



Committed to Sustainability

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

Table of Contents



02	Letter from Our CEO	09	Our Key Industries
04	Key Performance Indicators	10	Our Service Divisions
06	Our History	11	Our Governance Structure
07	Our Core Values	14	Our Economic Performance
07	Our Global Presence	16	Ethics and Compliance
08	econfidence® Highlights		



19	Global Sustainability Trends
20	Strategy for Sustainability
21	The Value Chain Approach



23	Textile Effects and Labels
24	Our Core Products
26	Product Stewardship Across Our Value Chain
27	Modules Making an Impact
29	Products with a Difference
30	Enabling Sustainability Across Our Value Chain
32	Product Life Cycle and Circular Economy
34	Leadership Close Up
36	The UN SDGs Across DyStar's Value Chain
38	Laws and Compliance



41	The 2020 Targets
42	Energy
43	GHG Emissions
44	Ozone-Depleting Substances
44	Water
45	Wastewater
46	Materials and Waste
47	Sustainable Packaging and Logistics



49	Our Employees
51	Interviews with Star Employees
52	Safe Working Conditions
54	Creating a Comfortable Workplace
55	Respecting Cultural Identity
56	Employee Empowerment & Skills Enhancement
57	Fostering Local Network and Belonging
58	Human Rights
59	Investing in Infrastructure



61	Supplier Evaluation
64	Staying Involved and Connected



67	Methodology
68	Materiality Matrix
70	GRI Content Index
75	SDG Index



Riding on the back of a significant year for DyStar's continuous success, I am pleased to present our Sustainability Report for FY2018. This year saw both significant economic and sustainability advances for the company. Among other achievements, we achieved 11% growth in revenue and have successfully surpassed five out of six of the 2020 targets towards reducing our overall production footprint by 20% for every ton of production. These achievements have been brought to light by making our business more competitive and more sustainable in a number of ways, many of which will be detailed in this report.

These achievements also took place against the backdrop of increasing consumer influence over businesses in FY2018. Businesses are under increasing pressure to take action on environmental and social issues. This was also a year which saw growing sustainability challenges and opportunities, with concerns over climate change and extreme weather causing supply chain disruptions. As a company, we embrace these developments and have many processes in place to address them.

Our vision is to be the environmental and innovation global leader in our chosen industries. This includes providing innovative colorants, chemicals, and services to textile and apparel, food and beverage, personal care, pharma and household, paints, coatings, industrial and construction, water treatment, and agriculture industries. Guiding this vision are DyStar's core values of responsibility, innovation, and excellence.

DyStar's commitment to sustainability is underpinned by a two-fold strategy, focusing on both reducing operational impacts as well as helping our customers to do likewise. This strategy involves incorporating sustainability across our value chain, extending beyond our operations to suppliers, customers, and other stakeholders. These efforts are guided by the four "C"s – Creating, Conserving, Caring, and Communicating. Together, these provide a direction to channel our sustainability efforts throughout the value chain. To work towards our goals:

- **We continue to innovate products that are safe for our employees, customers, business partners and consumers.** DyStar's econfidence® program is truly the backbone of the company's long term strategy which links the supply chain's work with our customers, offering stakeholders reassurance that their own sustainability activities will not be compromised through the supply chain activities.
- **We seek to continuously optimize our carbon footprint and conserve planetary resources along the entire value chain.** We do this by actively monitoring and setting reduction targets for areas like energy, waste, and water in our operations. In this way, our company actively seeks to translate sustainability trends into opportunities that bring value and growth for the company.
- **We continue to prioritize health, safety and environment protection within DyStar's value chain.** Our employees are the backbone of our organization, and accordingly, we prioritize their health and safety, with strong policies established in all operational areas. We also provided training for practical safety skills like firefighting, sponsored over 23,000 training hours in FY2018, with roughly 14,000 training hours dedicated to HSE training alone. This is part of our commitment to continually enhance our employee skills.
- **We continue to comply with all relevant laws and regulations worldwide and meet major industry standards.** DyStar puts great effort into maintaining compliance with many regulatory and industry requirements worldwide. Some related initiatives include our successful transition to ISO 9001:2015 quality management system across all DyStar's manufacturing sites and sales offices and successful completion of Environmental Legal Compliance Audits in our operation plants. Also, we are closely monitoring our operations in compliance with the REACH® legislation. To date, 450 of our substances are already registered.
- **We align the strategies of all our business operations to the United Nations Sustainable Development Goals.** As a business, we believe that DyStar can drive growth while contributing to a prosperous, inclusive and sustainable society. Thus, we continue aligning our programs and initiatives with the UN Sustainable Development Goals. We detailed many of our efforts in this regard later in the report.

With nine years of dedicated sustainability efforts under our belt, I am proud of the significant strides we have made to incorporate it into our core business strategy.

However, there is still more to be done. While work has been underway to diversify DyStar's product portfolio in favour of less carbon-intensive resources, the energy intensity in FY2018 still remains unchanged from the previous years. We are making efforts to ensure that the company's less efficient acquisitions are provided the support in terms of energy management. We also hope that as women increasingly opt to forge careers of their own in developing markets, more opportunities will arise to further narrow the workplace gender gap at DyStar.

While these challenges remain, we will continue to make efforts to move forward, enabling an even more prosperous and sustainable future for the company, our stakeholders, our communities, and the planet.

