



*Committed to Sustainability*



# Committed to Sustainability



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### ON THE COVER

#### **Cadira™ Concept** Saving Valuable Resources

Our newest innovation considerably reduces water, waste and energy consumption. Cadira concepts will help brands, retailers and their production partners to save valuable resources, reduce the carbon footprint of their textile goods and increase productivity by improving utilization of machinery.

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## Letter from our CEO

[G4-1, G4-14]



It is my pleasure to present to you DyStar's 2015 Sustainability Performance Report. This marks our sixth year of GRI reporting and builds on more than a decade of focused commitment by our management and employees. I hope our stories intrigue and inspire you in equal parts.

2015 was a year marked by the challenges of an increasingly unpredictable global economy. Despite the harsh uncertainties of the market, our financial performance continues to be stable with global sales revenue exceeding \$800 million for the third consecutive year. We view these results as a testament to the long-term value of our vision to become the most sustainable and responsible supplier of colors, chemicals and services to the global textile industry. To put it simply - what is good for the world is also good for business.

Innovation remains the heart of what we do at DyStar. Our R&D teams are focused on delivering responsible products and services that meet the needs of stakeholders across the value chain. 2015 saw the launch of our ground-breaking Levafix ECO Range of dyes, based on completely new chemistry free of p-chloroaniline (p-CA) and other regulated amines. Our state-of-the-art heavy metals-free Realan® Black MF-PV dye is drawing positive attention from wool producers in the industry. On the auxiliaries side of our business, the Evo® Protect range of Durable Water Repellent (DWR) alternatives continues to impress; its chemistry is based on modified fatty acids, replacing the use of persistent and bio-accumulative perfluorinated compounds (PFCs) which are traditionally used to render textiles water-repellent. We are also excited about Cadira Reactive and Cadira Polyester, the latest modules that combine the strengths of our dyes and auxiliaries to help textile producers achieve significant resource savings.

The DyStar Textile Services division continues to cater to the specialized needs of brands, retailers and their textile production partners. Their holistic array of tools and services enable our stakeholders to be safer and more resource-efficient at every stage of the textile production process. eliot® is the latest addition to our extensive collection of specialized tools, helping stakeholders make informed and responsible choices in product selection and process optimization. We made eliot free to use for anyone with an internet connection because we wanted it to be equally accessible for all our downstream stakeholders – whether they operate out of a textile mill in India or the procurement office of a London-based brand.

Closer to home, results from our manufacturing teams also give reason to be optimistic. DyStar is well on its way to achieving the 2020 target to reduce resource usage intensity by 20% of 2011

levels. For our production sites, resources are mainly energy, water and raw materials but the 20% reduction target also applies to the corresponding waste outputs - emissions, waste and wastewater. I am happy to announce that our emissions intensity is now 14% lower than in 2011, despite total production volume going up by 14% over that same period.

DyStar reaffirms its commitment to the United Nations Global Compact principles. Accordingly, we aim to uphold the highest ethical standards in the way we interact with all our stakeholders. On a day-to-day basis, the Code of Conduct acts as a moral compass, ensuring that our business activities are conducted with integrity. The Fraud Policy, newly introduced in 2015, adds further depth to our anti-corruption compliance system and allows known instances of unethical conduct to be reported without any risk of retribution.

We are dedicated to ensuring the health, safety and general well-being of our employees. Adherence to the Code of Conduct is a key component in this commitment but maintaining an open door policy is equally important; we want our employees to thrive in an environment where they can safely put forward their concerns and expect them to be addressed in a fair manner. Outside of our own walls, we also actively engage with external stakeholders to maintain open and honest dialogue.

In brief, DyStar has laid down strong foundations over the past decade by focusing on the essentials. The numbers speak for themselves – our teams have covered much ground in establishing safe and ethical conduct among our business units; creating responsible products and solutions across the value chain; and improving resource efficiency throughout our 14 production sites. Now that we have put the house in order, it is time to set our sights further afield and see the bigger picture. How do we incorporate sustainable principles into our day-to-day business activities? Are we ready to begin quantifying Scope 3 emissions? Can our social initiatives be broadened to address issues that are pertinent to the industry? These are just some of the questions we are starting to ask ourselves as this program matures.

Yes, we made significant progress in 2015 but this is not the time to rest on our achievements. Instead, we will make full use of this momentum to tackle the challenges that lay ahead.

With best regards,

**Eric Hopmann**  
Chief Executive Officer

## Creating Responsible Products and Solutions

**500**  
econfidence®  
from DyStar®  
regulated or restricted substances monitored through econfidence®

**700**  
SUSTAINABLE TEXTILE SOLUTIONS  
customers given chemical management and RSL training

**4,000**  
csi  
color references available to designers for better first-time-right performance

**300,000**  
Texanlab  
Textile & Analytical Laboratory  
samples tested for eco-parameters since 1994

**17**  
eliot®  
positive lists, e.g. for compliance to B&R Restricted Substances Lists

**5,000**  
REACH COMPLIANCE  
DyStar products pre-registered with REACH®

**1,150**  
bluesign®  
bluesign® approved DyStar products

**1,700**  
ZDHC  
DyStar products compliant with ZDHC MRSL 1.1

**1,700**  
CONFIDENCE IN TEXTILES  
Tested for harmful substances according to Oeko-Tex Standard 100 Test No. 00000000 Institute  
DyStar products compliant with Oeko-Tex® Standard 100

## Conserving Planetary Resources

**↓16%**  
Energy Intensity  
2015 vs. 2011

**↓14%**  
Emissions Intensity  
2015 vs. 2011

**↓34%**  
Water Intensity  
2015 vs. 2011

**↓18%**  
Wastewater Intensity  
2015 vs. 2011

**↓24%**  
Raw Materials Intensity  
2015 vs. 2011

**↓15%**  
Waste Intensity  
2015 vs. 2011

**1,700 tons**  
Total Waste Recycled, Reused or Recovered

**1.7 million m³**  
Volume of Water Reused

## Caring For People

**0**  
work-related fatalities

**30%**  
below industry average injury rate

**20,700 hrs**  
in staff training

**30%**  
of management roles held by women

**34,400 m³**  
of water provided to local communities at no cost

**275 lbs.**  
in food donations

**100%**  
of business locations audited for corruption-related risks

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## About Us

[G4-3, G4-5, G4-7, G4-17, G4-DMA, G4-EC5]

[G4-6, G4-8, G4-9]

### OUR HISTORY

The DyStar Group is a global market leader in colorants, chemicals and services to the textile industry. Our comprehensive range of products and services cater to the individual needs of customers who include brands, retailers and their industry partners. We also provide custom chemical manufacturing services for specialty chemicals industries, and produce a selection of products for the paper and plastic industries.

Our history dates back to 1995, when DyStar was formed as a joint venture between Hoechst AG, Bayer Textile Dyes, and Mitsubishi. This was followed by another joint venture, five years later, with BASF AG Textiles Dyes and Mitsui. The inherited legacy from our early parent companies spans more than a century, reaching back to some of the first innovations in synthetic dyes chemistry.

Over the last decade, DyStar completed a series of strategic acquisitions to form the core solutions providing firms in the textile and apparel industry. Organizations that joined our family in that period include Color Solutions Inc., Yorkshire Americas, The Rotta® Group, The Boehme® Group, Texanlab and Lenmar Chemical Corporation.

2010 marked a new turning point for DyStar when we were jointly acquired by the Longsheng Group and Kiri Industries. Today, DyStar is headquartered in Singapore and supported by a global workforce of over 2,000 dedicated employees.

### OUR SUSTAINABILITY STRATEGY

It is widely acknowledged that the textile industry has one of the largest environmental footprints in the world. Studies estimate that the net carbon footprint of the average t-shirt is 6 kg, which is about 20 times the weight of the product itself. Our customers and suppliers face increasing pressure from the public to behave more sustainably. In keeping with the trends of our industry, DyStar's long-term strategy is to continuously innovate, with the goal of mitigating the adverse environmental, social or economic impacts resulting from our direct activities as well as the use of our products.

### OUR ECONOMIC PERFORMANCE

The textile industry has faced multiple setbacks in recent years. Globally, it remains one of the most volatile and unpredictable. Despite the challenges, DyStar maintained positive financial results in 2015, grossing revenues of \$898 million. We view these results as a testament to the value of our approach to sustainability. By prioritizing environmental and social concerns, our business has reaped the direct benefits.

Although production remained stable over the year, our total operating cost went down by 2% to \$670 million. Total expenditure on materials and services, alone, dropped by 12% to \$566 million – partly the result of internal efforts to consolidate our procurement, with a smaller number of material suppliers providing quality products.

Our supplier selection policy supports the local economies in the places we operate. The majority of DyStar's materials and services continue to be sourced from local suppliers. Beyond the impact of direct spending, we support local economies by employing staff from the communities in which we operate. Through on-the-job training, we impart skills and experience that improve the long-term employment prospects of individuals from nearby communities. At all DyStar locations, staff wages meet legal or industry minimum standards.

We strive to be the environmental and innovation global leader in our chosen industries.

### OUR CORE VALUES



#### RESPONSIBILITY

We aspire to be the world's most sustainable and responsible supplier of colors, chemicals and services to the global textile industry.

500 restricted substances monitored by our econfidence® program



#### INNOVATION

Through continuous innovation, we create products and solutions to meet the needs of our stakeholders across the textile value chain.

1,000 patents and patent applications worldwide



#### EXCELLENCE

The quality of our products and services is a key factor in our company's success and underpins the fulfilment of our corporate goals.

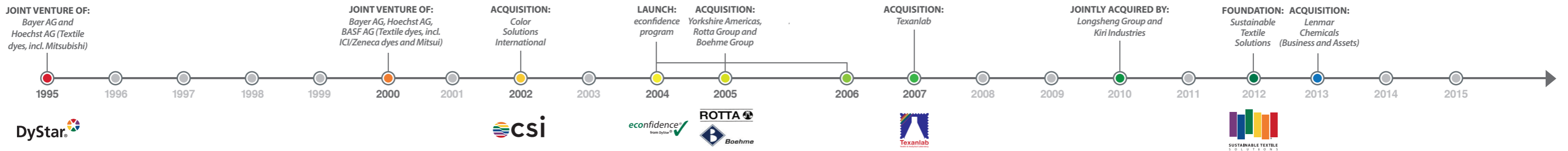
\$898 million in global sales revenue



### OUR GLOBAL PRESENCE

14 production plants across 12 countries with offices, competence centers and agencies in 50 countries, ensuring the availability of expertise in all major markets.

#### FOUNDATION

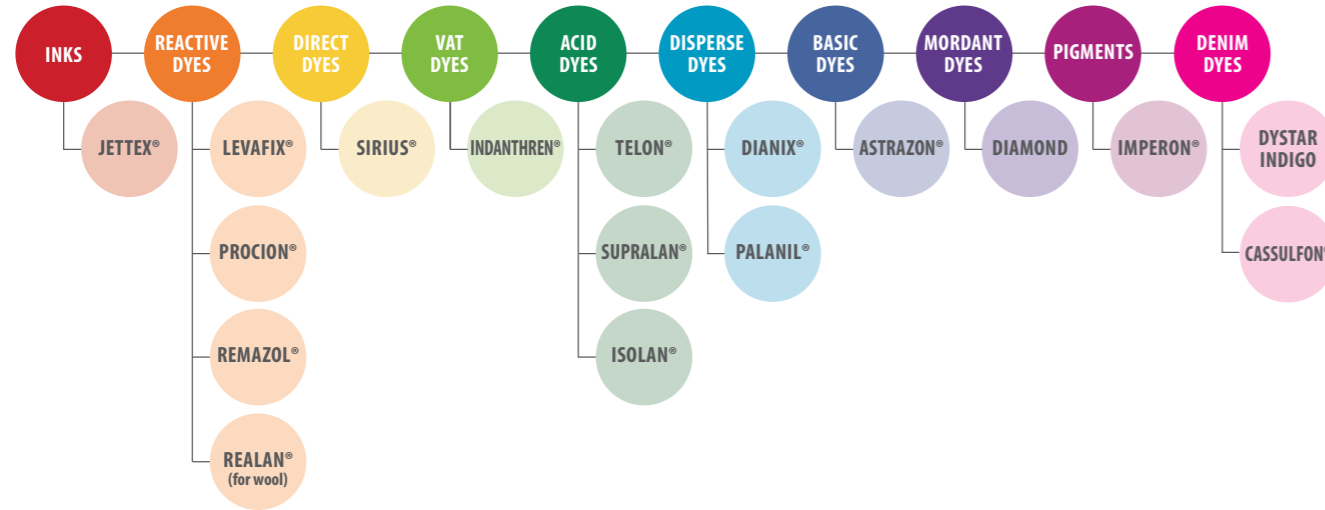


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[G4-4]

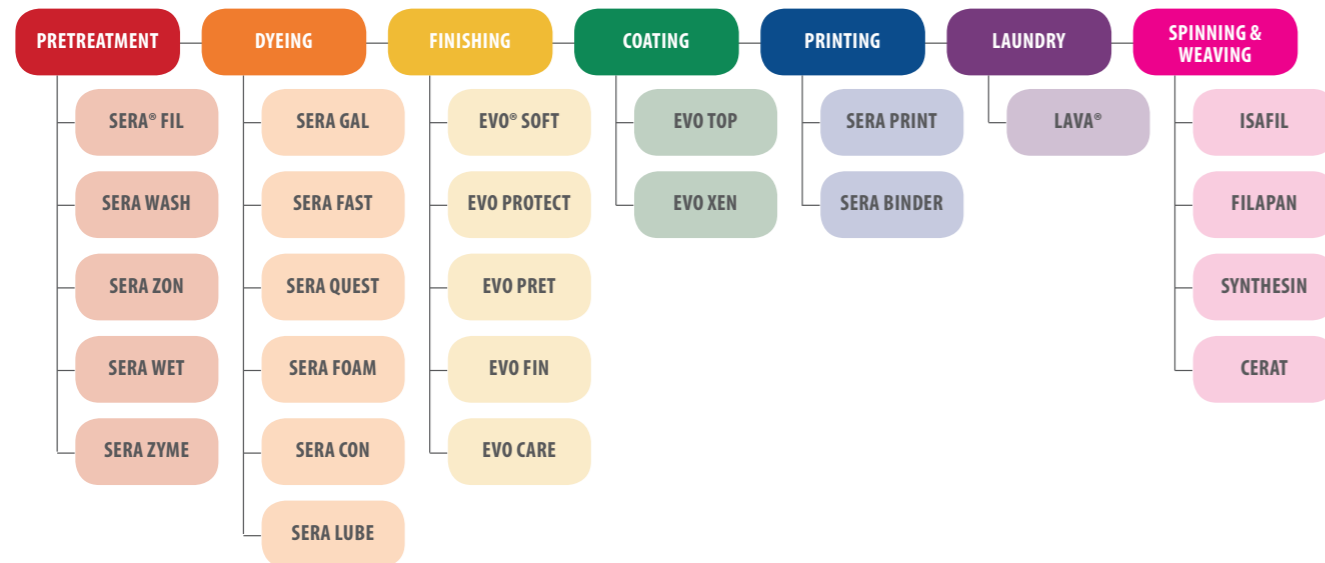
## OUR PRODUCTS

### DYES, INKS & PIGMENTS



DyStar is the world's leading supplier of textile dyes. We offer the broadest product range on the market covering nearly every fiber and quality specification, as well as catering to the diverse dyeing and printing techniques used by our customers. As part of our commitment to sustainability, we constantly innovate to deliver products that are safer and more resource-efficient for customers and end-users alike.

### AUXILIARIES



We offer a comprehensive range of auxiliaries spanning the entire textile wet processing chain. When used in combination with our dyes, DyStar auxiliaries can help textile manufacturers further maximize cost and resource efficiency. For the eco-savvy customer, our EVO Protect range is the latest in PFC-free water-repellent solutions.

### LEATHER

DyStar offers superior quality leather dyes that suit every application, from the basic shoe to high-fastness upholstery leathers and high-fashion products. Our specialized services help customers meet the widest range of test specifications and ecological standards pertaining to leather.

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## OUR SERVICES

### COLOR SOLUTIONS INTERNATIONAL

CSI provides retailers and brands with a variety of flexible color options and services. Our expert staff will create, manage and distribute color standards.

We are not only a source of colors. Our dedicated Color Team supports designers and color managers from the first inspiration throughout the entire supply chain, to create the perfect product for their customers. CSI's solutions guarantee a fast, efficient and accurate color communication process to bring the inspirations into reality. By improving our clients' chances for first-time-right results, we also help them save on time and money.



### econfidence

The econfidence program is designed to provide assurance to our customers that DyStar dyes and chemicals comply with both the statutory and voluntary legal requirements in the markets they are sold. econfidence is backed up by the most extensive eco-testing program of any textile chemical supplier.

Overseen by a dedicated and multi-disciplinary team of experts, the econfidence program was meticulously developed to monitor over 500 restricted chemicals and ensure the continued reliability of DyStar products. Our customers and their direct stakeholders - in turn - enjoy the comfort and reassurance that their sustainability performance is not compromised through supply chain activities.



### SUSTAINABLE TEXTILE SOLUTIONS

Sustainable Textile Solutions (STS) is dedicated to assisting brands, retailers and their industry partners implement sustainable textile production practices within their organizations. Our primary goal is to guide clients in the textile industry through the complex maze of quality and eco-testing requirements, helping them meet all applicable standards and regulations. STS also provides expertise to customers interested in operating more efficiently and achieving reductions in cost and resource consumption.