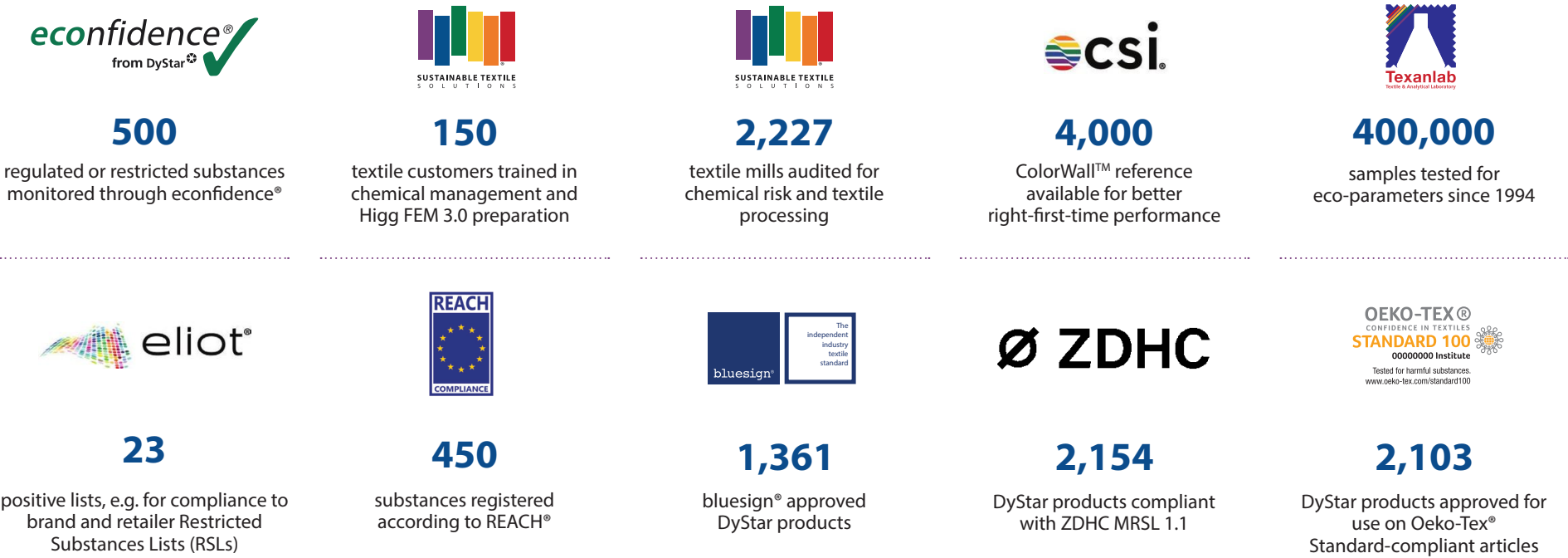
With warm regards,

Eric Hopmann



Key Performance Indicators

CREATING RESPONSIBLE PRODUCTS AND SERVICES

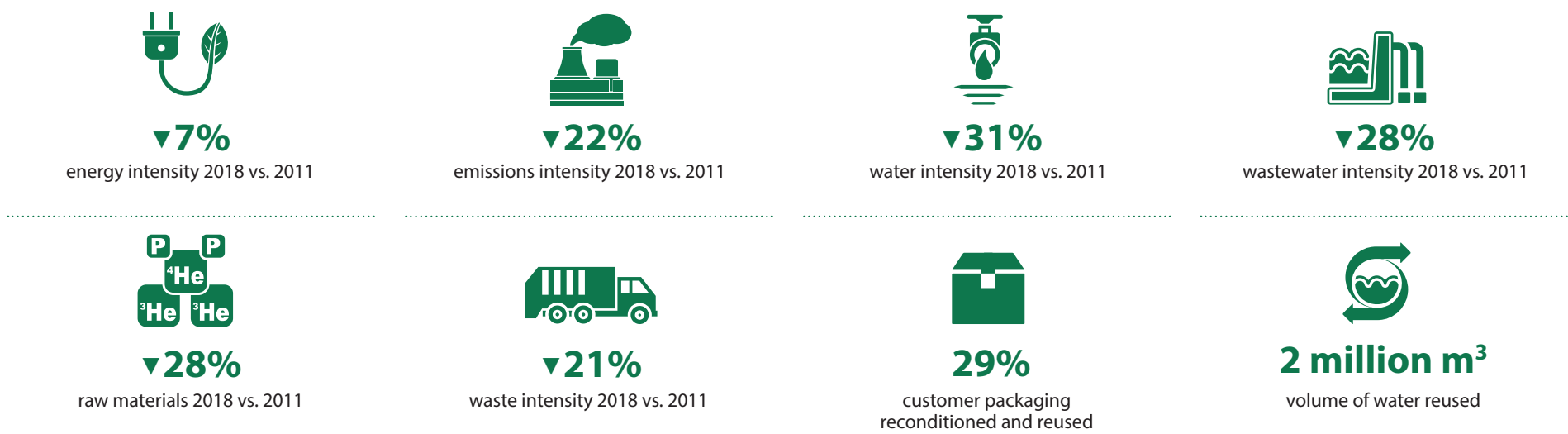


SUSTAINABLE BUSINESS GROWTH

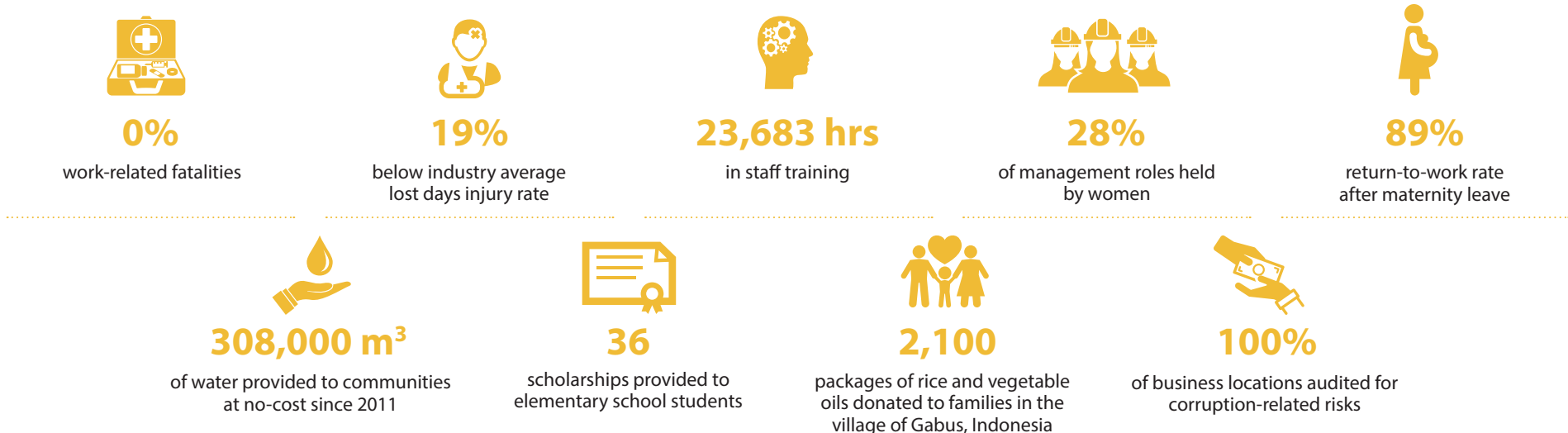


Key Performance Indicators

CONSERVING PLANETARY RESOURCES



CARING FOR PEOPLE



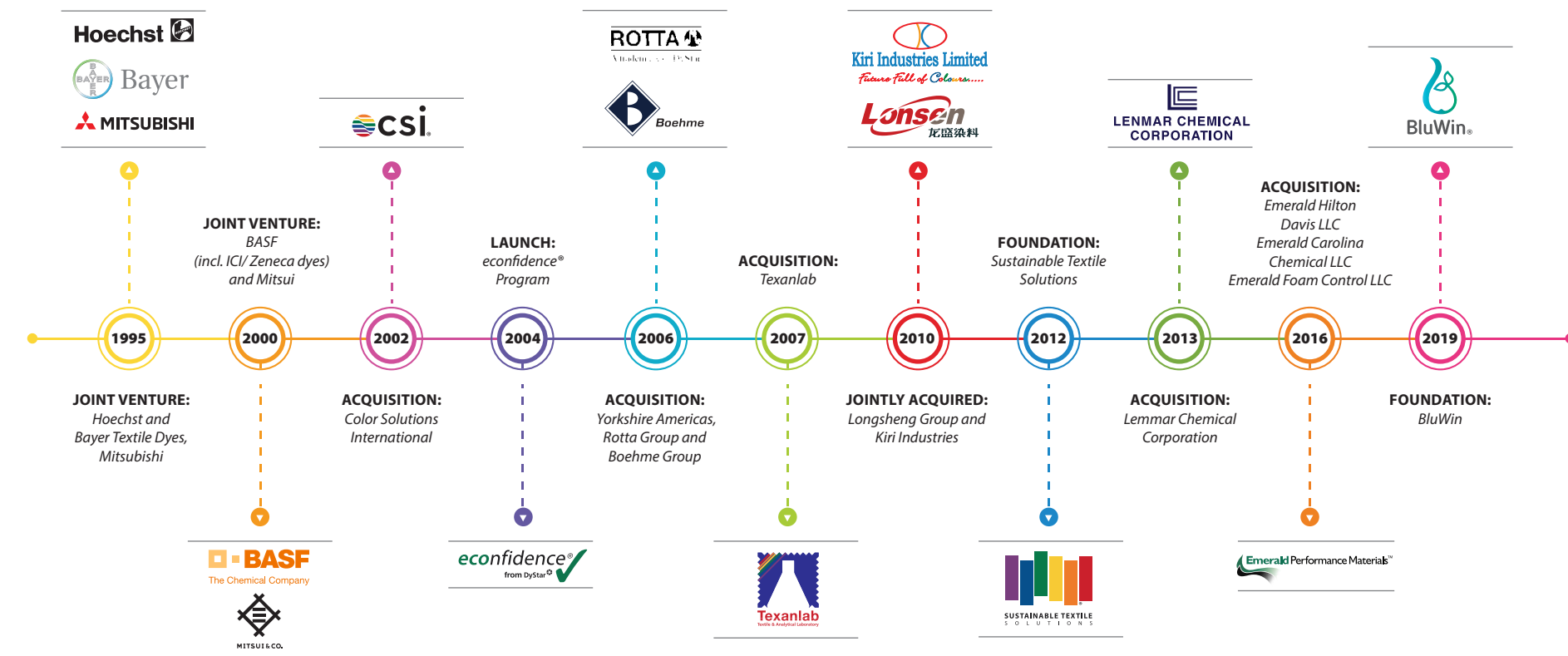
Our History

The DyStar Group is a global market leader in colorants, chemicals and services, serving the textile, apparel, food & beverage, personal care, pharma & household, paints, coatings, industrial & construction, water treatment & agriculture industry, offering a comprehensive range of products and services. It has a presence worldwide and is involved in work with a diverse range of customers including leading brands & retailers, as well as their industry partners.

The company was established in 1995 and has been an innovator in its product and service offerings, comprising of a spectrum of dyes, colorants and chemicals. DyStar's products enable its customers to achieve the highest product standards for quality, safety and the environment.

DyStar's legacy spans over a century, leveraging on the innovative work of its parent companies in synthetic dye chemistry, including pioneers like Hoechst AG, Bayer Textile Dyes, Mitsubishi, BASF AG Textiles Dyes, and Mitsui. From this solid pedigree, DyStar has grown as a trusted partner in sectors including paints, coatings, paper and packaging.

The company has diverse offerings, providing a full range of solutions to textile and apparel businesses. DyStar has driven consolidation in the industry of many core solutions providers over the last decade.



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.



INNOVATION



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.

Our Global Presence





The econfidence® program provides DyStar's customers assurance that its dyes and chemicals meet all applicable statutory restrictions in the markets in which 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.

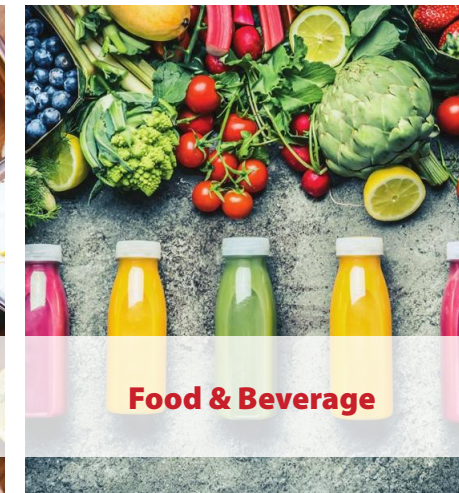
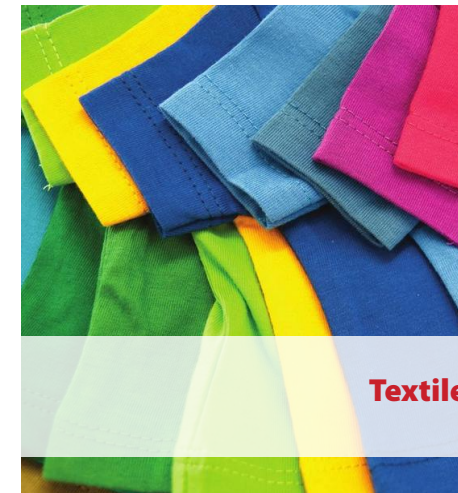
Because of this, customers and their stakeholders get the reassurance that their sustainability performance will not be compromised through supply chain activities. This assurance allows downstream stakeholders to proceed confidently in their business activities.

Brands and retailers who place their trust in econfidence 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) or Manufacturing Restricted Substances List (MRSL) criteria



Our Key Industries



Our Service Divisions

COLOR SOLUTIONS INTERNATIONAL (CSI)



CSI provides retailers and brands with a variety of flexible color options and services. Expert staff will create, manage and distribute color standards, and CSI's dedicated Color Team supports designers and color managers from the first inspiration throughout the entire supply chain to meet customer expectations. CSI's solutions guarantee a fast, efficient, and accurate color communication process to bring inspirations into reality. By improving clients' chances for right-first-time results, CSI also helps them save time and money.

SUSTAINABLE TEXTILE SOLUTIONS (STS)



Offering consultancy, auditing, and capacity building services, STS is dedicated to assisting brands, retailers, and their industry partners implement sustainable textile production practices within their organizations. STS guides textile industry clients through complex quality and eco-testing requirements, and help them meet all applicable standards and regulations. It also provides expertise to customers interested in operating more efficiently, and achieving reductions in cost and resource consumption.

ECONFIDENCE®



The econfidence program is designed to provide assurance to customers that DyStar dyes and chemicals meet all applicable statutory restrictions 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. In turn, customers and their stakeholders enjoy the comfort and reassurance that their sustainability performance will not be compromised through supply chain activities.

TEXANLAB



Since 1994, Texanlab Textile and Analytical Laboratory is an ISO 17025 certified, specialized testing laboratory focused on ensuring compliance and resolving failures in the customer supply chain. It is a repository of know-how in chemical testing, and analysis for the textile industry, meeting the requirements of CPSIA, EU Eco-label and brand- or retailer-defined Restricted Substances Lists (RSLs). Whether handling liquid or fabric samples, Texanlab applies correct and accurate methods to produce dependable results. The company prides itself on a 100% on-time performance record, delivering accurate results in a cost-effective, fast, and reliable manner.

Our Governance Structure

BOARD OF DIRECTORS

Ruan Weixiang
Chairman

Xu Yalin
Executive Director

Yao Jianfang
Director

Manish Kiri
Director

Amit Mukherjee
Director

From the beginning in 1995, DyStar's corporate philosophy has emphasized integrity and values. A consistently high standard of corporate governance, performance, and fair dealings in business processes have been upheld by the company. The Board members and Senior Management of the business lead this by example, with the collective recognition that transparency and accountability in management will secure long-term sustainability for DyStar.