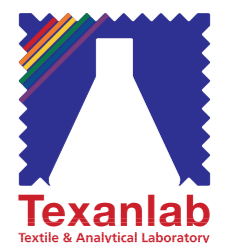
The three main service activities at STS are consultancy, auditing and capacity building. We tailor our offerings to meet the unique sustainability requirements of every client.



### TEXANLAB

Texanlab Textile and Analytical Laboratory is an ISO 17025 certified, boutique testing laboratory specialized in ensuring compliance and resolving failures in the customer supply chain. We are a repository of know-how in ecology testing and analysis for the textile industry, meeting the requirements of CPSIA, EU Eco-label and brand- or retailer-defined Restricted Substances Lists (RSLs).

Since 1994, Texanlab has tested over 300,000 samples for ecological parameters. Whether handling liquid or fabric samples, Texanlab applies correct and accurate methods to produce dependable results. We pride ourselves on a 100% on-time performance record, delivering accurate results in a cost-effective, fast and reliable manner.



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## Our Governance Structure

[G4-34, G4-LA12]

Since our founding in 1995, DyStar has followed a corporate philosophy based on sound business ethics and fair dealings with all stakeholders. Today, the DyStar Group is owned by DyStar Global Holdings (Singapore) Pte Ltd, whose shareholders are Zhejiang Longsheng Group and Kiri Industries Limited (KIL). The Board of Directors determine DyStar's long-term business objectives, whereas the Senior Management team is chiefly concerned with the implementation of those objectives in an effective, transparent and sustainable manner. Two committees, namely the Audit Committee and the Remuneration Committee, support the Board and provide guidance to the Senior Management team.

Overall functions at DyStar are supervised by the Board of Directors which is headed by the Chairman. Members of the Board contribute valuable industry insight and determine matters of organizational strategy for DyStar. One Executive Director from the Board is stationed at DyStar headquarters in Singapore where he supports the Board by guiding the management team in the implementation of company strategies developed by the Board. The Executive Director also oversees the company's daily operations from Singapore.

The management team is headed by the Group Chief Executive Officer and supported by four members who each, in turn, oversee a key function within our organization. Day-to-day management at DyStar is entrusted to the CEO who implements strategic plans and policies together with the members of his team, while also balancing

the interests of the Board and the two key committees. In their roles, members of the Senior Management team are also vested with the duty of instilling a culture of ethical behavior among DyStar employees. At the same time, our open door policy gives employees direct access to members of Senior Management so their concerns can be voiced and adequately addressed.

### BOARD OF DIRECTORS

- Ruan Weixiang, Chairman
- Xu Yalin, Executive Director
- Yao Jianfang, Director
- Manish Kiri, Director
- Amit Mukherjee, Director

### THE SENIOR MANAGEMENT TEAM

- Eric Hopmann, Chief Executive Officer
- Viktor Leendertz, VP Global Finance
- Vera Huang, VP Global Procurement & Greater China
- Gerald Talhoff, VP Global Manufacturing and Global Supply Chain Management
- Kevin Tan, VP Global Human Resources

### Responsibilities of the Board of Directors

- 1 Providing leadership and determining the strategic direction of the company
- 2 Advising, reviewing and approving business plans
- 3 Ensuring that the necessary financial and human resources are available for the company to realize its objectives
- 4 Determining the company's values and standards to ensure compliance with laws and business ethics
- 5 Ensuring that matters related to social and environmental responsibility are considered in the company's strategy
- 6 Establishing a framework that allows risks to be effectively assessed and managed
- 7 Reviewing management performance, as well as advising on matters related to Senior Management appointments and compensation

### Responsibilities of the Audit Committee

- 1 Ensuring the integrity of the company's financial statements and announcements relating to financial performance
- 2 Determining and monitoring proper internal control processes, and risk management policies and practices
- 3 Reviewing the performance and effectiveness of the company's internal audit function
- 4 Reporting to the Board on the effectiveness of DyStar's internal controls (including financial, compliance and operational controls)
- 5 Overseeing the engagement of external auditors, as well as ensuring their independence and objectivity
- 6 Making recommendations to the Board on matters related to the appointment, re-appointment and removal of external auditors

### Responsibilities of the Remuneration Committee

- 1 Ensuring human resource policies of the company are consistent and aligned with strategic objectives
- 2 Reviewing and recommending to the Board the remuneration frameworks for the management and employees, including those that apply to members of Senior Management
- 3 Reviewing the company's obligations arising from the termination of contracts of service, particularly those pertaining to key management personnel, as well as ensuring that termination clauses are both fair and reasonable
- 4 Defining global organizational structure and development to support the company's strategic growth
- 5 Ensuring compliance with laws and best practices related to human resource management
- 6 Monitoring global human resource initiatives to ensure business continuity, efficiency and organizational competitiveness

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## Our Business Principles

### DYSTAR'S CODE OF CONDUCT

At DyStar, we strive to conduct our business with the utmost integrity. Our Code of Conduct sets out the legal and ethical principles that guide our daily work activities. Upholding the principles is crucial to maintaining our reputation as an employer of choice and a reliable business partner. The Code of Conduct is binding for all employees as well as all entities that are part of the DyStar Group.

Each of the 8 points that make up our Code of Conduct corresponds to a universal and internationally-recognized principle of ethical conduct. Together, they serve as our moral compass and safeguard the well-being of both our internal and external stakeholders. Within DyStar, the Code promotes transparent operations; talent attraction; employee satisfaction; employee retention; workplace health and safety; and environmental sustainability. Externally, we uphold the rules of fair competition; respect local laws and regulations; support local communities; ensure customer satisfaction; and – above all – strive to maintain high product and service quality.

### The Code of Conduct's 8 Key Principles are Grounded on International Standards

1. Compliance with Laws and Regulations ●
2. Protection of Intellectual Property Rights ●
3. Commitment to Fair Competition ●
4. Separation of Private and Company Affairs ●●
5. Prioritizing Health, Safety and the Environment ●●●●●●●●
6. Ensuring Product and Service Quality ●●
7. Respect for the Rights of Employees ●●●●●●●●
8. Cooperation with Authorities ●●●●●●

### LEGEND

- The International Labour Organization Core Labour Standards
- ILO Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy
- The Universal Declaration of Human Rights
- The OECD Guidelines for Multinational Enterprises
- The United Nations Global Compact Ten Principles
- Social Accountability SA8000
- The Responsible Care Global Charter

### OUR FRAUD POLICY

Every one of DyStar's business units is subject to periodic assessments for corruption-related risks by our Internal Audit Group. We went one step further in 2015 by instituting a Fraud Policy, with the purpose of fostering a work environment where individuals could safely and anonymously report – without reprimand – any known or suspected instances of fraud.

The Policy defines the different types of activities that fall under the category of fraudulent conduct. It also details the investigative steps following each complaint; the internal parties that are informed or consulted; and the disciplinary action taken in cases of confirmed wrong-doing. By raising internal awareness for corruption-related risks, the Fraud Policy forms part of the support system that ensures sustainable financial growth for DyStar.

### COMPLIANCE MANAGEMENT

Being an international organization with operations spanning 23 countries, it is no small feat ensuring that business is conducted in compliance with acceptable practices. Our Compliance Group was created to ensure adherence to laws and regulations; environmental, health and safety requirements; rules of action; established standards; social accountability guidelines; DyStar policies and guidelines, including the Code of Conduct; and management directives. Ultimately, though, it is the responsibility of every DyStar employee to see that we conduct our business activities and transactions with the highest level of integrity and ethical standards.

No monetary fines or penalties were paid for environmental violations in 2015. As a chemicals company, we also adhere to all applicable regulatory and voluntary codes governing marketing communication practices. There were no known cases of marketing non-compliance in 2015. With regard to laws, regulations and voluntary codes governing the provision and use of products and services - including those related to product health and safety - there were no incidents of non-compliance in 2015; neither were we subject to any associated fines. DyStar is fully compliant with the labelling requirements of the Globally Harmonized System (GHS). Any product that has the potential to pose a chemical, physical, environmental or health risk is labelled in accordance with GHS guidelines.

### Drivers of Compliance Management at DyStar

- 1 The Global Compliance Manager oversees adherence to laws and regulations around the world
- 2 Local Compliance Management Officers work to ensure that DyStar complies to all applicable national-, provincial- and city-level laws
- 3 The Group Legal Counsel ensures cooperation with government authorities and provides legal advice to all divisions in the company

### Global Compliance Management Objectives

- 1 Fostering a culture of honesty and high ethical standards
- 2 Evaluating and mitigating risks to the company
- 3 Raising awareness among employees on the need to adhere to all applicable laws and regulations
- 4 Maintaining the reputation and public image of our company

## THE VALUE CHAIN APPROACH

DyStar is committed to sustainability across the value chain. That commitment begins at home, where we work to reduce our own operational impact; and extends upstream to our suppliers, who are expected to uphold the same values that we do. It also reaches far in the other direction, where our products, tools and services cater to the needs of stakeholders that include textile producers, brands, retailers and end-users. So we understand the scope of our commitment to sustainability - it spans the value chain - but how do we keep that promise? To put it simply, our actions are guided by the 4 C's - Creating, Conserving, Caring and Communicating.

### Creating

#### Responsible Products and Solutions

Product stewardship at DyStar starts at the front of the value chain with green design and responsible sourcing, and is bolstered by a comprehensive range of services that enable our stakeholders to select, communicate and utilize colors sustainably. The precautions taken at design and sourcing have strong significance beyond our own operations; they safeguard the environment, as well as the health and safety of our downstream stakeholders.



“There are many justifiably passionate voices in the ongoing conversation about how to make the world a better place. But a look at the state of the world around us says it all - none of us has all the answers yet. Compounded with the multitude of standards, systems and services that are available for any company venturing out to do the right thing, it is all too easy to get lost in the quagmire of options. So how do we keep our approach relevant at DyStar?”

1 To start with, we are systematic and periodically re-align our strategy through gap assessments

2 There is no getting around the fact that our assessments are comprehensive and three-dimensional, taking into account the “how”, “what” and “where” of our potential to create positive or negative impact:

- How do our internal operations, our products and our service activities affect people and the planet?
- What aspects of the environment, the economy and society are affected?
- Where along the value chain are our products, services and activities having an impact?

3 Communication is key. Our planning activities would be meaningless without fresh input from our stakeholders.

- Leong Li Sun, Global Sustainability Manager

### Conserving

#### Planetary Resources

Our production sites are tasked with the goal of reducing the energy, water and raw materials used for every ton of production by 20% of 2011 levels by the year 2020. The same target applies to greenhouse gas emissions, waste and wastewater resulting from our internal operations.

### Caring

#### for People

The health, safety and general well-being of our employees, as well as the people who live in surrounding communities, is a priority. We practice an open door policy so grievances can be fully addressed.

### Communicating

#### with Stakeholders

We value our stakeholders' views. By actively engaging with them, we have been able to keep our Creating, Conserving and Caring activities relevant.



## SUSTAINABILITY IS DRIVEN FROM THE TOP

Solid support from senior management is one of the core strengths of DyStar's sustainability program. Without that backing, the scope and depth of our commitment would be limited. At DyStar, sustainability is driven from the top and supported by members of senior management. Our Sustainability Committee is headed by the Chief Executive Officer and includes seven representatives from different key functions in the company. As a group, the Committee oversees the direction of our sustainability strategy, as well as the planning and implementation activities that go into realizing our core objectives. Staying abreast of all the latest developments is not easy so we meet regularly throughout the year to discuss progress and deliberate on the value of newly proposed initiatives.



“2015 has been a momentous year for Textiles & Sustainability. China's new Environmental Protection Laws came into force with far-reaching consequences for both dye manufacturers and the textile industry. In Europe the EU Commission proposed to ban a raft of carcinogenic, mutagenic and reprotoxic (CMR) chemicals from use in textiles and clothing, and in the US reform of the 40 year old Toxic Substances Control Act (TSCA) legislation made its way through Congress.”

On the ground, we draw on the abilities of the entire workforce to keep our commitment. Many of our staff are tasked with specific sustainability performance targets that are evaluated during their annual performance appraisals. Regardless, however, every one of us contributes to the effort in one way or another - from the PhD chemist working to give us safer and more resource-efficient products; to the members of econfidence who actively control against 500 restricted substances in our supply chain; to the production manager tasked with ensuring the safety of his workers as well as the surrounding environment; and even that office employee who turns off our lights at the end of the day. In every part of the organization, responsibility is becoming firmly ingrained into the way we think and act.

No company can expect to thrive in this economic climate by taking a head-in-sand approach. We welcome and value the opinions of both our internal and external stakeholders. Anyone with an idea they want to suggest or a problem that needs to be solved is welcome to address them directly to the Committee by writing to Sustainability@DyStar.com.

Greenpeace kept up the pressure on clothing brands and retailers with the publication of its Detox Fashion catwalk ratings in March and the Zero Discharge of Hazardous Chemicals (ZDHC) group, set up in response to the Detox campaign in 2011, published the first ever harmonized Manufacturing Restricted Substance List (MRSL) for the textile industry.

DyStar maintained its position as a sector leader on sustainability cooperating with several organizations including bluesign, the Sustainable Apparel Coalition and ZDHC. A particular focus of DyStar in 2015 was resource efficiency supporting the launch of the BlueWay concept by bluesign, and creating an online tool for product selection and process optimization (eliot®) which was launched at the ITMA in Milan last November.

Sustainability is now firmly established as a key issue for the industry and DyStar is in the best position to respond to this challenge thanks to its commitment to product safety and ecology through its sector-leading econfidence program.

- John Easton, Global Brand and Retail Sustainability Advisor

### SUSTAINABILITY COMMITTEE MEMBERS

- Eric Hopmann, Chief Executive Officer
- Gerald Talhoff, VP Global Manufacturing & SCM
- Ron Pedemonte, President Sales Area Americas & Head of Textile Services
- Fanny Vermandel, VP Global Marketing Coloration
- Clemens Grund, Senior Director Global Technology and Ecology
- Leong Li Sun, Global Sustainability Manager
- John Easton, Global Brand and Retail Sustainability Advisor
- Stephanie Schank, Global Head of Marketing Communications

### Responsibilities of the Sustainability Committee

- 1 Shaping DyStar's long-term sustainability strategy and defining performance targets
- 2 Driving initiatives to mitigate the environmental and social impact of our products and activities across the value chain
- 3 Reviewing DyStar's sustainability performance against defined targets on a quarterly basis
- 4 Regularly communicating our company's sustainability plans, policies and progress to internal stakeholders
- 5 Accurately and transparently reporting DyStar's sustainability performance to internal and external stakeholders on an annual basis

# Creating Responsible Products and Solutions

The third aspect of the triple bottom line framework is traditionally “profit”, but we understand that profits are the natural outcome of having responsible products. We have invested heavily in innovation to create an extensive range of responsible products and solutions, and the numbers speak for themselves. One might ask what our motivation was to be this comprehensive. The answer is that when we started this journey, we were focused on the quality and performance of our products. It soon became clear that brands, retailers and their industry partners also needed a support system to complement those products. As a result, our objectives are now not only to provide stakeholders with responsible products through our product stewardship activities; we also enable our stakeholders to act more sustainably by offering the tools and services for them to succeed.

We have invested heavily in innovation to create an extensive range of responsible products and solutions

## PRODUCT STEWARDSHIP ACROSS OUR VALUE CHAIN

We have to get it right from the start. By applying the principles of green chemistry design, we have been able to develop products that not only help us reduce our own impact to the world, but also that of our customers and end-users. Product design, however, is only the start of this story. The ingredients need to be right to create the products our stakeholders deserve. We do not want any substances making their way into our finished goods if they are known to be carcinogenic, mutagenic, reprotoxic, bio-accumulative, persistent, etc. These are what we refer to as restricted substances and the list of them is extensive. Taking into consideration all applicable regulatory restrictions, voluntary eco-standards, and the individual Restricted Substances Lists (RSLs) developed by brands and retailers – we are talking about more than 500 substances. Product stewardship is not taken lightly at DyStar because the precautionary steps taken at design and sourcing have resounding impacts across the length of our value chain.

## ENABLING SUSTAINABILITY ACROSS OUR VALUE CHAIN


Being truly responsible means that our responsibilities do not start or end at the doorstep. That is why the DyStar Textile Services (DTS) division caters to a wide spectrum of the value chain, offering our stakeholders the specialized tools and services they need to be more responsible at each stage of the textile production chain – from design to finish. DTS is dedicated to supporting brands, retailers and their industry partners with fast and innovative global solutions.

 **500**  
regulated or restricted substances monitored through econfidence®


 **700**  
customers given chemical management and RSL training

 **4,000**  
color references available to designers for better first-time-right performance

 **300,000**  
samples tested for eco-parameters since 1994

 **17**  
positive lists, e.g. for compliance to B&R Restricted Substances Lists, in eliot®

 **5,000**  
DyStar products pre-registered with REACH®

 **1,150**  
bluesign® approved DyStar products

 **1,700**  
DyStar products compliant with ZDHC MRSL 1.1

 **1,700**  
DyStar products compliant with Oeko-Tex® Standard 100

### SPOTLIGHT ON

## Levafix® ECO Range Black, Navy and Forest

Zero p-CA or other regulatory controlled amines for responsible textile production

The new Levafix ECO Range of reactive dyes presents customers with dual sustainability benefits. Our researchers started with the health of the end-user in mind and created a product free of p-CA and other regulatory controlled amines. They then mitigated its overall impact to the environment by giving their product enhanced fastness properties. Levafix ECO range demonstrates how DyStar's chemistry creates products for both people and the planet.

See pages 16-17 to learn more about how DyStar creates responsible products and solutions across the value chain.



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[G4-12, G4-14, G4-DMA, G4-PR1]

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[G4-12, G4-PR6, G4-13, G4-DMA, G4-EN32, G4-LA14, G4-DMA, G4-HR10, G4-DMA, G4-SO9]

## PRODUCT STEWARDSHIP ACROSS OUR VALUE CHAIN

At DyStar, product stewardship is an integrated process for identifying, managing and minimizing environmental, health and safety impacts at every stage of a product's life cycle. We recognize that the indirect impact of a product can be comparable, if not greater, than that resulting from our internal activities. In taking a comprehensive approach, we assess all of our products for health, safety and environmental consequences at each stage of the value chain – product concept development, R&D, registration, manufacturing, marketing and promotion, warehousing, distribution and supply, use and disposal, reuse and recycling.

What happens in the first stages of our value chain has lasting impact long after a product has left our doorsteps. For this reason, Product Stewardship at DyStar begins at the front of the value chain - with design and sourcing.

### ► Green Chemistry Design – Getting it right from the start

We have built our core strength in Product Stewardship through continuous research and innovation. Sustainability begins with chemistry at DyStar because we understand that the most effective way to mitigate a product's cradle-to-grave impact is to start from design. Our R&D efforts are driven by Green Chemistry design principles<sup>1</sup> to provide safer and more environmentally-friendly products for customers and end-users alike.



**“** In 2015 DyStar launched a package of new reactive dyes for dyeing of cotton – *Levafix® ECO Black, Levafix ECO Navy and Levafix ECO Forest* – which are based on completely new chemistry. Because these dyes are created from a new reactive blue dye that is not based on p-base-ester, we can say - for the first time - that the products are completely free of p-chloroaniline (p-CA). All mixing components of the new products, and all other dyes which are recommended in combination with the new dyes, are also free of p-CA and all other banned aromatic amines. By using these dyes, our customers will be able to produce products which are on the safe side with regards to this ecological requirement.

The Levafix dyes also show excellent application technology properties: very high wet fastness and outstanding light fastness. In combination, these features enable our customers to produce much more sustainable garments.

– Clemens Grund, Senior Director Global Technology and Ecology

### Examples of Green Chemistry Design Principles Applied at DyStar

- |  |   |
|--|---|
| <p><b>1 Preventing pollution</b></p> <p>We optimize the synthesis process by reducing solvents and increasing batch sizes. Compared to 2011, we now emit 14% less greenhouse gas for every ton of production.</p>  | <p><b>6 Improving energy efficiency</b></p> <p>For efficiency and cost reasons energy input and reaction time are constantly monitored and optimized. DyStar's energy intensity has gone down for the 2nd year in a row.</p>  |
| <p><b>2 Maximizing the incorporation of material inputs into the final product</b></p> <p>Economic pressure has motivated our industry to optimize all processes and eliminate chemicals that do not end up in the product. Compared to 2011, we need 24% less material for every ton of production.</p> | <p><b>7 Reducing derivation steps</b></p> <p>We shorten the synthesis chain wherever possible. For example, the synthesis of Isolan® Scarlet K-GLS was recently shortened by one step.</p>  |
| <p><b>3 Using or generating substances with little or no toxicity</b></p> <p>We use mainly bromo-components as intermediates for azo dyes instead of more critical chloro-intermediates.</p>   | <p><b>8 Leveraging on the power of catalysts</b></p> <p>Catalysts are used wherever possible in place of stoichiometric reagents. In our production of Indigo Vat 40% Solution, catalytic hydrogenation is carried out in place of chemical reduction.</p>  |
| <p><b>4 Developing high performance products with reduced toxicity</b></p> <p>The increasing number of chemical regulations in many sales areas drives the search for alternative chemicals (e.g. Dianix® Golden Yellow S-4R, Dianix ECO Black HF, Realan® Black MF-PV)</p>                              | <p><b>9 Designing for degradation</b></p> <p>Persistent chemicals are not used as intentional ingredients in our production. We go one step further by innovating to create safer chemical alternatives. DyStar's Evo® Protect range of durable water repellent (DWR) auxiliaries makes use of modified fatty acids in place of bio-accumulative PFC compounds.</p> |
| <p><b>5 Minimizing the use of solvents</b></p> <p>For health and safety reasons, DyStar uses the safest solvents and they are recycled where possible. For example, we reuse phenol in the synthesis of vat dyes and disperse dyes.</p>  | <p><b>10 Designing for human safety</b></p> <p>Risk assessments are conducted for all synthesis steps to prevent accidents during production or product use.</p>  |

<sup>1</sup>Anastas, P.T.; Warner, J.C.; Green Chemistry: Theory and Practice, Oxford University Press: New York, 1998, p.30.

### ► Responsible Sourcing – Following through with the right ingredients

We may approach each design with the best intentions in mind, but the performance of a finished product depends on more than just its recipe. The quality of the ingredients we procure is as – if not more – important than the recipe itself. It is our econfidence program that provides assurance to customers that compliant products meet all applicable statutory and voluntary chemical restrictions in the markets they are sold. Through econfidence, we control for substances that are known to pose a risk to people and the planet.

Backed up by the most extensive eco-testing program of any textile chemical supplier, econfidence is the gatekeeper that prevents more than 500 restricted chemicals from entering our supply chain. This allows downstream stakeholders to work with our dyes and chemicals knowing – to a high degree of certainty – that their textile and apparel products will not be contaminated. In a way, our program acts as a filter by preventing toxic and/or hazardous substances from trickling further down the textile value chain.

*We know what we are selling. Do you know what you are buying?*

### Why do businesses need to know what they are buying?

- The scientific community has made significant advances in the understanding of carcinogenic, mutagenic and reprotoxic (CMR) substances. Our knowledge regarding the potential impact of toxic and hazardous substances on the natural environment has also matured considerably.
- To keep up with developments in science, chemical regulations applying to textile and leather articles are receiving more attention from governments around the world.
- However, sourcing for textile and leather articles has become dynamic and multi-national so supply chains are usually lengthy and fragmented.
- A growing number of brands and retailers are aware of the potential reputational risks arising from contaminated products and have created their own restricted substances lists (RSLs). Suppliers must comply with RSLs to continue business relations with well-known brands and retailers.
- The public is also increasingly aware of issues that affect the environment as well as their own physical well-being. In an ever more connected world, where huge swathes of the population now have access to the internet, every individual has a say in this matter.

### What is the econfidence commitment?

- Leadership**  
econfidence is overseen by a dedicated and multi-disciplinary team that, together, address the potential risks spanning the entire length of our product chain.
- Expertise**  
The PhD chemists in our econfidence group know where to look for impurities at each stage of the product chain. We leverage on their extensive knowledge to create specific monitoring scenarios for individual chemicals.
- Dependability**  
We want to be certain that our purchases meet all applicable quality and eco-specifications, so testing is systematic and starts early in the product chain with raw materials.
- Traceability**  
A global business platform monitors, controls and services the complete supply chain to ensure traceability.
- Guarantee**  
Eco-conformity declarations are available for brands, retailers and their industry partners.

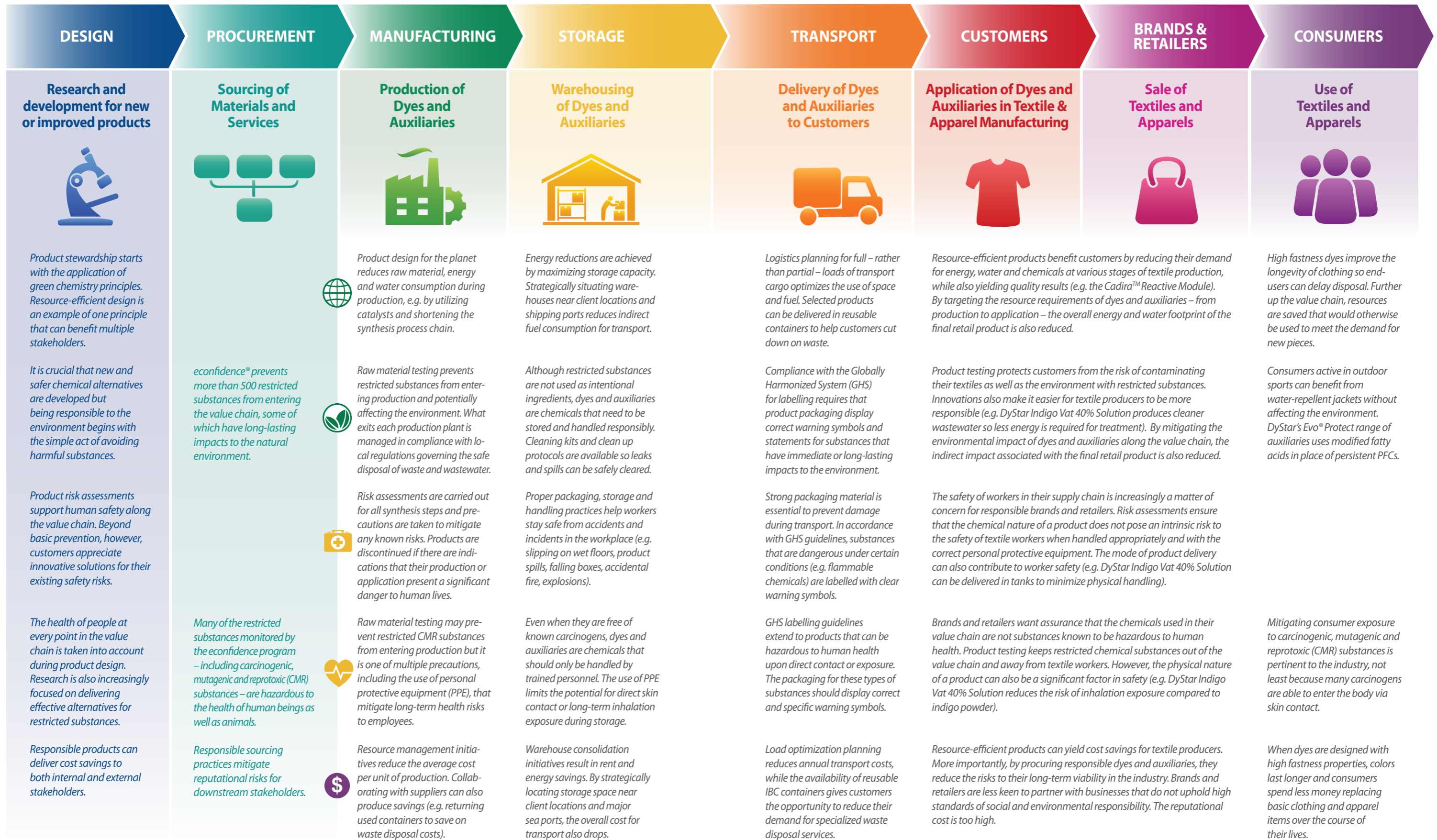
### Responsible sourcing is more than just chemical compliance

We want to build long-term relationships with suppliers who support our core values. But with a network of over 1,200 direct suppliers around the world, it is no small task just to monitor our existing suppliers; developing new and reliable partners becomes a challenge. Adding further complexity to the situation: we operate in parts of the world where sustainability principles are new to most industries. Although it makes sense - from an economic, social and environmental perspective - to source most of our materials locally, we also take on the added responsibility of promoting sustainability in our supply chain. So, how is this accomplished?

Regular site visits to our main suppliers help us evaluate a range of issues that might pose significant risks to the well-being of workers, the environment and surrounding communities. New suppliers are evaluated for adherence to human rights and social rights. Labor practice is a key criterion; we do not condone child labor, forced labor or prison labor. In addition, compliance with local laws and regulations is included as a clause in all our vendor contracts and agreements.

80% of our suppliers have been assessed for environmental performance. To raise awareness further, we introduced three new supplier surveys in 2015: the Environmental Incidents Summary; the Ecological Compliance Questionnaire; and the Supplier Sustainability Questionnaire. The surveys helped us assess supplier awareness for a comprehensive range of issues including chemical compliance, environmental sustainability, adherence to human and social rights, community engagement and employee engagement.

What did we find out? Our suppliers want to improve resource efficiency. They are concerned about workplace safety and product safety. Promoting ethical conduct is also a priority for many. Although these initial findings give us reason to be optimistic, there still exists much scope for improvement. Through continued communication and collaboration with our upstream stakeholders, we hope to see the entire industry move forward together.



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[G4-DMA]

## ENABLING SUSTAINABILITY ACROSS OUR VALUE CHAIN

Our commitment to sustainability is all-encompassing in its approach. It became apparent to us, early on, that providing safe and environmentally-friendly products was only half the journey. Brands, retailers and their industry partners needed a support system to help them achieve optimal results. Among other things, they required the tools and expertise to make informed choices about what products to purchase; to accurately communicate color with their industry partners for first-time-right results; then test their purchases for traces of contamination; and – ultimately – be able to attain the desired color on their fabrics, but in a resource-efficient manner. To cater to these wide-ranging needs, we depend on the highly-specialized tools and know-how offered by three DyStar business units - Color Solutions International (CSI), Sustainable Textile Solutions (STS) and Texanlab. Together, they enable our clients to make the right choices at every stage of the textile production process.

### eliot® Sustainability Made Accessible via Online Technology

eliot is the latest addition to DyStar's extensive collection of specialized tools that enable clients to make informed product choices. Our newly developed, internet-based tool provides guidance on product selection as well as process optimization. The first of its kind at DyStar, eliot is free to use and makes sustainability accessible to the masses.

eliot was developed by consolidating different expert systems and information databases into one comprehensive function for our customers. The four modules offered on eliot are Positive Lists, Product Finder, Optidye, and Information. In just one sitting, users can choose from our wide selection of RSL and eco-standard compliant products using the Positive Lists module, and determine the most resource-efficient recipe for their selected product via the Optidye module.

Its well-structured user interface makes eliot an intuitive and easy-to-use system for textile manufacturers. Our responsive design means that eliot can be opened on any computer or tablet device, and accessed via multiple browsers. Through eliot, DyStar makes sustainable products and practices easy to understand and freely accessible to anyone with an internet connection. Innovation is at the heart of what we do, so stay tuned for upcoming modules.

#### The Positive Lists Module



Search through a selection of recommended DyStar products that are compliant with brand and retailer Restricted Substances Lists or selected eco-standards such as bluesign® and GOTS. eliot lets users apply search filters or sort through product lists. Products can be bookmarked under the favorites list and users have the added convenience of exploring their favorites in other eliot modules.

#### The Product Finder Module



Users can search through DyStar products in the Product Finder Module based on their technical properties. The module enables them to narrow down the products that match their desired fastness criteria and dyeing or application performance. User selections can be a combination of both fastness and dyeing properties; and results can be exported to Excel.

#### The Optidye® Programs



Through Optidye, users can access recipes and process optimization tips to help shorten their dyeing cycles and reduce effluent load. Optidye programs were designed to improve the reliability of the dyeing process for better right-first-time processing and improved quality of finished products.

#### Information



eliot also gives users direct access to product information categorized by industry segments including active wear, technical textiles, denim, work wear, carpet, digital printing, home textiles, automotive and fashion. A variety of shade cards and brochures can also be found in the Information file.



“DyStar's commitment to inventing and delivering sustainable products and services to brands, retailers and their industry partners has become part of our daily work culture and is unrivaled in the industry. To deliver this commitment, each new product and service that we develop must eliminate or minimize the three common failures that we recognize in today's supply chain.

#### ❶ Wrong Color Leads to Lost Sales

Color is failing in today's supply chain and, as a result, the color in the store is in many cases far from the designer's inspiration. It's the wrong color. How does this happen? It's caused by a failure to communicate the color properly from designer to vendor and textile mill. Color failures cost time and money, which result in compromised time-lines and delays that produce costly late changes for everyone in the supply chain. Consumers expect to buy that perfect color at the best price. To meet these demands, there is no room for color failure.

#### ❷ Damage to Brand Integrity Leads to Value Loss of the Brand

Identifying and protecting your Brand Integrity in the 21st century has become a daunting task. The manufacturing and sourcing of fabrics and garments is dynamic and multi-national. The supply chain is lengthy, fragmented and not transparent. NGOs and public groups are voicing concern regarding corporate social responsibility, environmental issues and chemicals in consumer products. The communication of these issues spreads rapidly through social media platforms. As a result, Brand Integrity is under siege and the potential for damage and value loss to investors and shareholders is paramount.

#### ❸ Unhappy Customers Lead to Lost Business

Consumer demands for high quality at lower prices are pressuring brands and retailers. Customers are seeking functional garments that are designed to be low impact on the environment and long-lasting. Even one unhappy customer can have a significant impact through Facebook®, Twitter® and other social media avenues. The lengthy, multi-national and fragmented supply chains challenge the ability of brands and retailers to meet these quality demand and price points. Returns are common and can be attributed to light-fastness, perspiration light-fastness, wet rubbing fastness and color loss after multiple washes. Even more alarming is the presence of restricted substances on the fabrics and garments. If these failures reach the consumer, confidence and value is lost in the Brand.