Over the years and amidst a fast-paced operating environment, any weaknesses in management systems are acknowledged and improved by the company across all business units in all countries. DyStar recognizes this as vital to the company's continued success and has also allowed it to adapt quickly to many changing circumstances over the years.

BOARD OF DIRECTORS

A non-executive Chairman head's the DyStar Board of Directors. To encourage a balance of authority and enable independent decisions, the Chairman and the Chief Executive Officer (CEO) are different individuals.

The Board members contribute core competencies to the Group's decision-making capabilities. This includes applied chemistry knowledge, technological insights, legal and regulatory expertise, accounting and finance proficiencies, business and management capabilities, and a well-rounded understanding of customer expectations. Collectively, this approach enables balanced and quality decision-making.

Guardianship of the company is the responsibility of the Board. It sets the tone for DyStar's long-term business objectives, organizational strategy, risk management and global dealings. They review and approve business plans, and ensure sufficient resources for DyStar to fulfill its objectives. As the global leaders in the industry, the Board also has a priority to ensure that environmental, social and economic responsibilities are ingrained in operations. The Board's corporate responsibility also includes DyStar's legal conduct and its dealings with partners in the business community.

The company's daily operations are supervised by Executive Director, Xu Yalin, based in DyStar's Singapore headquarters. Representing the Board, he also serves as the primary link between the Board and Senior Management, coordinating closely with the Senior Management to achieve the goal of successfully realizing the Board's decisions and strategies.

BOARD COMMITTEES

Specialized committees support the Board in their decision-making, reinforce governance, and also provide guidance to the company's Senior Management. The Audit Committee and Remuneration Committee enable good business conduct to be maintained across the DyStar Group. Periodic committee meetings enable assessment of the latest developments, future planning, discussion of progress and setbacks, and assessment of new projects and policies. The Audit Committee has the critical role of

monitoring the effectiveness of DyStar's internal control processes and internal audit function, evaluating the independence and objectivity of external auditors, as well as verification of the Group's financial statements and all announcements related to financial performance ahead of publication.

The Remuneration Committee oversees DyStar's human resource policies and practices, safeguarding consistency and alignment with DyStar's long-term intentions. Its efforts ensure an optimal and effective organizational structure, enhance human resource activities, ensure business continuity and operational efficiency, and enable organizational competitiveness. In addition, it makes recommendations to the Board on market-adjusted remuneration affecting management and employees. The Board reviews management performance and looks to the Committee for recommendations on appointment and compensation related matters.

Our Governance Structure

SENIOR MANAGEMENT TEAM

The Group's Executive Director and Chief Executive Officer heads members of the Senior Management team with the goal of executing the Board's strategy and directions in an effective, transparent and sustainable manner. Day-to-day management of DyStar is the responsibility of the ED & CEO, includes the execution of strategic plans and policies with Senior Management, and balancing the interests of the Board and the two key committees. The Senior Management team includes Vice President positions, contributing their capacities as leaders of different key functions within DyStar. Beyond daily operations, the company expects the management team to instill an ethical business culture among managers and employees.



DYSTAR SUSTAINABILITY COMMITTEE

- Eric Hopmann**
Chief Executive Officer
- Gerald Talhoff**
Vice President
Global Manufacturing
- Fanny Vermandel**
Vice President
Global Marketing Coloration
- Clemens Grund**
Senior Director
Global Product Safety & Ecology
and Global Intellectual Property
- Hartmut Behnke**
Director
Global Marketing Auxiliaries
- Thorsten Huels**
Director
Global Marketing Denim
- Markus Dorer**
Head
Global Marketing Printing
- Bernhard Knoche**
Global Head
Brand & Retailer Management
- Adrian Ho**
Manager
Global Communications

DYSTAR SUSTAINABILITY COMMITTEE

Across all its global operations, DyStar drives sustainability from the very top, helped by its Senior Management team. These leaders integrate sustainability into the Group's business strategy, corporate culture, ground operations, and beyond. Steadfast leadership in this area is one of DyStar's key strengths, enabling both latitude and penetration of sustainability-related initiatives.

DyStar's Sustainability Committee is chaired by the Chief Executive Officer, and includes eight members from key functions in the company. It sets the overall direction of the company's long-term sustainability strategy and organizes its implementation aligned with core objectives.

Sustainability Committee members convene quarterly to assess progress, consider new initiatives, and discuss industry developments. Preparation and distribution of DyStar's annual Sustainability Performance Report is also overseen by the Committee. This Report provides a transparent overview of the company's achievements and challenges in the calendar year for interested internal and external parties.

The Senior Management leaders work to identify and manage the economic, environmental, and social topics material to each function, as well as their impacts, risks, and opportunities. These efforts also include periodic stakeholder engagement exercises. Where feasible, Senior Management also ensures the inclusion of these aspects into due diligence processes.

Meetings and forums executed throughout the year provide platforms for stakeholder engagement, and an external consultant carries out a formal stakeholder engagement survey exercise bi-yearly. Six stakeholder groups are consulted. These include employees, shareholders, customers, brands and retailers, NGOs and industry groups, and suppliers. Individual responses are kept confidential by the third-party consultant. A summary of these response is presented to the Senior Management, Presidents and Vice Presidents.

Collected annual sustainability data are also shared with members of the Senior Management. Quantitative and qualitative data from this exercise helps the company understand the effectiveness of its risk management processes. Each year, following the annual sustainability reporting exercise, DyStar's Global Sustainability Committee evaluates the management approach toward each of material topics (i.e. following the data collection and analysis step). Evaluation methods specific to each material topic include, but are not limited to, internal or external auditing or verification, measurement systems, external performance ratings, benchmarking, stakeholder feedback, and grievance mechanisms.

The company's management policies can then be adjusted based on the results of that exercise as well as other available information. This practice applies to all topics deemed material GRI criteria, such as Economic Performance, Market Presence, Indirect Economic Impacts, Socioeconomic Compliance, and so on.

An internal sustainability newsletter (covering the latest industry news and developments surrounding relevant laws and regulations, science and technology, research and findings, NGO programs, etc.) is also circulated at regular intervals.

Senior Management and the members of the Sustainability Committee depend on directors and managers to inform them of critical concerns in addition to making their own observations. A sustainability-related enquiry page has been created in DyStar website to anticipate any knowledge gaps and feedback. DyStar's new hires are also provided with the e-mail address of the Global Compliance Manager. The Internal Audit team mailbox exists to accept anonymous reports.

Those reviewing this report can continue reading to learn more about DyStar's journey and some of the specific adjustments that have been made to each material topic.

Our Economic Performance

The price and accessibility of materials and commodities are major determining factors of the success of any textile business. Also, the cost increases in recent years as well as the changing consumer behaviors have had major repercussions throughout the supply chain. Countries like China have also stepped up law enforcement of environmental regulations which have affected many industries in the market.

The consolidated financial statements in this report include all of DyStar's service divisions. For FY2018, there was a 11% increase in revenues, reaching US\$1.13 billion for the company. Profits stood at a healthy US\$35 million for the year. DyStar's results reflect that having sustainability as a central part of how the business operates helps to ensure its commercial success in the long term.

Across all countries and areas of operation, the company is committed to supporting local economies, with approximately half of its purchasing coming from suppliers in regions where it operates. DyStar's approach derives many benefits, including benefitting the community, aiding local businesses, improving local livelihoods, and mitigation of indirect greenhouse gas emissions from transport.

It is a major employer in many of the communities in which it operates and accordingly has significant direct economic impacts for its staff. By employing much of its workforce and up to more 80% of its management locally, DyStar benefits skills development and the employability of the local community. In each of its company locations, DyStar either meets or exceeds legal or industry minimum standards for employee wages in support of fair practices.

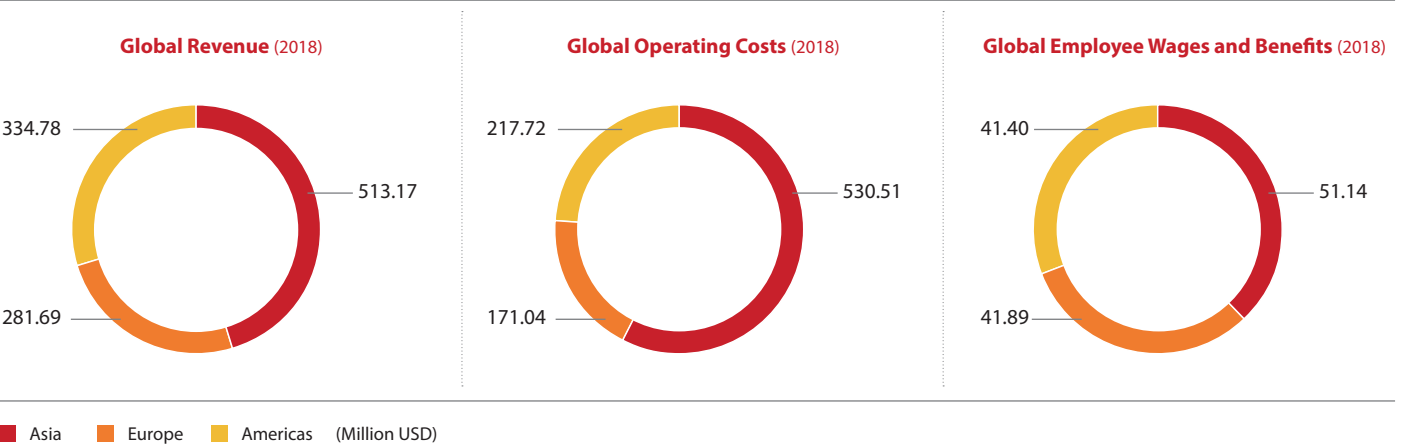
The company also has indirect impacts on suppliers it purchases from, customers it sells to, customers utilizing its resource-saving products, as well as the end-user who purchases the end merchandise. The use of DyStar's high-quality and resource-efficient dyeing processes means that garments last longer and fewer replacement pieces are required over their lifetime.

It should also be noted that DyStar has structures ensuring tax is duly paid in all countries it operates in. The company believes that benefitting the local government adds to stability of its operating environment, and that doing so is part of being a good corporate citizen. Worldwide, DyStar contributed US\$36 million in tax payments to governments for FY2018.

DyStar's management approach to create indirect impacts on the surrounding local economy includes donations to local society, trading (to increase ratio of local product export), improving the infrastructure or services it provides in a developing country. No significant indirect economic impacts have been identified in any of DyStar's operational locations.

	2016	2017	2018
Global Revenue	871.35	1,016.19	1,129.64
Global Operating Cost	652.34	765.48	919.27
Global Employee Wages and Benefits	108.93	133.21	134.43
Payments to Providers of Capital	7.47	6.07	5.26
Payments to Government	26.48	27.37	35.62
Economic Value Retained	76.13	84.06	35.06

(Million USD)



Our Economic Performance



OUR CODE OF CONDUCT PROMOTES EIGHT KEY PRINCIPLES THAT ARE ALIGNED WITH INTERNATIONAL STANDARDS¹:

- 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

¹ The international standards referred to include the following: 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; and The Responsible Care Global Charter.

For all business activities, DyStar is committed to conduct in accordance with the highest ethical and legal standards, operating under the company's Code of Conduct, which was implemented to create a common understanding of the company's expectations. The Code of Conduct sets out the legal and ethical principles guiding work, and is binding for all employees in the Group's entities. DyStar's reputation as an employer of choice and as a reliable business partner is built on adherence to these principles.

A global increase in attention to environmental effects and the increasing economic and community interest has resulted in corporations needing to become corporate citizens. While no company is immune to bribery, fraud and corruption, DyStar has taken steps to bolster existing safeguards. Beyond the Code of Conduct, the company also has a Fraud Policy to protect whistle-blowers, a Code of Business Conduct for Suppliers and Third-Party Service Providers, as well as the Code of Business Conduct for Sales Related Service Partners. Collectively, DyStar's principles and policies are the first line of defense in stamping out corruption, and depend on the everyday vigilance of managers and employees.

The existence of these anti-corruption policies has been communicated to all governance body members, managers, directors and VPs, as well as all employees that interact with external business partners, and all external business partners in every region of operation. Also, DyStar's trains those staffs who are interacting with external business partners on these matters.



DyStar is subject to laws and regulations governing anti-competition behavior and makes clear to staff that behavior in this regard will not be tolerated. Abiding by all laws and regulations is part of the company policy, and legal counsel is available for any employee that may have questions regarding what may or may not constitute anti-competitive behavior. In FY2018, there were zero legal actions pending or completed regarding violations of anti-trust and monopoly legislation in which the organization has been identified as a participant.

DYSTAR'S CODE OF CONDUCT

The eight principles in DyStar's Code of Conduct corresponds to an internationally accepted ethical standard in business, promoting transparency in operations, and safer workplace practices. The Code is the moral compass of the business, protecting interests of internal and external stakeholders alike.

DyStar believes ethical companies have a competitive advantage, and are able to attract and retain the best people. External stakeholders across the value chain also benefit from the rules laid out in the company's Code of Conduct through compliance of all parties by all applicable laws and regulations. This safeguards the long-term interests of the company, its customers, suppliers, brands and retailers, and the local communities it operates in.

CODES OF BUSINESS CONDUCT

DyStar's Code of Business Conduct for Suppliers and Third-Party Service Providers communicate its fundamental principles and expectations to upstream partners. This includes, but is not limited to, all suppliers of raw material, intermediate goods and finished goods, IT and engineering suppliers or service providers, and freight forwarders and logistics providers. Regardless of the geography of operation, companies wishing to cultivate long-term relations with DyStar must comply with the principles outlined in the Code of Business Conduct.

As part of the policy, DyStar has a zero tolerance for giving or receiving bribes. Corruption has no justification, as it exposes DyStar and its employees to possible criminal prosecution, civil fines, and penalties. Its Code of Business Conduct forbids inappropriate payments — whether to government or private sector organizations, and it applies all business functions and dealings in its countries of operation. To combat real or perceived conflicts of interest, company employees and their relatives are forbidden to accept payments, gifts, or entertainment services from any individual or company desiring to do business with DyStar.