– Ron Pedemonte, President Sales Area Americas & Head of Textile Services at DyStar



“At STS, we are committed to creating a sustainable textile supply chain by working closely with all stakeholders, mills, brands, retailers and suppliers. We actively engage with brands & retailers in achieving and maintaining their sustainability goals. We help in creating and implementing smart and practical solutions for textile wet processing mills by reducing their overall environmental footprint, and creating safe workplaces through chemical and water management systems.

– Dr. Siva Pariti, Global Audit Manager, STS



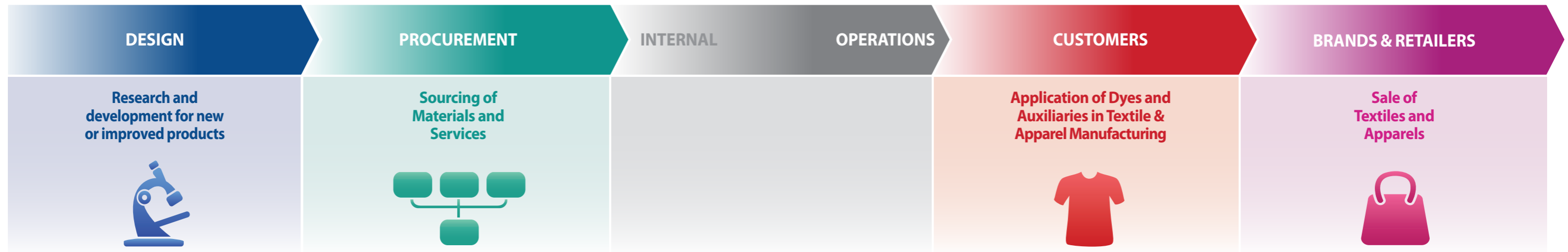
“The training session taught by Dr. Siva Pariti from Sustainable Textile Solutions was informative and interesting. My team learned a great deal about the ecological challenges faced by the entire textile supply chain, particularly by textile processors such as ourselves. Sadaqat Ltd. prides itself on offering the best quality products and services in our industry. As such, specialized training is valuable for us to remain informed on the latest developments in sustainability.

– Khurram Mukhtar, CEO, Sadaqat Ltd.



“Rapid industrialization and the widespread use of thousands of synthetic chemical compounds have led to many devastating impacts on the environment. Previously unknown allergies are being attributed to the use of chemical finishes on textiles. We help our clients navigate the complexity involved in assessing hazardous and/or banned chemicals. Texanlab boasts modern testing facilities with the latest in gas chromatography, liquid chromatography and ion exchange techniques. We are fully equipped to meet the testing requirements of global standards and regulations including – but not limited to – CPSIA and GOTS.

– Vinod Kumar, General Manager, Texanlab



Color Solutions International works with brands and retailers as early as the design phase, turning their color inspirations into reality. Finding the right color is a difficult task. Reproducing it can be even harder. From inspiration, to selection, to production, designers require a fast, efficient, accurate process to select colors and bring their designs to the world.

**Helping Designers Make Informed Decisions**

The decisions made at the design phase greatly affect the later decisions made by the rest of the supply chain. They have the greatest potential for changing the output of the process. To make an impact on the process, designers should think of themselves as not only part of an artistic process, but also part of an engineering process. Most design decisions related to color will result in a chemical decision later in the value chain. For example, something as simple as deciding to choose a bright pastel pink on cotton versus a duller shade most likely will result in the fabric being bleached as opposed to simply scoured. Bleaching, it should be noted, requires more energy and chemicals during fabric production.

**Tackling Waste During the Design Process**

Smart design decisions can drastically reduce waste across the value chain, but the design process itself can also be resource-intensive. CSI's products facilitate a sustainable process for the designer. Color Inspirations and ColorWall™ provide trend-aligned colors that can be used in the design. The designer simply specifies the color required by referencing the desired trend inspiration color, and color standards can be produced from already-prepared fabric. This eliminates the costly and wasteful process of lab dipping and color approval for each new color.

There is also often the need to reproduce palettes or display groups of colors, resulting in a lot of printed paper. Working in a virtual environment results in less waste. The alternative to the digital colors are the CSI Design Tools, which are reusable and therefore cause less waste.



Brands, retailers and their textile production partners desire assurance that their textiles and apparels are safe for people and the environment. DyStar's econfidenc® team works to ensure that chemicals entering the value chain are not contaminated with substances that are harmful to people and the environment. econfidenc is backed by the most extensive testing program of any dye and chemical supplier to the textile industry.

**Encouraging Sustainable Suppliers**

DyStar's responsible sourcing practices do not only impact downstream stakeholders. By rewarding contracts to responsible suppliers, DyStar's upstream partners have an added incentive to maintain sound practices, and improve their social and environmental performance.

**Enabling Supplier Sustainability**

Companies are increasingly encouraged to search beyond internal operations for opportunities to reduce their environmental footprint as well as to remain competitive. As a leader in the industry, DyStar sees it as a duty to positively influence the performance of external stakeholders wherever possible. Often, keeping the lines of communication open with suppliers makes it possible to identify optimal solutions. To illustrate, the Nanjing Production Plant recently collaborated with suppliers to reduce packaging waste. Besides the benefits to the environment, both parties achieved cost saving as a direct result of this mutually beneficial arrangement.



CSI has the tools and know-how to accurately communicate and efficiently distribute colors from brands and retailers to their production partners. Color communication is a strong determinant of whether the desired result can be realized, with the potential to save or cost the producer both money and resources. CSI provides a comprehensive color management program with coordinated colors across substrates to ensure colors are correctly achieved on products, packaging and marketing materials. Simply stated, CSI ensures color consistency. It does not matter where the merchandise is manufactured; CSI's Certified Color Standards provide accurate color communication across the globe.



econfidenc® is more than DyStar's responsible sourcing program. It is a commitment from DyStar toward the ecological quality of its dye and auxiliary products. econfidenc guarantees that all DyStar products are sold in full compliance with chemical legislations worldwide. This assurance allows downstream stakeholders to proceed confidently in their business activities. Brands and retailers who place their trust in econfidenc gain multiple benefits:

- Confidence in the eco-performance of their textiles and garments
- Help in communicating how to meet eco-specifications to their textile production partners
- Shorter lead times and more reliable supply
- Support for reputation and brand integrity
- Advice on the coloristic consequences of their Restricted Substances List (RSL) criteria
- econfidenc hangtags are offered to customers as an effective way for them to communicate the safety and value of their textiles and garments to potential buyers



DyStar's Sustainable Textile Solutions unit has a proven track record in helping textile manufacturers optimize production and resource consumption. They reduce operational costs for customers, all while delivering the same or better quality of goods required.

The STS team also supports brands and retailers in their efforts to develop, implement and communicate their Restricted Substances Lists (RSLs) to existing as well as aspiring production partners. At the same time, by facilitating compliance with brand and retailer RSLs, the STS team also assists textile and apparel producers in mitigating their impact on society and the environment.



DyStar's Texanlab unit provides accurate and reliable testing services to guide textile and apparel producers through the complexities of chemical compliance. They are equipped to meet the most stringent industry testing standards and resolve failures in the customer supply chain.

Texanlab has the capabilities to meet all major brand and retailer testing requirements. Beyond testing services, they also help textile producers meet buyer specifications through guidance and training, thus widening the pool of responsible suppliers for brands and retailers to choose from.



Textile and apparel producers can access eliot via the internet and use the Product Finder module to identify a dye or auxiliary that meets the requirements of a restricted substances list (RSL) or a voluntary eco-standard. The Optidy® module lets users explore multiple parameters to decide on the optimal recipe for their selected product.

The sustainable procurement manager of a brand or retailer aims to comply with the latest chemical eco-standards. eliot serves as a one-stop center for DyStar's extensive collection of compliant dyes and chemicals. For the hands-on procurement professional assisting multiple textile production partners, eliot serves as a convenient self-service tool that allows users to make quick and informed product choices.

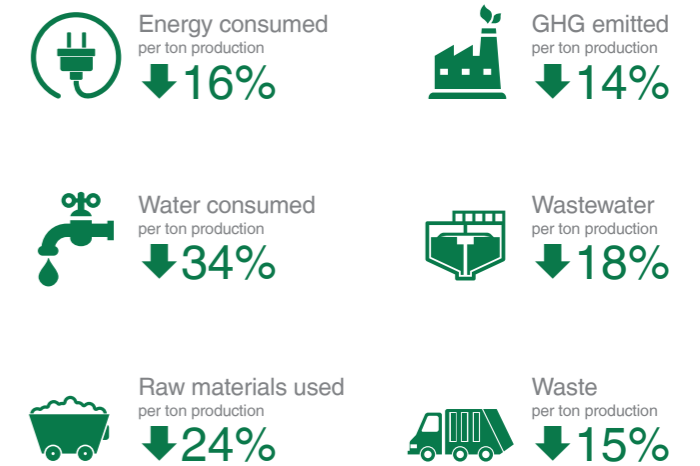
# Conserving Planetary Resources

[G4-DMA, G4-EN3, G4-EN5]

Half a decade ago, we set out on a mission to reduce the intensity of our resource consumption and waste production by 20% of 2011 levels. The 2020 goal applies to production inputs including energy, water and raw materials, as well as to their corresponding outputs – namely greenhouse gas, waste and wastewater. Environmental performance is more than a material issue to our stakeholders. Resource efficiency is essential to the long-term competitiveness of DyStar as a business, so we employ a centralized platform to monitor consumption across all 14 production plants, as well as the 20 key offices and laboratories.

In 2015, we saw improvements across all targeted areas compared to baseline values from 2011. Our production teams made strong and concerted efforts to meet their respective targets, but they are not resting on their laurels. At DyStar, we understand that sustainability is a journey without a finish line, because there will always be a generation vested with the duty of preserving our planet's resources; and a younger one waiting around the corner to inherit that privilege.

## FIVE-YEAR ENVIRONMENTAL PERFORMANCE SUMMARY: 2015 vs. 2011



## ENERGY

Energy efficiency across our production sites improved for the second year in a row, despite increasing production volumes. In 2011, at our least efficient, we needed almost 10 GJ of electricity, steam and fuel for every ton of product created. Today that figure is down 16% to 8.4 GJ per ton production. Our total energy consumption also resisted the trend of rising production levels. We manufactured 14% more product in 2015 compared to 2011 but, in that same period, total non-renewable energy usage went down by 4.4%, from about 1,266 TJ to 1,210 TJ

Most energy consumed at DyStar is used to run plant machinery, IT systems and air conditioning. Steam is used to heat chemical and physical processes. Although steam is usually purchased, a portion is also produced on-site.

In 2015, dye production activities accounted for 1,122.7 TJ of our energy demand at DyStar. By comparison, our auxiliary production activities consumed 52.7 TJ. To put that into perspective, it is only slightly more than the combined demand of our offices and laboratories which used 34.5 TJ.

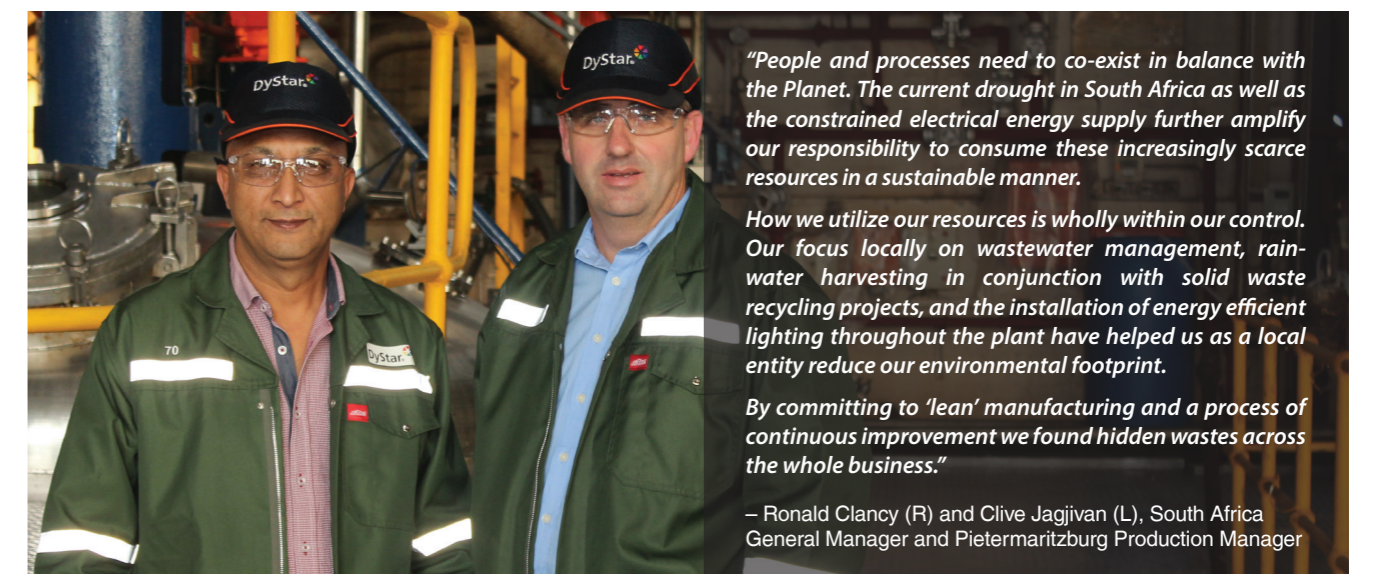
SPOTLIGHT ON

### Denim Solutions

#### DyStar Indigo Vat 40% Solution – the cleanest Indigo on the market

Our core denim product represents the state-of-the-art in pre-reduced Indigo liquid, giving our customers a cleaner denim production and significant saves of up to 70% from sodium hydrosulphite consumption. Textile producers who have switched to DyStar's Indigo Vat 40% Solution not only generate cleaner wastewater. They also waste less energy and resources on treating wastewater.

See page 29 to learn how our products are helping customers conserve planetary resources



*"People and processes need to co-exist in balance with the Planet. The current drought in South Africa as well as the constrained electrical energy supply further amplify our responsibility to consume these increasingly scarce resources in a sustainable manner."*

*How we utilize our resources is wholly within our control. Our focus locally on wastewater management, rain-water harvesting in conjunction with solid waste recycling projects, and the installation of energy efficient lighting throughout the plant have helped us as a local entity reduce our environmental footprint.*

*By committing to 'lean' manufacturing and a process of continuous improvement we found hidden wastes across the whole business."*

– Ronald Clancy (R) and Clive Jagjivan (L), South Africa General Manager and Pietermaritzburg Production Manager

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[G4-EN3, G4-EN5, G4-EN6]

Indirect energy, including energy from purchased electricity and steam, continue to make up over 70% of our overall energy consumption, amounting to more than 873 TJ or 242.7 million kWh. Annual consumption in this category has gone down by about 122 TJ, or 12%, compared to base year. Among direct energy sources, natural gas accounts for a full 25% of our overall consumption. The remaining 5% can be attributed to a combination of stationary combustion fuels and vehicular fuels. Currently, only 1% of our electricity consumption is derived from renewable sources, and is exclusively used by the Mem Martins Production Plant.



**“ We are pleased to announce that DyStar Germany was awarded ISO 50001 certification in 2015. Our goal was on the sustained increase of energy efficiency of our production process and the consequent reduction of CO<sub>2</sub> emissions. This achievement has triggered new impetus across the company to implement similar energy management systems.**

*By using our energy management system, according to DIN EN ISO 50001, we are able to identify new opportunities early on and take appropriate technological, organizational and behavior-altering measures. Our employees are actively involved in the design and implementation of our energy policy.*

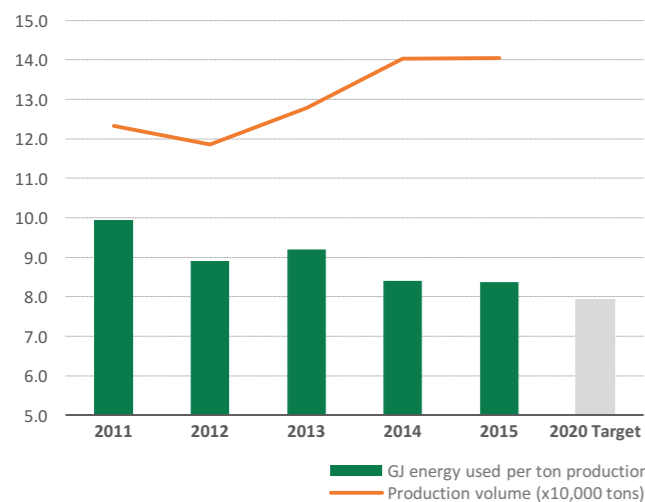
– Dr. Andreas-Johann Schmidt, Head of Ludwigshafen Production Plant

The variability of product mixes and production volumes from year-to-year continue to challenge our ambitions to further improve energy efficiency. However, active efforts to counter these forces have, thus far, reaped positive results. Total non-renewable energy consumption, including direct and indirect energy sources, was 4% lower in 2015 compared to 2011, despite a 14% increase in production volume over the same period.