DyStar's suppliers and third-party service providers are also expected to adhere to fair competition and antitrust laws, keep accurate accounts and business records, and comply with all applicable local, national and international laws and regulations in the provision of products and services to the company. Trusted suppliers have systems and controls in order to comply with laws and principles set forth in DyStar's Code of Business Conduct. These include policies, training, monitoring, and auditing mechanisms. Company suppliers and third-party service providers should also use these same principles in turn towards their own suppliers and contractors.

Risks facing upstream stakeholders can also be encountered among by downstream businesses. Consequently, beyond the Code of Business Conduct for Suppliers and Third- Party Service Providers, DyStar also has a Code of Business Conduct for Sales Related Service Partners. Staff found in deliberate breach of either code face discipline or dismissal, and business relations will be suspended with partners contravening company policies, or repeatedly failing to implement corrective actions in their operations. For FY2018, there are no reported issues of non-compliance with laws or regulations in social or economic areas.

COMPLIANCE MANAGEMENT

DyStar's Compliance Group ensures all applicable laws and regulations, as well as to the company's internal policies and management directives are adhered to. Potential risks to the business and to stakeholders across the value chain are evaluated and mitigated. Through raising awareness among managers and employees, the Compliance Group plays a critical role to inculcate an ethical and honest culture in the company.

The contact details of the Global Compliance Manager are supplied to each new employee as part of their DyStar orientation. Around the world in each area of operation, there is further support by one or more Compliance Management Representatives to ensure that all entities operate in line with company policies and relevant legislation. To provide staff guidance, legal counsel is also accessible for anyone with questions on the legality of potential decisions and actions.

FRAUD POLICY

When local laws are broken and individuals seek personal gain, communities can experience severe environmental impacts. To successfully fight the potential for corruption, both a top-down and a bottom-up communication approach are required. Beyond internal audits for corruption-related risks, DyStar's Fraud Policy was created to reinforce the company's anti-corruption efforts. This policy fosters a work environment where staff can safely and anonymously report known or suspected instances of fraud, and aids efficacy in identifying instances of wrongdoing by assuring potential whistle-blowers that they can act without fear of unjust retribution.



DyStar's business conduct policy is straightforward: there is zero tolerance for giving or receiving bribes. There is never a justifiable reason for corruption, as it exposes DyStar and its employees to possible criminal prosecution, civil fines and penalties.



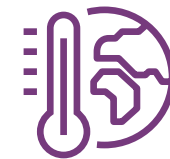
Approach to Sustainability



Watch now

Global Sustainability Trends

Sustainability challenges are growing worldwide in terms of complexity and scale. Transitioning towards a more sustainable business model requires understanding of key global trends that impact the industry. As highlighted by some of the world's leading think tanks, here is a shortlist of the key sustainability issues:



CLIMATE CRISIS

With global greenhouse gases rising at an estimated 2.7% in 2018 and reaching an all-time high, climate change is a major concern. Extreme weather conditions and increasingly hotter years will create many challenges to how businesses operate and cause interruptions to global supply chains. For businesses to respond appropriately, it means prioritizing investments in climate resilience and adaptation, in addition to increasing collaboration towards adoption of low carbon solutions.



CITIZEN POWER

Increasingly, citizens the world over are demanding action from governments and businesses on pressing environmental and social issues. Gen Z, the demographic cohort after the Millennials who have used technology from a young age, are leading this drive, and are increasingly important influencers in engaging companies and government for change. Businesses increasingly need to be purpose-led, providing their consumers products and services addressing environmental and social impacts, integrating sustainability into their core business model, and building trust with stakeholders and the public by increasing transparency in their operations and supply chains.



SAVING ECOSYSTEMS

Humans are disrupting ecosystems with their activities, causing environmental degradation and loss of many other species at an alarming rate. Extraction of natural resources for human consumption, land degradation and deforestation, plastic waste concentrating in the world's oceans, and greenhouse gases on the increase are just a handful of the significant ecosystem threats taking place today. Factors like these destroy ecosystems and cause species to go extinct—including many that are beneficial to human beings. Consumers are demanding businesses to act regarding how their products are made and to make supply chains more environmentally sustainable. This pressure has encouraged interest in circular solutions for businesses and their value chains. Companies are also beginning to look at their impact on biodiversity.



INDUSTRY LEADERSHIP

Industry leadership is required to help meet the challenges facing businesses today. Companies are increasingly heeding the call, incorporating sustainability into corporate strategy, setting ambitious environmental and social goals and targets, pushing for transparency and responsible operations in their value chains, and building the trust of their customers and employees. Against the severity of the challenges being faced however, significantly more needs to be done in the coming years. DyStar takes its responsibilities as a leader seriously and has defined numerous goals and strategies to ensure sustainability drives the business forward.

Strategy for Sustainability

DyStar strives to be the environmental and global leader in its target industries. It has set numerous goals to ensure this vision is realized.

The company continuously innovates its products so that they are safe for employees, customers, business partners, and consumers. It works to stay connected with its stakeholders and engage the communities where it operates.

Aiming to secure sustainable business growth, it pursues sustainability in all aspects of its business, aligning its efforts and strategies to the UN Sustainable Development Goals where possible. DyStar works to continually optimize its carbon footprint and conserve planetary resources along the entire value chain. The company also puts health, safety, and environmental protection as a high priority in the value chain.

As a responsible business, it complies with all relevant laws and regulations worldwide in its areas of operation, and meets major industry standards.

TWO-FOLD SUSTAINABILITY STRATEGY

DyStar’s sustainability strategy is Two-Fold, focusing on both reducing its own operational impacts as well as helping customers to reduce their impact.

To reduce its own operational impacts, there is an established sustainability structure within the organization. There is a regular sustainability reporting process with robust data collection and environmental performance monitoring. It has also implemented emissions reduction strategies and is committed to reducing its water, waste, energy, and greenhouse gas (GHG) footprints.

In order to help DyStar customers reduce their impacts, an econfidence® assurance is offered and backed with a strong ethos of product stewardship. There is reliability in all quality aspects of DyStar products, including eco-performance. The company also leads in sustainable product innovation and processing.

1 REDUCE OUR OPERATIONAL IMPACT



- **Established Sustainability Structure**
- **Measured environmental performance – Sustainability Reporting**
- **Implemented emission reduction strategies**
- **Committed to reduce our footprint in water, waste, energy, GHG**

2 BEST-PRACTICE FOR OUR CUSTOMERS



- **Founding of econfidence® Management**
- **Product stewardship – Reliability in all quality aspects including eco-performance**
- **Sustainable Product Innovation**
- **Sustainable Processing (Cadira®)**

The Value Chain Approach

In many parts of the world, the textile and apparel industry has achieved the unfortunate distinction of being a highly pollutive sector. The production of garments is complex and involves extensive supply chains for fiber production, raw material sourcing, textile manufacturing, garment construction, shipping, storage, retail, use, and disposal.