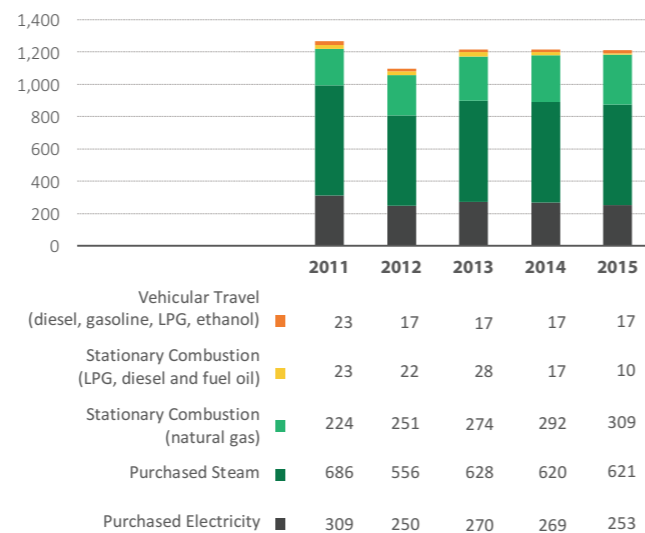
At the most basic level, our energy management approach involves monthly management reviews with individual production teams to monitor performance and assess the feasibility of newly proposed energy solutions. The vast majority of our consumption and, likewise, most of our resource savings come from the 14 production sites. Some of the more notable team initiatives in 2015 were implemented at the Pietermaritzburg Production Plant, where annual savings of 330,000 MJ were realized. They accomplished this reduction by streamlining their operations and product range, as well as optimizing production processes across the plant.

Elsewhere, a new policy aimed at reducing vehicle dependence across multiple locations – including the Ankleshwar Production Plant, the Mem Martins Production Plant, the Mumbai Office, Texanlab and the Istanbul Office – have collectively yielded diesel savings of 7,000 liters in one year. The Naucalpan Production Plant and the Raunheim Office went a different route by purchasing more fuel-efficient vehicles and achieved diesel savings of 7,000 and 5,000 liters respectively.

#### NON-RENEWABLE ENERGY INTENSITY



#### NON-RENEWABLE ENERGY CONSUMPTION BY SOURCE (TJ)



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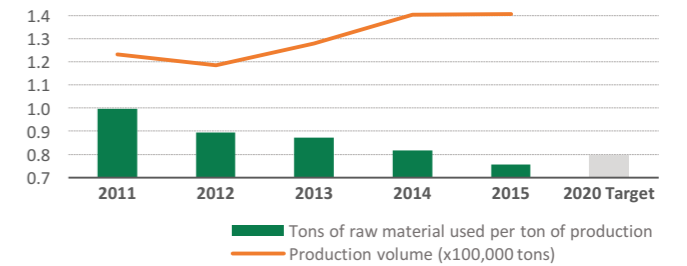
[G4-DMA, G4-EN23]



## RAW MATERIALS

Raw materials utilization intensity is 24% lower than in 2011, exceeding our 2020 reduction target by 4%. This outcome can be credited to product mix effects and improved process efficiency. In adopting the core principles of green chemistry, we are continuously optimizing our manufacturing processes in such a way that chemical yield is maximized and the generation of waste is minimized.

#### RAW MATERIAL USAGE INTENSITY



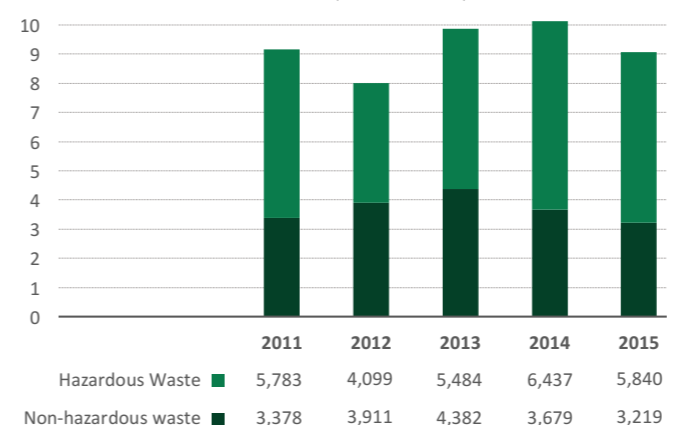
## HAZARDOUS AND NON-HAZARDOUS WASTE

Hazardous and non-hazardous waste production is 10% lower than the previous year, but only 1% down compared to base year 2011. Although our production levels went up by 14% between 2011 and 2015, overall waste production did not change significantly over that same period. As a consequence, waste production intensity is down by 15% compared to base year.

Among the many initiatives undertaken by our production teams in 2015, the Gabus Production Plant most notably reduced their landfilled waste by 280 tons – accomplished by segregating and recycling non-hazardous waste produced through their operations.

Elsewhere, at our Nanjing Production Plant, a partnership scheme with selected raw material suppliers resulted in the reuse of 470 drums and 10,000 Flexible Intermediate Bulk Containers (FIBCs). This unique agreement with our suppliers means that drums and FIBCs, used as packaging for selected raw materials, are returned to their original suppliers where they are reused to package the same product. By helping our suppliers reuse undamaged packaging material, the Nanjing Production Plant simultaneously reduced their annual demand for specialized waste disposal services. Pioneered by our Procurement team and the Nanjing Production Plant team, this initiative is an example of the benefits that can be reaped from collaborating externally with partners across the value chain and creating optimal solutions.

#### WASTE PRODUCTION BY CATEGORY (thousand tons)

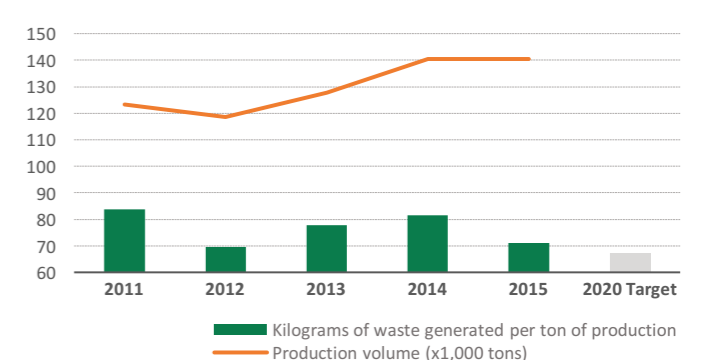


Non-hazardous waste at DyStar consist mainly of office waste materials as well as uncontaminated packaging material and pallets. Uncontaminated waste that cannot be recycled is disposed via the municipal waste collection system. Hazardous waste from our production plants consist mainly of packaging material from raw material suppliers and product residues; as well as residues from the distillation recovery of solvents and residues from the evaporation of wastewater at zero discharge plants.

## 1,700 tons of waste reused, recycled or recovered in 2015.

Across our production plants, hazardous waste is handled with the utmost precaution. Disposal activities are carried out in compliance with prevailing local regulations. Hence, hazardous waste that exit our premises are transferred to licensed third-party waste management vendors. We do not tolerate unethical practices from contracted waste management vendors and have no hesitations about terminating relationships with service providers that do not act in compliance with local regulations. Further, regardless of local laws and regulations, our policy does not permit hazardous waste to be transported outside the physical boundaries of the countries where our respective production units are located.

#### WASTE PRODUCTION INTENSITY





## WATER

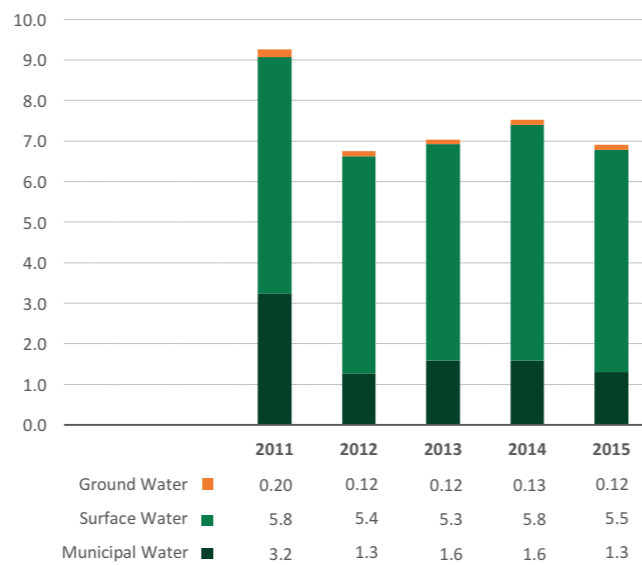
[G4-DMA, G4-EN8, G4-EN10]

Water efficiency has improved for the fourth consecutive year at DyStar. The 20% reduction target was met early on, in 2012, largely helped by a strategic decision to close two of our older production plants. This experience highlights the detrimental impact that retaining outdated infrastructure can have on an organization's environmental footprint. Compared against 2011, we now withdraw 34% less water for every unit of product created. However, it is not only our efficiency that has improved. Overall consumption of municipal water, ground water and surface water went down by 8% in the past year alone - amounting to over 620 thousand m<sup>3</sup> in savings. Production plants are responsible for over 99% of DyStar's water consumption. Hence, our manufacturing teams are always seeking more efficient ways to consume water in the face of rising production levels.

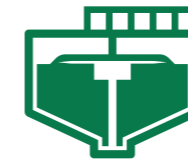
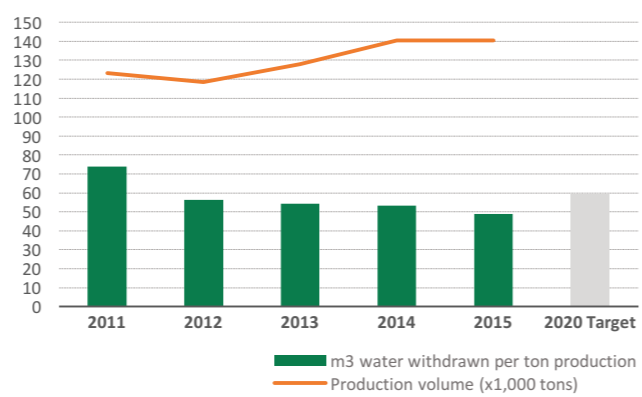
Against pervasive pressures from product mix and production volume changes, active measures have to be implemented to ensure that water efficiency improves every year. For the team at our Pietermaritzburg Production Plant, though, a drought in their country of South Africa has given water efficiency efforts a strong social dimension. More than ever, they recognize their duty as a business to consume resources responsibly. Over the course of 2015, a product range rationalization drive allowed the Pietermaritzburg team to streamline vessel cleaning operations that resulted in 50% water savings - the equivalent of 6,000 m<sup>3</sup> per annum.

The vast majority of our water savings are achieved by reusing condensate from purchased steam. At a number of production sites, we require large quantities of steam and the resulting condensate is reused for cooling and/or cleaning purposes. Because the cooling process takes place through indirect heat exchange mechanisms, cooling water remains uncontaminated by chemical mixtures and can be reused again for other purposes. The influence of these practices cannot be overstated. Altogether, 21% of our requirement is currently met by reusing water that, to a large extent, is composed of steam condensate. In 2015, alone, more than 1.7 million m<sup>3</sup> of water was reused.

WATER WITHDRAWALS BY SOURCE (million m<sup>3</sup>)



WATER WITHDRAWAL INTENSITY



## WASTEWATER

[G4-DMA, G4-EN22]

Wastewater intensity is down by 10% compared to 2014; 18.4% compared to base year 2011. Our teams made rapid progress toward the 2020 reduction target to generate no more than 11.6 m<sup>3</sup> of wastewater for every ton of production. We look forward to achieving that target ahead of schedule.

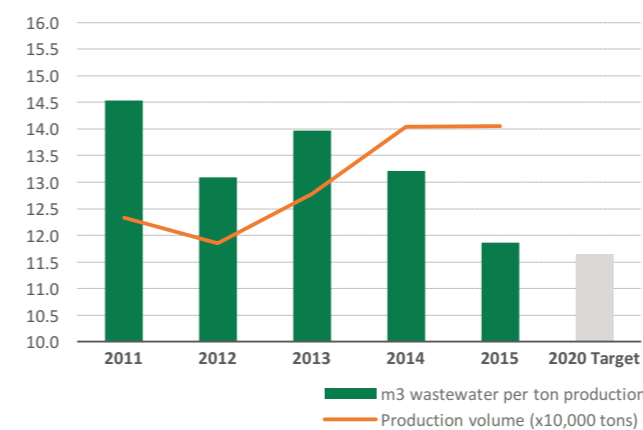
While production levels have been on the rise, annual wastewater production has dropped to 1.66 million m<sup>3</sup>, i.e. 10% and 7% less than in 2014 and 2011 respectively. Over the past five years, we have systematically reduced the volume of cleaning water needed for product changeovers. This was accomplished by simply being more efficient at production planning and maximizing batch sizes where

feasible. Beyond planning changes, we have also leveraged on improved technology. For example, at our Nanjing Production Plant, the practice of recovering methanol for reuse in selected processes has secured significant results. Wastewater reductions derived from this measure totalled to almost 58,000 m<sup>3</sup>.

Where wastewater is concerned, ensuring safe and adequate treatment is just as, if not more, important as reducing the volume generated. Before wastewater leaves any one of our properties, we employ a combination of on-site treatment measures, depending on the physical and chemical nature of wastewater generated at each production site. To ensure that regulatory limits are not exceeded, wastewater intended for further treatment at municipal plants undergo monitoring for all necessary parameters before exiting our premises. Likewise, wastewater destined for final treatment at private third-party treatment plants also undergo monitoring to ensure that safe limits are not exceeded.

At locations where wastewater is discharged directly to a nearby river body, we take precautions to minimize the impact to river-dependent ecosystems. At the Ludwigshafen Production Plant, for example, only uncontaminated cooling water is released into the river. Further, to mitigate any impact on the early-stage development of aquatic species, cooling water is monitored against high temperatures before exiting the production site. At both the Apiuna and Corlu Production Plants, cleaning water undergoes on-site treatment and is also closely monitored before release to ensure that acceptable levels of chemical oxygen demand (COD) are not exceeded.

INTENSITY OF WASTEWATER PRODUCTION



### RESPONSIBLE WASTEWATER MANAGEMENT AT DYSTAR LOCATIONS

- Pietermaritzburg Production Plant, South Africa
- Apiuna Production Plant, Brazil
- Nanjing Production Plant, China
- Ankleshwar Production Plant, India
- Mem Martins Production Plant, Portugal
- Omuta Production Plant, Japan
- Samutprakarn Production Plant, Thailand
- Corlu Production Plant, Turkey
- Reidsville Production Plant, USA
- Dalton Production Plant, USA
- Gabus Production Plant, Indonesia
- Wuxi Production Plant, China
- Ludwigshafen Production Plant, Germany
- Naucalpan Production Plant, Mexico

#### LEGEND

##### On-site Wastewater Treatment

- Precipitation / Coagulation / Flocculation
- Sedimentation or settling tank
- pH neutralization
- Chemical treatment
- Biological treatment
- Anaerobic pond
- Sequence batch reactor
- Dissolved air flotation
- Distillation
- Evaporation and Spray Drying
- Filtration
- Reverse Osmosis

##### Off-site Wastewater Treatment

- Municipal wastewater treatment facility
- Discharged to river after monitoring
- Industry park wastewater treatment plant
- Zero Discharge Plant
- Sludge treatment by licensed contractor



Reidsville Production Plant Wastewater Pre-Treatment Facility

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[G4-DMA, G4-EN15, G4-EN16, G4-EN18]



## GREENHOUSE GAS EMISSIONS

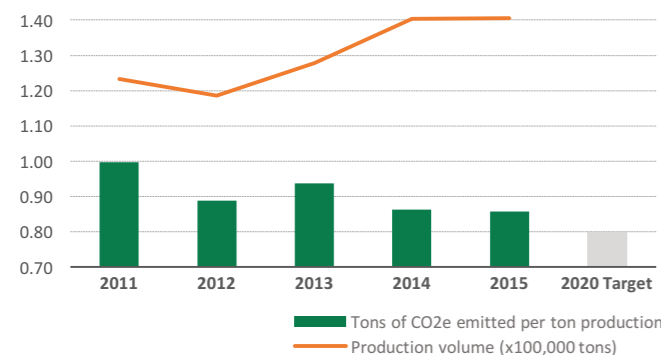
Greenhouse gas (GHG) emissions intensity stands at 0.86 tons CO<sub>2</sub>-equivalent (tCO<sub>2</sub>e) for every ton of production at DyStar. We emitted nearly 1 tCO<sub>2</sub>e for every ton of production in 2011 and gradually improved that figure by 14% over the following four years. In 2013, our emissions intensity experienced an unfortunate and temporary increase. This spike was caused by an effort to develop our backwards integration. However, subsequent initiatives targeted at reversing the 2013 setback have proved successful. As of 2015, we have met 70% of the 2020 reduction goal to emit no more than 0.8 tCO<sub>2</sub>e for every ton of production.

Overall, GHG emissions in 2015 totalled to 124.3 thousand tCO<sub>2</sub>e, down by 3% compared to 2011. Meanwhile, production volume soared by 14% in that same period. Dye production plants were responsible for more than 93.4% of our GHG emissions. Auxiliary production plants and non-production sites, including laboratories and offices, accounted for 3.6% and 3% of total emissions.

Scope 1 emissions are those that occur from sources owned or operationally controlled by DyStar. They include emissions from stationary combustion fuels, vehicular fuels, process emissions, refrigerants and ozone-depleting substances. Among Scope 1 emission sources, natural gas, alone, accounted for nearly 16.7 thousand tCO<sub>2</sub>e. Scope 2 emissions, i.e. emissions derived from purchased electricity and purchased steam, continue to make up the vast proportion of our footprint. Sources in Scope 2 were responsible for 104.8 thousand tCO<sub>2</sub>e in 2015. Scope 3 emissions are not assessed in this report.

The methodology we employ to quantify Scope 1 and Scope 2 emissions and emissions intensity is in accordance with the World Resources Institute / World Business Council for Sustainable Development (WRI/WBCSD) Greenhouse Gas Protocol Corporate Standard. Scope 1 greenhouse gases are selected for reporting based on their presence in our operations. Hence, CO<sub>2</sub>-equivalent figures for Scope 1 emission sources include carbon dioxide, methane, nitrous oxide and hydrofluorocarbons. Global Warming Potentials (GWPs) and Scope 1 emission factors are sourced from WRI/WBCSD GHG Protocol guidelines.

### GREENHOUSE GAS EMISSIONS INTENSITY

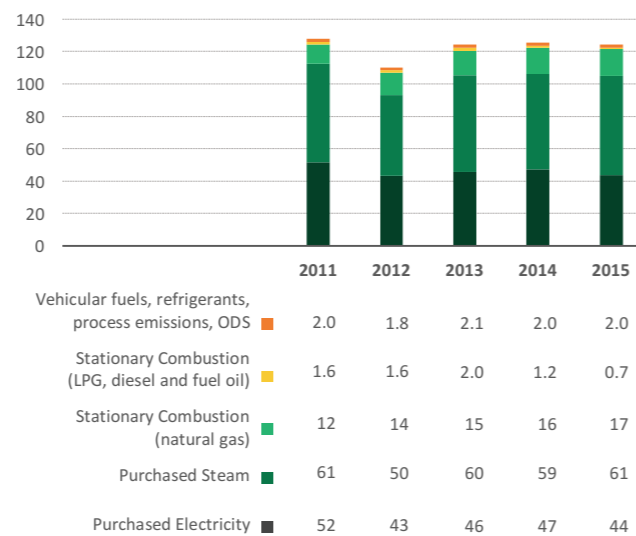


**“** We were focused in 2015 on continuous process improvements, energy management and optimizing product supply across our global operations. For example, we were able to reduce air transportation further, minimize cross-regional shipments and optimize container loads. This endeavor helped reduce emissions beyond the area of product manufacturing and highlighted the importance of targeting Scope 3 emissions. We will work to expand the boundaries of our emissions reporting in years to come.

– Gerald Talhoff, VP, Global Manufacturing and Supply Chain

Since the previous report, our purchased electricity emission factors have been updated based on figures from the UK Department for Environment, Food and Rural Affairs (Defra). The modification to purchased electricity emission factors does not significantly impact our reported performance. Where purchased steam is concerned, however, we have discontinued the conservative approach of applying purchased electricity emission factors to estimate emissions attributable to the steam production process. We now use nationally set factors specific to the steam production process. This adjustment reduces our overall emissions profile considerably but produces a more accurate carbon footprint for DyStar. Readers can rest assured that the revised emission factors for purchased steam do not artificially skew our reported performance. We took the precaution of applying the revised steam emission factors to all years from 2011 onwards, so our report provides a true reflection of DyStar's emissions performance from year-to-year.

### GREENHOUSE GAS EMISSIONS BY SOURCE (thousand tons CO<sub>2</sub>e)



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[G4-EN7, G4-EN27]



## PRODUCTS DESIGNED TO MAKE A DIFFERENCE

### Cadira Reactive – Saving Cost and Valuable Resources in Reactive Dyeing

We want our customers in textile production to know that being environmentally responsible is not necessarily more expensive. By investing in better products and processes, and thereby improving resource efficiency, textile manufacturers can achieve cost savings and simultaneously reduce their impact on the environment.

Cadira Reactive is DyStar's new resource efficiency program for reactive dyeing. The module helps brands, retailers and their production partners save on energy, water and steam. Besides being a more energy- and water-efficient process, Cadira also delivers significant reductions in greenhouse gas emissions and wastewater.

How does it work? It's all about the right combination of dyes and auxiliaries.

- 1 High Fixation Dyes**  
Cadira is a selection of Remazol and Levafix dyes that have high fixation yields, thus ensuring a more effective dyeing process and reduced wastewater.
- 2 Process Optimization**  
Compared to conventional dyes, the selected Cadira dyes offer similar or enhanced fastness performance. Cadira has the added advantage of being effective at lower application temperatures, which leads to additional energy savings.
- 3 Special Wash-off Process**  
Using DyStar's Sera Fast C-RD allows a lower temperature wash-off at 60°C instead of 100°C. The process also requires only four instead of six wash-baths which reduces overall water consumption by almost 30%.



**“** The DyStar Group launched Cadira, a resource efficiency concept that promotes our Best Available Technology (BAT). Cadira concepts considerably reduce water, waste and energy consumption. They will help brands, retailers and their production partners to save valuable resources, reduce the carbon footprint of their textile goods and increase productivity by improving the utilization of machinery.

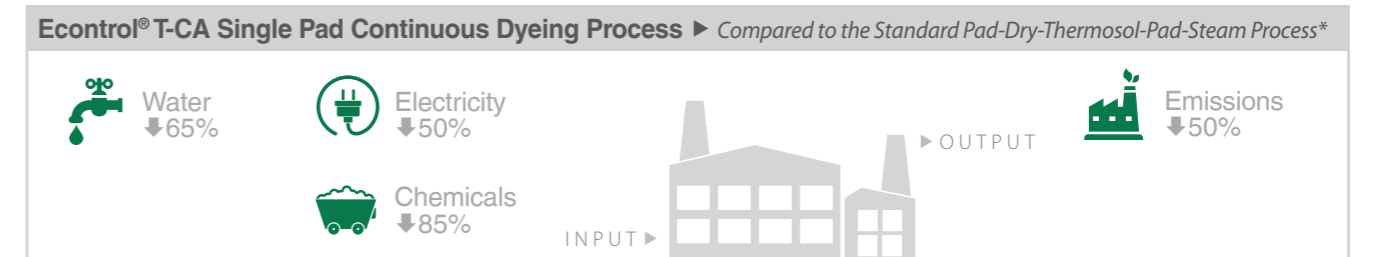
– Fanny Vermandel, VP, Global Marketing Coloration

### Econtrol® T-CA – Sustainable Technology for Continuous Dyeing

Rising cost pressure remains a problem in the textile industry. It is a particularly pertinent issue for parts of the industry that specialize in woven polyester/cellulose. The conventional pad-dry-thermosol-pad-steam (PDTPS) dyeing process used for PES/CO fabric is as complicated as it sounds. Consisting of multiple separate and repetitive steps, it is a system that frequently leads to high costs and poor reproducibility. By contrast, Econtrol T-CA is a significantly shorter process, involving 3 steps instead of the 8 required in PDTPS.

As a single bath process, Econtrol T-CA may seem minimalistic but its simplicity belies the significant cost and resource savings that can be achieved. Econtrol T-CA delivers tangible benefits for customers through a smart combination of machinery, dyes and auxiliaries.

- 1** No intermediate reduction clearing and no steamer required
- 2** Wide range of shades available to fulfill fastness requirements
- 3** Significant cost savings for textile producers



\*Actual reductions may vary. Figures presented in diagram represent best known performance results.



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[G4-EN7, G4-EN27]



## PRODUCTS DESIGNED TO MAKE A DIFFERENCE

### DyStar Indigo Vat 40% Solution – The Cleanest indigo on the Market

The core product of the DyStar Denim Package is our patented Indigo Vat 40% Solution. This state-of-the-art in pre-reduced indigo liquid allows a consistently cleaner denim production and a reduction in sodium hydrosulphite consumption by up to 70%.

It cannot be emphasized enough that indigo was and still is a challenging pigment to work with. This is in part because it is intrinsically insoluble in water. To this day, conventional indigo powder must be rendered water-soluble through chemical reduction with hydrosulphite before it can be used in the dyeing process. The reduction step is usually carried out manually by exposed dye workers. With DyStar Indigo Vat 40% Solution, however, reduction is carried out in a closed system at our production plant; and realized through catalytic hydrogenation, with water being the key by-product.

#### Why DyStar Indigo Vat 40% Solution is Safer and Cleaner:

- 1 Workers do not come in direct contact with the product because it is supplied as a solution rather than a powder. This also makes it easier to handle safely.
- 2 Indigo Vat 40% Solution is a liquid and, hence, does not pose the respiratory risks associated with a powdered product
- 3 Required chemical input is significantly reduced. Customers also save on the cost for specialized waste disposal as a result.
- 4 By doing away with the hydrosulphite-dependent chemical reduction step, considerably less sulphates end up in wastewater. Up to 70% reduction in COD levels is achievable, with proportionate energy savings derived from the reduced load on effluent treatment plants.

#### Indigo Vat 40% Solution ▶ Compared to Conventional Powdered Indigo\*



### Jettex® 4.0 – The Highest Performing Digital Textile Printing Inks

Digital textile printing is a relatively new technology. Producers who want to join this specialized industry require new inks that meet more stringent requirements. Among other things, digital printing demands tighter drop forming performance, improved stress resistance, higher color strength, high fastness properties and, of course, reliable eco-performance. In response to the new industry standards, DyStar partnered with Zimmer Austria to create Jettex 4.0 – the highest performing digital textile printing inks.

#### Benefits of Jettex 4.0 Printing Inks:

- 1 Trouble-free printing
- 2 High color yield
- 3 Top fastness levels on polyester fabrics
- 4 Suitability of inks with various printheads gives users flexibility

#### Why Digital Printing is More Sustainable than Screen Printing:

- 1 Digital textile printing eliminates the considerable amount of energy and water that producers normally require for rotary screen preparation, printing and clean up.
- 2 Digital textile printing requires less ink and, therefore, results in less chemical waste compared to screen printing.
- 3 Digital printing allows manufacturers the ability to print a design at will, reducing the need to store pre-printed fabric that may or may not be sold and, hence, also reducing the potential for waste.
- 4 To set up a digital print shop, an aspiring producer would require lower capital investment compared to rotary screen printing production. This makes it easier to set up an operation – even if in a small way – and expand as business develops.

\*Actual reductions may vary. Figures presented in diagram represent best known performance results.

COMMITTED TO SUSTAINABILITY ACROSS OUR VALUE CHAIN



#### SPOTLIGHT ON

### Digital Printing Solutions

#### Jettex® Inks for environmentally sound digital textile production

With reliable printing performance and high reproducibility, our range of Jettex inks are the dependable choice for digital textile producers. The more environmentally sound choice, digital textile printing is also versatile and can be used for fashion, home textiles and more...

# Caring For People

[G4-DMA, G4-LA9, G4-LA11]

Staff wellbeing is essential to DyStar's success. We can only be as great as the hearts and minds of the people who choose to work with us. The foundation of our employee engagement program hinges on skills enhancement as well as maintaining safe and productive work environments. By providing fair and ample opportunities to our diverse workforce, we hope to help them succeed both personally and professionally. All permanent employees receive annual performance and career development reviews each year so they can grow with the company. The success of our approach is evident in the diversity of our workforce and the growing number of staff who choose to maintain long-term relationships with DyStar. Globally, 30% of our management is comprised of women; among technical staff, this figure rises to 35%.



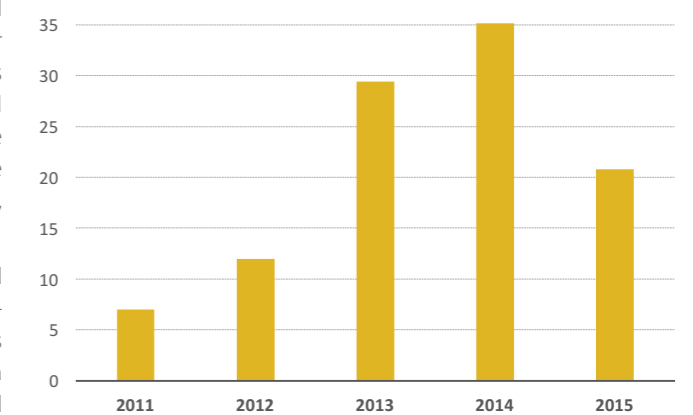
## SKILLS ENHANCEMENT

Skills Enhancement gives our employees the opportunities to develop knowledge and know-how needed for professional growth. We see it as a way of levelling the playing field. Skilled labor is not always readily available in the areas where we operate. This is particularly true of our production plants, some of which are situated among rural communities. At these locations, we prefer to provide opportunities to members of the local community who have completed their basic education. By providing on-the-job training, they gain skills and lasting employment prospects in the industry.

Across our organization, learning opportunities are provided throughout the year to keep staff up-to-date on the latest advancements in our industry. The Human Resources group regularly assesses the training requirements of DyStar employees and develops a training calendar accordingly. Their 2015 program encompassed group training, leadership work-shops and customized skill-building.

We made a conscious push over the previous two years to boost English language skills - the lingua franca at DyStar. This has improved the ability of our teams to share and receive knowledge with colleagues from around the world. Health and safety training has also been at the forefront of our skills enhancement program.

EMPLOYEE TRAINING (thousand hours)



Because an increasing number of our employees opt to maintain long-term relationships with DyStar, we have been able to reduce the training sessions that would have been required for new joiners. Hence, training hours appear to have dipped in 2015, compared to the previous year.

SPOTLIGHT ON

### Wool Solutions

**Realan® Navy MF-RRN and Realan Black MF-PV – new, metal-free options in wool dyeing**

DyStar offers solutions to the biggest segments of the wool market. Customers can choose from very deep, clear bloom shades designed for high processing and wet fastness. To achieve a cleaner production for customers, Realan Navy MF-RRN and Realan Black MF-PV are also free of chrome and other heavy metals. Young children may be particularly susceptible to the effects of heavy metal exposure but adults are not immune. Our heavy metals-free chemistry takes into account the safety of our customers' employees, the communities that reside near their manufacturing sites and the final end-user.

See pages 16-17 to learn more about how DyStar cares for people through responsible product design



DyStar Singapore's 2015 team building exercise, "One Team, One Dream"

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[G4-10, G4-DMA, G4-LA6]



## OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety is a vital responsibility borne by our Ecology, Health, Environment and Safety (EHES) Group. The training programs and guidelines developed by our EHES teams at each location are a major component in ensuring that staff, across production plants and laboratories, understand the need to exercise vigilance with the aim of protecting themselves as well as their colleagues. DyStar's workplace health and safety policy is structured on the "Guidelines for Responsible Care in Environmental Protection, Health Protection and Safety". Subcontractors are also required to adhere to the health and safety guidelines applicable at each work site.

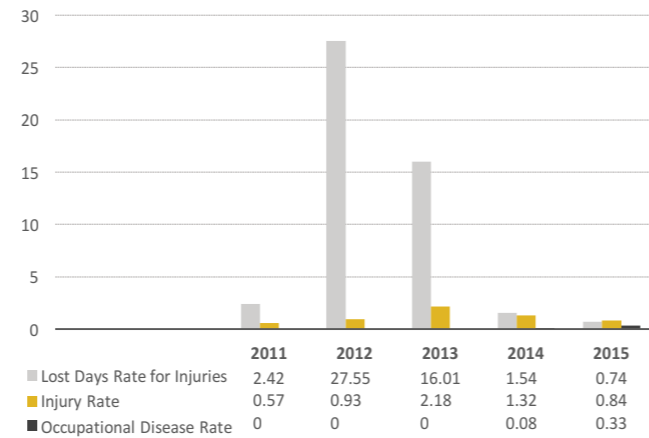
One of the fundamental elements of our program is the provision of adequate personal protective equipment (PPE) to employees, so they are protected from direct as well as long-term health risks. Regular site assessments are another key aspect in our health and safety program. We approach site assessments with the utmost diligence to ensure compliance with both internal as well as external standards. Our EHES teams at each site work to make sure that we act in compliance with all applicable local and national health regulations, safety regulations and labor laws. As a follow up to each assessment exercise, all identified gaps are addressed within a set timeline. In the event of an accident or incident, our on-site teams are required to investigate the cause of the incident and implement appropriate plans-of-action so that similar incidents do not occur.

Through the careful implementation of our health and safety guidelines, we did not experience any workplace fatalities in 2015. However, 10 colleagues suffered workplace injuries. Although recorded injuries have gone down, in terms of frequency and severity, compared to previous years – those 10 injuries give us strong reason to continue striving for safer work environments.