Comprehensive analysis of this sector would have to take into account not only the direct sources of pollution like the excess use of fertilizers and pesticides in cotton farming, the copious quantities of dyes and auxiliary chemicals applied in textile manufacturing, the accumulation in lakes and oceans of plastic microfibers shed by synthetic garments, and the growing volume of waste composed of cast-off clothing. Other factors for consideration include the sizable amount of natural resources required for raw material extraction, farming, harvesting, processing, manufacturing, storing, and shipping. Industry issues such as these are the responsibility of many stakeholders.

DyStar supplies dyes and auxiliaries and acknowledges risks from improper use of chemicals can be significant. Beyond chemical risks, climate change has the potential to severely impact DyStar and its customers’ access to water in certain parts of the world, which is an important medium for production processes. Adequate waste and wastewater management practices enable DyStar’s substances to be applied safely by customers in textile production. If waste and wastewater management practices are insufficient, textile production can be highly polluting.

In the face of many pollution-related issues and amidst public concern, governments in emerging market countries are stepping up enforcement of environmental laws and regulations – particularly those that target emissions, waste, and wastewater. Consequently, many textile producers are facing pressure to clean up.

Against this industry backdrop, DyStar has become a natural partner for businesses keen to improve their environmental performance. The company is committed to sustainability across the entire value chain. That commitment begins at home, with DyStar working on its own operational impacts, and extending upstream to its suppliers, who are expected to uphold basic standards of ethical conduct. Downstream, a diverse range of responsible products, tools, and services cater to the needs of customers, brands, and retailers.

The “Four C’s” – Creating, Conserving, Caring and Communicating, are guiding the principles that identify positive and negative impacts across DyStar’s value chain.

CREATING RESPONSIBLE PRODUCTS AND SOLUTIONS



Green design and responsible sourcing underpin product stewardship at DyStar, and these areas are bolstered by a comprehensive range of services enabling stakeholders to select, communicate and utilize colors sustainably. Precautions undertaken at the design and sourcing stage have significant and positive impacts beyond the company’s walls.

CONSERVING PLANETARY RESOURCES



Across DyStar’s business units, production teams have the goal of reducing the energy, water and raw materials consumed for every ton of production by 20% of 2011 levels by the year 2020. These targets also apply to waste, wastewater and greenhouse gas emissions resulting from the company’s operations.

CARING FOR PEOPLE



The importance of the company’s employees and local communities is recognized in DyStar’s sustainability framework – whether pertaining to their health, safety or general well-being. An open-door policy is used and all reported grievances should be addressed in a fair and just manner.

COMMUNICATING WITH STAKEHOLDERS



Regardless of whether it is praise or critical feedback received, the company values views from both internal and external stakeholders. By actively engaging with stakeholders, DyStar is able to keep its Creating, Conserving and Caring activities relevant to the times and fit for purpose.



Creating Responsible Products and Services



Watch now

Textile Effects and Labels

DyStar's Evo® finishing products provide solutions for a variety of requirements in the textile industry. Together with the Evo product range, DyStar also offers labels for customers to demonstrate the high quality standard on the finished product.



EVO® Protect

- Water and oil repellent
- Soil repellent
- Keeps fabrics cleaner for longer
- Wash-fast durability
- Based on PFOA- and PFOS-free recipe



EVO® Protect D

- Water and oil repellent
- Soil repellent
- Keeps fabrics cleaner for longer
- Wash-fast durability
- Based on fluorine-free recipe



EVO® Care Aloe

- Contains natural aloe vera extract
- Comfortable softness and absorbency
- Wash-fast durability



EVO® Care Vital

- Contains natural aloe vera extract, jojoba oil, and vitamin E
- Comfortable softness and absorbency
- Wash-fast durability



EVO® Fresh

- Odor absorbing finish
- Long-lasting freshness
- Eco-friendly
- Reactivated by washing
- Wash-fast durability





Textile Dyes, Inks and Pigments

DyStar is the world's leading supplier of dyes. We have by far the broadest product range on the market.

- DISPERSE DYES**
Dianix® | Palanil®
- REACTIVE DYES**
Levafix® | Procion® | Remazol® | Realan®
- DENIM DYES**
DyStar Indigo | Cassulfon®

- INKS**
Jettex®
- VAT DYES**
Indanthren®
- ACID DYES**
Telon® | Supralan® | Isolan®
- DIRECT DYES**
Sirius®
- PIGMENTS**
Imperon®



Textile & Apparel Auxiliaries

DyStar's innovative auxiliaries range spans the entire textile wet processing chain. DyStar's auxiliaries provide textile manufacturers enhanced cost and resource efficiency.

- PRE TREATMENT**
*Sera® Fil | Sera Wash | Sera Zon | Sera Wet
Sera Zyme*
- DYEING**
*Sera Gal | Sera Fast | Sera Quest | Sera Foam
Sera Con | Sera Lube*
- FINISHING**
*Evo® Soft | Evo Protect | Evo Pret | Evo Fin
Evo Care*
- COATING**
Evo Top | Evo Xen
- PRINTING**
Sera Print | Sera Binder
- LAUNDRY**
Lava®
- SPINNING & WEAVING**
Isafil | Filapan® | Synthesin® | Cerat



Colorants and Process Additives Applied in Consumer Products

DyStar offers additives and colorants to multiple consumer industries including food, drugs and cosmetics (FD&C), FDA certified and quality Food D&C and globally certified Food Grade / Food Safe defoamer additives.

- FD&C REGULATED**
*Certified FD&C Dyes | FD&C Lakes
Certifiable Dyes | Lakes*
- D&C REGULATED**
*Certified D&C Dyes | D&C Lakes
Certifiable dyes | Lakes*
- FOOD FOAM CONTROL**
Foam Blast® | Acepol® | Mazu® | KFO® | Masil®
- SECONDARY BLENDS**
From Regulated and technical dyes
- TECHNICAL DYES**
Hidacid®



Industrial Colorants and Performance Chemicals

Our diverse portfolio of dyes, pigment dispersions, defoamers, functional silicones and specialty esters enable manufacturers of coatings, inks, and adhesives to meet performance and regulatory compliance targets.

- TECHNICAL DYES**
Hidacid® | Jettex®
- PIGMENT DISPERSIONS**
*Hilton Davis® Formulator 24A and Industrial
42A Super Seatone® | Sup-R-Conc® | Black
Shield® Auracote® | Sup-R-Cryl® | Lucida®*
- DEBONDERS**
Fluffsoft®
- INDUSTRIAL DEFOAMERS**
Foam Blast®
- INDUSTRIAL SILICONES**
*Masil® Functionalized | Emulsions |
Reactive Fluids*
- SPECIALTY ESTERS**
Novaflex®

PRODUCT STEWARDSHIP ACROSS OUR VALUE CHAIN

At DyStar, product stewardship is an integrated process, tapping the dedication and expertise of multiple product divisions towards one common goal: to identify and minimize environmental, health and safety risks throughout a product's lifecycle. After all, a product's indirect impacts can be comparable or even greater than what results from the company's internal activities. The early stages of design and sourcing can imbed sustainability, and DyStar focuses its efforts in this critical area to provide value for its customers. As a result, customers are likely to attain the desired color and a positive effect on workers, communities, and the environment.