In 2015, there were 6 spillage incidents involving a total of 1.1 m<sup>3</sup> of liquid. In each case, a product had been inadvertently spilled on the concrete floor of a production site or warehouse. No staff were

### HEALTH AND SAFETY PERFORMANCE

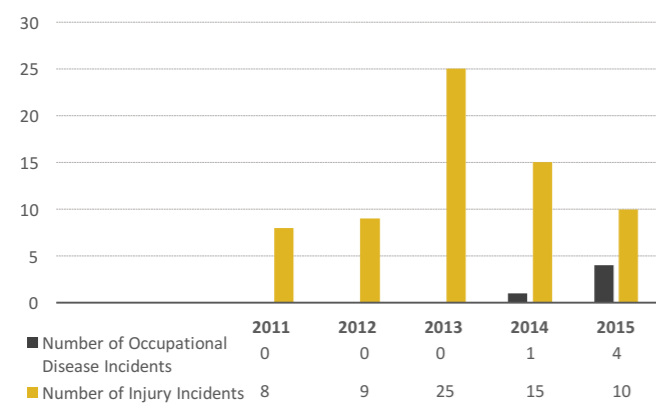
Incident rate = No. injuries or illnesses X 200,000 hours / Total no. work hours



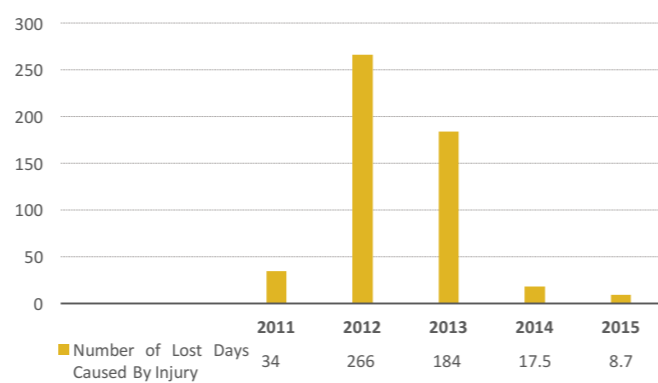
injured in any of the spillage incidents. To mitigate the potential for impact on the environment and human health, our teams follow strict clean-up procedures after every incident.

In keeping with our principle of being transparent, we highlight here an incident that occurred in June 2015, where a human error caused a runaway reaction at our Reidsville Production Plant. The resulting chemical release did not cause any human injuries or fatalities. A product mixture breached the plant's rooftop and affected an adjoining property as well as a nearby road. Local authorities were closely involved in the remediation effort. Agencies for public health, environment and emergency response were also notified. Although no one was harmed, we see this incident as a valuable lesson. In the follow up to the investigation, precautionary measures were implemented across the plant to prevent similar accidents from occurring.

### OCCUPATIONAL INJURIES AND DISEASES



### LOST DAYS CAUSED BY INJURY



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[G4-11, G4-DMA, G4-HR3, G4-HR4, G4-HR5, G4-HR6, G4-HR9, G4-DMA, G4-SO1]



## HUMAN RIGHTS

Human Rights play a central role in DyStar's commitment to the United Nations Global Compact (UNGC) principles. DyStar does not support or condone child labor, forced labor or compulsory labor in any of the countries where we operate. We have not carried out formal human rights assessments at our operations. Instead of depending on once-off evaluations, our teams actively monitor their respective locations on a daily basis to address any risks or known breaches in ethical conduct. Staff are encouraged to report known violations to the Global Compliance Officer, whose contact details are shared with all new joiners.

The Social Accountability Declaration is part of DyStar's Code of Conduct. Accordingly, discrimination in any way, shape or form is not tolerated. Employees are entitled to freedom of association; the right to form and join trade unions; and the right to bargain collectively. In addition, trade union representatives have unhindered access to their members at our workplaces.

Through the supplier engagement process, we also carry out regular on-site visits to monitor our main material suppliers and service providers for signs of unethical conduct. We review our approach to supplier management on a regular and periodic basis. The goal of this continuing endeavor is to broaden the reach of our core values upstream in the value chain.



### WATER

Our Gabus Production Plant is one of the rare locations where we operate in rural surroundings. Since 1995, we have provided water to the neighboring Indonesian villages of Gabus, Linduk and Sangereng. In 2015, alone, over 34,400 m<sup>3</sup> of water was supplied to nearby communities free of cost.

To prevent wastage of our planet's most valuable natural resource, the Gabus team has also initiated a project providing faucet valves in parts of the villages where they are currently not installed.



## COMMUNITY ENGAGEMENT

Community Engagement is a pillar of our responsibility to society. We uphold the SA 8000 principles on social accountability as well as the values defined by Responsible Care®. Beyond formal pledges, though, it is an immense privilege for our staff to give back to society.

Each of our teams is responsible for identifying and executing social initiatives based on the needs of their local community. Across the value chain, communication with our stakeholders is the first step in addressing and resolving any real or perceived grievances. This is no different when interacting with local communities. In rural locations, where we operate near tightly-knit communities, we have found regular dialogue to be invaluable in helping us identify and resolve problems raised by the local population. It has also helped us better understand the fundamental needs of our neighbors, thus giving both direction and relevance to our philanthropic activities.

As DyStar continues to expand, so too does our impact on society. We are cognizant of the growing social responsibility that comes with our success as a business. Looking into the future, we expect to see greater social commitment and staff volunteering across our operations globally.



### SUSTENANCE

The team at our Reidsville Production Plant in North Carolina, USA organizes an annual food collection drive for the local food bank. 275 lbs. of food was donated in 2015. The Naucalpan Production Plant in Mexico held a similar event in 2015 to collect clothing, toys, diapers and other consumables for vulnerable members of their local community.

Through dialogue, the Gabus Production Plant team realized that members of their society could benefit more from food production than from food donations. In response, they expanded on the existing water program by helping local farmers develop more reliable irrigation canals.



### OPPORTUNITY

At least a quarter of our Indonesian colleagues are drawn from nearby rural locations. Our Gabus Production Plant has long benefitted from the pool of local talent produced by its surrounding communities. For years, the plant has provided on-the-job training and imparted skills that improved the long-term employment prospects of locals. When plans for a new cafeteria were formed in 2015, external vendors were not engaged. Instead, the Gabus team hired applicants from a local village and organized formal training to prepare them for the catering business.

The Apiuna Production Plant team continues to support the Association of Parents and Friends of Exceptional Children (APAE), an organization that helps children with disabilities and facilitates their integration into the society.

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# Communicating With Stakeholders [G4-25]

DyStar is committed to maintaining open and honest dialogue with internal and external parties. To build long-term and productive relationships, we proactively engage with our stakeholders, listen to what they have to tell us, and – to the best of our ability - respond to their concerns. We believe that the projects and partnerships born from active engagement have added immense value to our business and to each of our stakeholders' interests as well.

## PROJECTS AND PARTNERSHIPS RESULTING FROM DIALOGUE



The SAC is a collaborative venture of leading apparel retailers, suppliers and manufacturers, with participation from academics and NGOs. The central driver of the SAC is the Higg Index, which was developed to take a full life-cycle view of an apparel product and identify all major social and environmental impacts along its production chain from cradle to grave.

DyStar works closely with many brand and retail members of the SAC in creating seasonal color palletes through its Color Solutions International (CSI) business. CSI ensures the compliance of DyStar's products with the Restricted Substances Lists of brands and retailers through DyStar's econfidence program. Further up our value chain, the capacity-building programs run by DyStar's Sustainable Textile Solutions (STS) team provide support in implementing the Higg Index's Chemical Management module among textile manufacturers.



Brands and retailers are under increasing pressure from new regulatory requirements and NGOs. To meet the demands of their stakeholders, they now require greater chemical disclosure along their supply chain. Brands and retailers who have committed to the Zero Discharge of Hazardous Chemicals (ZDHC) goals are intent on eliminating hazardous chemicals from their supply chains by 2020. DyStar is an active member of the ZDHC Technical Advisory Committee (TAC). Early on, our Sustainable Textile Solutions (STS) business unit was instrumental in the development of ZDHC's audit protocol.

DyStar has long been committed to the highest standards of product safety through its econfidence program. Hence, the vast majority of our products do not contain, as an intentional ingredient, any of the chemical groups that are restricted by ZDHC. A comprehensive list of ZDHC-compliant DyStar products can be accessed via eliot®, our new online sustainability tool.



DyStar is a system partner of bluesign® and the majority of DyStar products can be found on the bluefinder tool established by bluesign technologies ag. The bluefinder database of sustainable products contains more than 900 DyStar textile dyes and pigment preparations; and over 200 DyStar textile auxiliaries. Our collection gives manufacturers the widest selection of products to choose from when producing bluesign approved fabric.

In July of 2015, DyStar participated in the fourth bluesign conference to proudly support the introduction of blueXpert. The result of a collaboration between Archroma, Huntsman, DyStar and CHT, bluesign technologies – blueXpert is a revolutionary tool expected to help the textile industry significantly reduce its environmental impact.



The DyStar Group and DyeCoo Textile Systems are collaborating on the development of dye products using DyeCoo's breakthrough technology of substituting carbon dioxide, also known as CO<sub>2</sub>, for water in the dyeing process.

Because water is the medium for most dyeing processes, wastewater has become one of the chief environmental concerns that plague our industry. DyeCoo Textile Systems is the world's first supplier of industrial CO<sub>2</sub> dyeing equipment which uses recycled CO<sub>2</sub> gas instead of water to permeate textiles with dyes.

Our partnership with DyeCoo will pave the way for more ecological products to meet the rigorous demands of the industry. This technology offers huge potential to save water and energy – both of which are top priorities for textile dyers.



## STAYING INVOLVED AND CONNECTED [G4-15, G4-16]

DyStar actively participates in joint projects and dialogue with local and international organizations to drive responsible practices across the textile industry and the chemical industry. Businesses operate in an increasingly globalized world, so we stay connected to keep on top of the issues that matter most to our stakeholders.



### Chemical Industry Organizations

The Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD®)

China Dyestuff Industry Association

Ankleshwar Industries Association

South African Dyers and Finishers Association

German Chemical Industry Association (VCI)

American Association of Textile Chemists and Colorists (AATCC)

Society of Dyers and Colourists, United Kingdom

Associação Brasileira das Indústrias Químicas (ABIQUIM), Brazilian Association of Chemical Industries

Sindicato das Indústrias de Produtos Químicos (SINPROQUIM), Brazilian Union of Chemical Products Industries

“Sustainability is a central part of a company's communications in order to educate customers about innovations that reduce their environmental impact and save costs – for example our newly developed resource efficiency program Cadira™. At DyStar we want to assure brands, retailers and their business partners that we commit to their level of product quality and environmental responsibility. With our sustainability report, we openly communicate the measures we take to improve our production and our progress in reaching our sustainability targets.”

– Stephanie Schank, Global Head of Marketing Communications

### Global Corporate Sustainability Organizations and Local Chapters

United Nations Global Compact (UNGC)

Singapore Compact for Corporate Social Responsibility

Responsible Care®

National Committee of Responsible Care, Indonesia

### Sustainable Textile Standards and Organizations

bluesign®

Zero Discharge of Hazardous Chemicals (ZDHC)

Cradle to Cradle®

Global Organic Textile Standard (GOTS)

Oeko-Tex®

Sustainable Apparel Coalition (SAC)

Textile Exchange

Global Apparel, Footwear and Textile Initiative (GAFTI)

American Apparel and Footwear Association (AAFA)

Associação Brasileira das Indústrias Têxteis (Abit), Brazilian Textile and Apparel Industry Association

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[G4-24, G4-26, G4-27]

## BUILDING SUSTAINABLE RELATIONSHIPS - ENGAGE, LISTEN AND RESPOND

OUR STAKEHOLDERS	HOW WE ENGAGE WITH THEM	WHAT THEY HAVE TOLD US	HOW WE RESPONDED
<b>Employees</b>	<ul style="list-style-type: none"> <li>Internal communication channels including e-mail and intranet</li> <li>Team building exercises</li> <li>Performance review process</li> <li>Materiality assessment survey</li> <li>Sustainability Report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	Production plant teams are focused on maintaining high standards of workplace health and safety.	HSE remains a top priority. To improve access to training material and HSE guidelines, a central online platform is being developed.
		Office employees want to contribute to DyStar's sustainability plan.	The Sustainability Committee is preparing to roll out a green office program before 2017.
		On the whole, DyStar employees value opportunities for growth, reward for performance, and fair treatment.	We maintain an open door policy at all levels and review the effectiveness of our approach regularly. The CEO Award was established to recognize exceptional performance.
<b>Customers in Textile Manufacturing</b>	<ul style="list-style-type: none"> <li>Public and private communication channels including our website, product brochures, social media and newsletters</li> <li>Meetings with sales associates</li> <li>Interaction with our Customer Services team</li> <li>Forums, seminars and conferences</li> <li>Materiality assessment survey</li> <li>Sustainability report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	Customers need quality chemicals that comply with regulatory restrictions, and brand and retailer restrictions. Procuring chemicals that meet these requirements is also the first step in ensuring the health and safety of their workers and end-users.	DyStar's econfidence® program monitors over 500 restricted chemicals in the supply chain. Our Texanlab unit also offers analytical services to textile processors who are eager to comply with regulatory or brand & retailer restrictions. In 2015, we launched eliot® – a free and online tool that helps customers make informed choices from the wide selection of sustainable products offered by DyStar. <a href="#">Read more in this report about eliot under "Enabling Sustainability Across Our Value Chain"</a>
		Packaging should show correct hazard labels.	All DyStar products are labelled in accordance with the Globally Harmonized System (GHS) developed by the United Nations.
		Preference for products that enable manufacturers to operate more efficiently.	We offer an extensive collection of products and modules that are designed to reduce consumption of water, energy and chemicals (e.g. Cadira™ and Indigo). <a href="#">Read more in this report about our resource-efficient products under "Product Stewardship Across our Value Chain"</a> .
		Technical assistance is important so products can be used effectively.	DyStar technical experts are available in every major market to provide advice and know-how.
		Customers want assurance that their information is secure	Client information is treated as confidential and maintained in secure systems
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>Tendering process</li> <li>Meetings and audits</li> <li>Supplier Ecology Survey</li> <li>Supplier Sustainability Survey</li> <li>Materiality assessment survey</li> <li>Sustainability Report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	Suppliers desire long-term business relationships with their clients	Over the last few years, we have developed a smaller but more reliable network of suppliers. We reward contracts to chemical suppliers who comply with the ecological requirements of our econfidence program.
		Regular feedback and collaboration is important to help suppliers maintain the quality of their products and services	We conduct site visits and provide audit feedback to our key suppliers. At the Nanjing Production Plant, we collaborate with material suppliers to reduce their operating costs by returning undamaged packaging containers, which are then reused. This mutually beneficial arrangement also helps us reduce our waste disposal costs.
		It is essential that contractual obligations are met and that the supplier selection process remains fair.	Adherence to our Code of Conduct ensures that we remain a reliable business partner. Our new Fraud Policy was instated as an added measure this year to prevent corruption in the company
<b>Shareholders</b>	<ul style="list-style-type: none"> <li>Meetings to review company performance</li> <li>Long-term planning with Senior Management and key committees</li> <li>Sustainability Report feedback</li> <li>Materiality assessment survey</li> </ul>	Our shareholders expect a reasonable return on investment each year. At the same time, sustainable business growth should not be compromised by short-term gains.	DyStar remains profitable despite the recent economic downturn. Our global sales revenue has exceeded \$800 million for the third year in a row. We aim to create long-lasting brand equity by applying our three Core Values – Responsibility, Innovation and Excellence – to every aspect of the business.

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## BUILDING SUSTAINABLE RELATIONSHIPS - ENGAGE, LISTEN AND RESPOND

OUR STAKEHOLDERS	HOW WE ENGAGE WITH THEM	WHAT THEY HAVE TOLD US	HOW WE RESPONDED
<b>Brands &amp; Retailers</b>	<ul style="list-style-type: none"> <li>Meetings with sales associates</li> <li>Production site visits</li> <li>Color design process</li> <li>Forums, seminars and conferences</li> <li>Materiality assessment survey</li> <li>Sustainability Report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	Brands and retailers want to work with suppliers who operate in a socially and environmentally responsible manner. They are also keen to keep their supply chains free of materials that are harmful to people and/or the environment.	Chemical compliance is assured through our econfidence program. At the same time, we actively explore safer alternatives through chemical substitution. For example, our new Evo® Protect water-repellent product replaces PFC compounds (known to be persistent and bio-accumulative) with modified fatty acids. <a href="#">Learn more in this report about econfidence and green chemistry under "Product Stewardship Across Our Value Chain"</a> .
		Brands and retailers want their partners in textile manufacturing to stay informed on the latest sustainability developments within our industry.	Our STS business unit offers training to textile manufacturers on how to comply with brand and retailer RSLs (Restricted Substances Lists). STS is also a repository of know-how on resource optimization in textile manufacturing.
		Correct color selection and color communication is important for first-time-right results. This saves brands, retailers and their industry partners both time and resources.	DyStar's CSI business unit offers a comprehensive range of color tools and services. Our dedicated Color Team supports designers and color managers from the first inspiration throughout the entire supply chain, to create the perfect product for their customers. CSI's solutions guarantee a fast, efficient and accurate color communication process to bring the inspirations into reality. <a href="#">Learn more in this report about CSI and STS under "Enabling Sustainability Across Our Value Chain"</a> .
<b>Industry Associations</b>	<ul style="list-style-type: none"> <li>Participation in working groups</li> <li>Collaborative projects</li> <li>Meetings</li> <li>Forums, seminars and conferences</li> <li>Materiality assessment survey</li> <li>Sustainability Report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	Associations seek support and partnership so their industries can move effectively – and as a whole – toward safer and more environmentally-friendly practices	DyStar actively engages in dialogue with industry associations. We also cooperate and collaborate with sustainable textile standards and organizations to promote sustainability across the value chain.
<b>Non-governmental Organizations</b>	<ul style="list-style-type: none"> <li>Local interaction</li> <li>Forums, seminars and conferences</li> <li>Materiality assessment survey</li> <li>Sustainability Report feedback</li> <li>Sustainability@DyStar.com</li> </ul>	NGOs want to know that we operate in a socially and environmentally responsible manner.	For the 6th year now, DyStar has disclosed material information in the annual Sustainability Report. We set targets to reduce resource consumption and waste production, including greenhouse gases. <a href="#">Learn more in this report about our progress under "Conserving Planetary Resources"</a> .
<b>Local Communities</b>	<ul style="list-style-type: none"> <li>CSR initiatives</li> <li>Regular dialogue to address grievances</li> <li>Discussions with local communities as part of Environmental Impact Assessment (EIA) for new projects</li> </ul>	Communities want to know that their grievances are heard and adequately addressed.	We maintain an open door policy with all of our neighbors. Members of the public are occasionally invited on plant tours to alleviate any health and safety concerns they might harbor. At our Gabus Production Plant, regular meetings allow village leaders the opportunity to voice their thoughts and suggestions. <a href="#">Learn more in this report about our social initiatives under "Caring for People"</a> .
<b>Government and Regulators</b>	<ul style="list-style-type: none"> <li>Visits and meetings</li> <li>Chemical registration process (e.g. REACH®)</li> <li>New project approval process</li> <li>Cooperation with inquiries</li> </ul>	Regulators expect compliance with all applicable national-, provincial-, state-, and city-level laws and regulations	Each of our compliance officers is entrusted with the duty of actively ensuring that no laws are intentionally violated in their respective countries.
<b>Industry-specific Media</b>	<ul style="list-style-type: none"> <li>Regular updates through press releases</li> <li>Media briefings</li> <li>Interviews with key executives</li> </ul>	Members of the media want prompt and accurate responses to their inquiries	We share regular updates with interested members of the media.

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## About This Report

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### REPORTING OBJECTIVES

This is the DyStar Group's 6th annual corporate sustainability report. In this document, we review DyStar's performance in the calendar year 2015. Our report is grounded on the Global Reporting Initiative (GRI) G4 guidelines and is in accordance with the "core" option. The disclosures in this report are also part of our formal Communication of Progress (COP) on the United Nations Global Compact (UNGC) principles.

Every year since 2010, DyStar has published a corporate sustainability report. The sustainability report communicates DyStar's vision and approach surrounding the environmental and social concerns most pertinent to the industry as well as our stakeholders. Interested stakeholders are also provided here with an annual update on our targets and commitments.

It is our hope that this report reaches both internal and external stakeholders. Our external audience extends across the value chain and includes, but is not limited to, material suppliers and service providers; shareholders; customers, brands and retailers; industry peers; regulatory authorities; industry associations and non-governmental organizations; local communities and consumers. The corporate sustainability report is also created every year to inform and inspire DyStar employees.

### SCOPE OF REPORT

Our report captures the sustainability performance of business units, facilities and subsidiaries that are operationally and financially controlled by the DyStar Group. The reporting boundary excludes third-party warehouses and agents.

### MATERIALITY ANALYSIS

Keeping up with developments in our fast-paced industry is essential. In this reporting cycle, we carried out a stakeholder engagement exercise with both our internal and external stakeholders to help us identify the most material sustainability issues. The results guided our sustainability reporting process and, even more importantly, helped us to further align DyStar's strategy with stakeholder expectations.

The materiality assessment process started with the creation of a questionnaire based on internal reviews that considered industry megatrends, stakeholder feedback and GRI guidelines. Internal as well as external stakeholders were then invited to participate in the survey. We asked participants to rank the issues in our questionnaire based on how significantly each affected their decision-making process. Similarly, members of upper management at DyStar ranked the same issues based on their potential to impact our business. Participant responses were weighed to create a materiality matrix that reasonably reflects the sustainability issues most relevant to DyStar.

### REPORTING PROCESS

A data management software is employed to collect and analyze sustainability performance data. All information keyed into the software undergoes a two-step verification process to ensure the integrity of our report's data. The procedure also lends accuracy to our year-on-year performance results. We have a standardized approach to data collection and data analysis across our operations. Applied methods and assumptions are detailed in this report, wherever relevant.

### DATA

It should be noted that DyStar's absolute emissions profile has undergone significant adjustments. The reduction is a result of our decision to discontinue the overly conservative approach of applying purchased electricity emission factors to estimate emissions attributable to the steam production process. We now use nationally-set factors specific to the steam production process. This adjustment reduces our overall emissions profile considerably but produces a more accurate carbon footprint for DyStar. Readers can rest assured that the revised emission factors for purchased steam do not artificially skew our reported performance. We took the precaution of retrospectively applying the revised steam emission factors to all years from 2011 onwards, so the report provides a fair reflection of DyStar's progress from year-to-year.

### EXTERNAL VERIFICATION

The 2015 report is not externally assured. We depend on an internal and multi-level verification system to validate each data point before it is deemed suitable for reporting purposes.

### AVAILABILITY

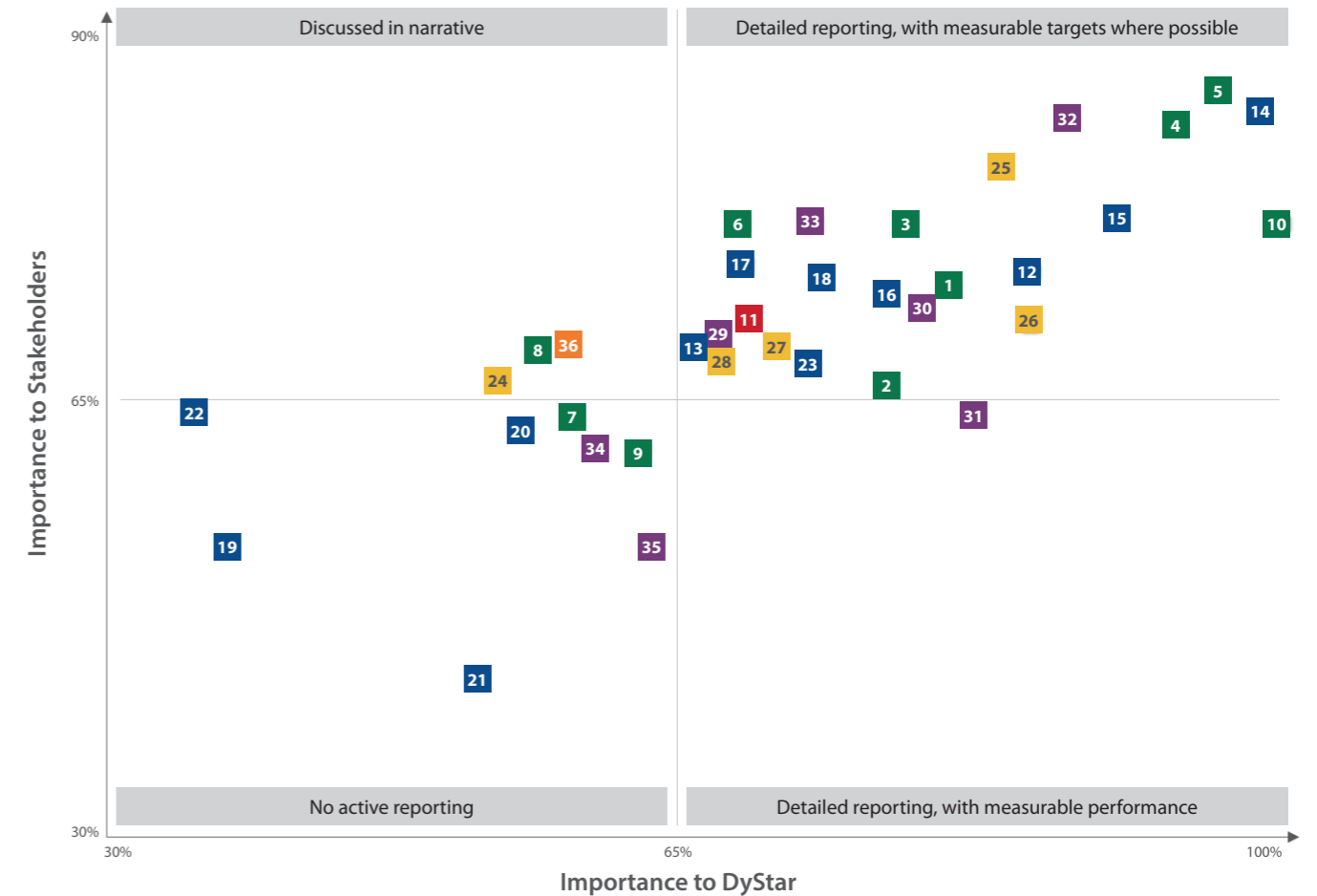
DyStar's sustainability reports can be downloaded from our website at [www.dystar.com](http://www.dystar.com). Only a limited number of copies are printed each year. To ensure that our reports are printed on paper that is sourced in an environmentally friendly, socially responsible and economically viable manner, we print this report on FSC-certified paper. Most of our printed copies are distributed to value chain partners in locations where a stable internet connection may not be readily accessible.

### FEEDBACK

We appreciate any feedback that can help us improve our sustainability program. Readers can address their thoughts and queries to [sustainability@dystar.com](mailto:sustainability@dystar.com).

## Materiality Matrix

[G4-19, G4-20, G4-21]



BOUNDARIES: ● Within the organization ▲ Within and outside the organization

MATERIAL ISSUE IDENTIFIED	CORRESPONDING GRI ASPECT	MATERIAL ISSUE IDENTIFIED	CORRESPONDING GRI ASPECT
1 Energy efficiency	● Energy	19 Product-level carbon footprinting	● Products and services
2 Greenhouse gases and air pollutants	● Emissions	20 Product life cycle assessments	● Products and services
3 Water consumption	● Water	21 Sustainable logistics	● Products and services
4 Waste and effluent management	▲ Effluents and waste	22 Circular economy	▲ Products and services
5 Water pollution	▲ Water	23 Responsible marketing	▲ Marketing communications
6 Land pollution	▲ Effluents and waste	24 Commitment to local communities	▲ Local communities
7 Ozone-depleting substances	▲ Emissions	25 Worksite health and safety	● Occupational health and safety
8 Innovations in resource management	● Energy, Water	26 Emergency preparedness and response	● Occupational health and safety
9 Ecosystem biodiversity	▲ Biodiversity	27 Development of human capital	● Employment
10 Compliance with environmental regulations	● Compliance	28 Diversity and equality	● Diversity and equal opportunity
11 Sustainability and carbon footprint reporting	● Emissions	29 Transparency and accountability	● Ethics and Integrity
12 Chemical testing of supplied materials for restricted and regulated substances	▲ Products and services, Customer health and safety	30 Code of conduct and ethical practices	▲ Ethics and Integrity
13 Responsible sourcing	▲ Products and services	31 Economic performance	▲ Economic performance
14 Compliance with product safety regulations	● Products and services, Compliance, Customer health and safety	32 Commitment to anti-corruption and anti-bribery policies	● Ethics and Integrity
15 Product compliance with restricted substances lists (RSLs)	● Products and services, Customer health and safety	33 Customer satisfaction	▲ Product responsibility
16 Commitment to voluntary standards, including ZDHC and Oeko-Tex®	● Products and services, Customer health and safety	34 Expansion in new and emerging markets	● Business strategy
17 Product design for resource-efficiency	● Products and services	35 Exposure in mature markets	● Business strategy
18 Substitution of hazardous chemicals with safer alternatives	● Products and services, Customer health and safety	36 Stakeholder dialogue	▲ Stakeholder engagement

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## Data at a Glance

[G4-10, G4-EC1, G4-EC9, G4-EN1, G4-EN24, G4-LA6, G4-LA12]

	2011	2012	2013	2014	2015	
<b>ECONOMIC (MILLION USD)</b>						
G4-EC1	Global Revenue	-	764.14	822.86	937.99	898.05
	Asia	-	337.28	372.90	419.18	416.23
	Europe	-	228.27	239.98	266.10	236.35
	Americas	-	198.59	209.98	252.71	245.57
	Global Operating Costs	-	634.77	638.76	683.48	670.57
	Asia	-	335.20	356.18	413.92	420.06
	Europe	-	188.55	164.24	146.09	138.64
	Americas	-	110.31	118.34	123.47	111.87
	Global Employee Wages and Benefits	-	109.28	107.20	118.03	100.51
	Asia	-	47.46	43.34	50.01	43.26
	Europe	-	42.86	41.56	42.68	35.58
	Americas	-	18.96	22.31	25.34	21.67
	Payments to Providers of Capital	-	23.33	12.55	11.34	3.98
	Payments to Government	-	7.15	14.49	25.01	26.32
Economic Value Retained	-	(10.39)	49.87	100.09	96.67	
G4-EC8	Total Purchase Value Costs	502.22	526.03	706.68	643.00	565.73
	Amount Spent on Local Suppliers	282.27	263.17	434.86	363.41	324.33
<b>ENVIRONMENT<sup>1</sup></b>						
G4-EN1	Raw Material (thousand tons)	105.75	103.19	111.28	114.80	106.44
	Raw Material Usage Intensity (tons per ton production)	1.00	0.90	0.87	0.82	0.76
	Packaging Material (thousand tons)	-	4.56	4.77	4.90	5.55
G4-EN3	Associate Material (thousand tons)	1.17	1.00	1.74	1.94	1.42
	Direct Energy Consumed (TJ)	270.15	290.95	318.73	326.32	336.10
	Indirect Energy Consumed (TJ)	995.50	805.96	898.67	889.01	873.79
G4-EN5	Energy Consumption Intensity (GJ per ton production)	9.94	8.91	9.21	8.40	8.37
G4-EN8	Water Withdrawal (million m <sup>3</sup> )	9.27	6.74	7.04	7.52	6.90
	Water Withdrawal Intensity (m <sup>3</sup> per ton production)	74.00	56.35	54.47	53.31	48.94
G4-EN10	Water Reused (million m <sup>3</sup> )	1.79	1.69	1.69	1.84	1.73
G4-EN15	Direct GHG Emissions – Scope 1 (thousand tCO <sub>2</sub> e)	15.76	17.08	18.94	18.92	19.50
G4-EN16	Indirect GHG Emissions <sup>2</sup> – Scope 2 (thousand tCO <sub>2</sub> e)	112.24	93.14	105.49	106.26	104.76
G4-EN18	GHG Emissions Intensity (tCO <sub>2</sub> e per ton production)	0.998	0.888	0.937	0.863	0.858
G4-EN22	Wastewater Discharged <sup>3</sup> (million m <sup>3</sup> )	1.79	1.55	1.78	1.85	1.67
	Wastewater Intensity (m <sup>3</sup> per ton of production)	14.54	13.09	13.96	13.21	11.86
G4-EN23	Hazardous Waste (thousand tons)	5.78	4.10	5.48	6.44	5.84
	Non-hazardous Waste (thousand tons)	3.38	3.91	4.38	3.68	3.22
	Overall Waste Intensity (kg per ton production)	83.76	69.50	77.68	81.45	71.12
G4-EN24	Number of Spills, Total Volume of Spills	14, 38.1 m <sup>3</sup>	14, 38.1 m <sup>3</sup>	3, 0.4 m <sup>3</sup>	12, 3.2 m <sup>3</sup>	6, 1.1 m <sup>3</sup>
G4-EN31	Environmental Protection Expenditure (million USD)	7.15	8.15	8.97	7.19	6.81
<b>SOCIETY<sup>4</sup></b>						
Staff No.	Number of Senior Management Staff	-	101 (15)	-	-	106 (19)
	Number of Middle Management Staff	-	286 (93)	-	-	317 (105)
	Number of Admin / Support Staff	-	626 (328)	-	-	588 (312)
	Number of Technical Staff	-	339 (109)	-	-	418 (148)
	Number of Production Workers / Supervisors	-	648 (12)	-	-	615 (11)
	Total Workforce	2,419	2,000 (557)	2,195	2,200	2,044 (595)
LA6	Total Lost Days caused by Injury	34.0	266.0	184.0	17.5	8.7
	Lost Days Rate	2.42	27.55	16.01	1.54	0.74
	Number of Occupational Disease Incidents	0	0	0	1	4
	Occupational Disease Rate	0.000	0.000	0.000	0.088	0.330
	Number of Workplace Injuries	8	9	25	15	10
	Injury Rate	0.57	0.93	2.18	1.32	0.84
	Fatalities	0	0	0	0	0
LA9	Senior Management Training Hours	2,004	301 (92)	565 (88)	-	1,130 (97)
	Middle Management Training Hours	-	491 (199)	2,165 (1,117)	-	3,961 (1,089)
	Admin / Support Staff Training Hours	3,512	1,236 (500)	4,395 (2,934)	-	3,952 (1,954)
	Technical Staff Training Hours	-	934 (456)	8,732 (4,619)	-	4,200 (1,677)
	Production Worker / Supervisor Training Hours	1,518	9,021 (1,663)	13,580 (1,576)	-	7,573 (54)
	Total Training Hours	7,034	11,983 (1,410)	29,437 (10,334)	35,105	20,771 (4,871)

<sup>1</sup>Resource consumption figures are retrospectively adjusted where such changes can improve data quality

<sup>2</sup>Conversion factors used to derive emissions from purchased steam were adjusted for years 2011 to 2015. Factors are now based on nationally-set emission figures specific to the steam production process.

<sup>3</sup>Depending on the physical and chemical nature of wastewater produced, the various stages of treatment are completed on-site and/or externally by an authorized third-party

<sup>4</sup>Where information is available, statistics for women employees are shown in (red brackets)



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