Modules Making an Impact

DYSTAR CADIRA® MODULES

Saving Valuable Resources

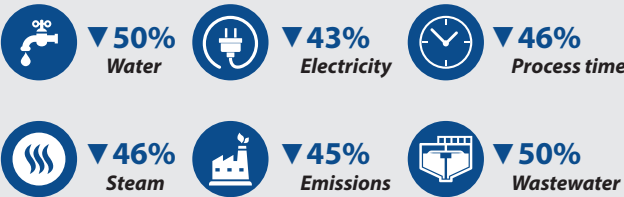
Enable the reduction of the carbon footprint and increase productivity by improving the utilization of machinery.

Nine Cadira modules are meanwhile offered. Besides being more energy- and water-efficient processes, they also deliver significant reductions in wastewater.

CADIRA® POLYESTER

Maximize the resource efficiency in exhaust processing

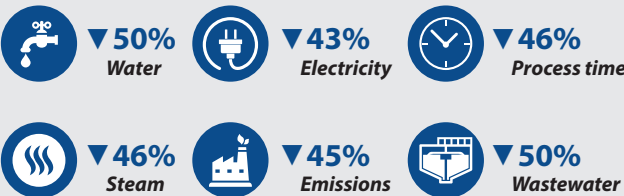
Fully Optimized Cadira Polyester Dyeing > Compared to Conventional Polyester Dyeing*



CADIRA® RECYCLED POLYESTER

Optimize the rPET dyeing process with Cradle to Cradle Certified™ product – Dianix® Dyes

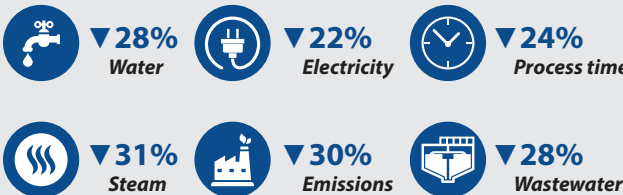
Cadira® Recycled Polyester vs dyeing virgin polyester with standard dyes



CADIRA® REACTIVE

Save valuable resources and lower the costs in reactive dyeing

Cadira® Reactive Dyeing > Compared to Conventional Reactive Dyeing



CADIRA® REACTIVE/DISPERSE CONTINUOUS

Reduce the need for resources in continuous dyeing of Polyester/Cellulosic blends

Cadira® Reactive /Disperse Continuous Dyeing > Compared to Conventional Continuous PDTPS process



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

Modules Making an Impact

CADIRA® VAT

Strengthen resource-efficiency in exhaust processing of cellulosic fibers

Cadira® Vat Dyeing > Compared to Conventional Vat Dyeing*

▼30%
Water

▼20%
Electricity

▼30%
Process time

▼25%
Steam

▼24%
Emissions

▼30%
Wastewater

CADIRA® PRINTING PX

Eliminate waste of resources in the wash-off process

Cadira® Printing PX vs conventional wash-off

▼50%
Electricity

▼50%
Process time

▼50%
Steam

▼33%
Wastewater

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

CADIRA® DENIM

Take full advantage of the ultimate sustainable solution providing clean denim production

Cadira® Denim vs standard Indigo dyeing process using Hydrosulphite

▼95%
Sulphate

▼50%
Total suspended solids reduction

▼82%
COD

▼10%
Wastewater

CADIRA® WOOL

Support the environment with clean and more efficient dyes for the wool dyeing process

Cadira® Wool vs Mordant Black 9 dyeing process

▼50%
Electricity

▼50%
Process time

▼50%
Steam

▼40%
Wastewater

Products with a Difference

DIANIX® XF2 DYES

The latest high wet-fastness disperse dye developments

The Brand & Retailer fastness specifications for high wet-fast sportswear, apparel and workwear on critical fabrics like polyester microfiber, polyester/elastane, polyester/cellulosic and other polyester blends are challenging for the textile industry. In addition, the tightened environmental and eco-standards set by Brands & Retailers must be taken into consideration. The Dianix XF2 dyes have been designed for Color Confidence®, providing the highest levels of wet-fastnesses on critical fabrics, and comply with major Brand & Retailer eco-requirements.

The Dianix XF2 dyes are fully compliant with Standard 100 by Oeko-Tex® and are bluesign® approved. All dyes are free of organic chlorine and Dianix Yellow XF2, Dianix Yellow Brown XF2, Dianix Red XF2, Dianix Deep Red XF2, Dianix Rubine XF2, Dianix Blue XF2 and Dianix Turquoise XF2 are AOX-free.

The Dianix XF2 dyes offer excellent Right-First-Time performance in ternary shades through good reduction stability of Dianix Royal XF2 new, Dianix Dark Blue XF2, Dianix Navy XF2 & Dianix Black XF2 and the compatibility of dyes.

** The majority of XF2 dyes is patented or patent pending.

The dyes are characterized by excellent wet-fastness performance

and high sublimation fastness

with good build-up properties to dark shades on polyester microfiber & polyester/cellulosic blends at dyeing temperature of 135 °C and on polyester/elastane blends at dyeing temperature of 130 °C.

ABOUT DYSTAR
APPROACH TO
SUSTAINABILITY
CREATING RESPONSIBLE
PRODUCTS & SERVICES
CONSERVING
PLANETARY
RESOURCES
CARING FOR
PEOPLE
COMMUNICATING
WITH
STAKEHOLDERS
ABOUT THIS
REPORT

28

29

Enabling Sustainability Across Our Value Chain



DyStar takes a holistic approach to sustainability, going beyond product responsibility by offering brands, retailers, and textile producers reliable innovative support systems.

ELIOT®

Sustainability Made Accessible via Online Technology

DyStar's unique internet-based eliot tool provides quick-access guidance on product selection and process optimization. The tool helps make sustainable products and processes easy to understand and freely accessible to any client with an internet connection. Any time of the day, any place in the world, customers can skip the middleman and get the answers they need with direct access to this system.

eliot® has meanwhile six modules: Positive Lists, Product Finder, Optidye®, Information, Cadira® modules and eliot manuals. It is quick to use, where customers and stakeholders are able to explore the DyStar products, choose from an extensive selection of Restricted Substances Lists and eco-standard compliant products using the Positive Lists module, and even determine the most resource-efficient recipe for their chosen product through Optidye®.

POSITIVE LISTS

Search through a selection of recommended DyStar products that are suitable for textile articles with brand and retailer Restricted Substances Lists or selected eco-standards, such as bluesign® and GOTS. Preferred products can be bookmarked in the system, giving users the added flexibility to explore their favorite products in other eliot modules.

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 product quality.

CADIRA® MODULES

The Cadira concepts considerably reduce water, waste and energy consumption. Cadira will help Brands & Retailers and their production partners to save valuable resources and to reduce the carbon footprint of their textile goods.

PRODUCT FINDER

The Product Finder module helps customers to narrow down the dyes and chemicals that meet the required fastness and dyeing performance criteria. Users can search for products based on the desired technical properties and export results onto a spreadsheet before exiting.

INFORMATION

eliot gives users direct access to product information from different industry segments including activewear, technical textiles, denim, workwear, carpet, digital printing, home textiles, automotive and fashion. Shade cards and brochures are also available through the Information module.

ELIOT MANUALS

Detailed explanations of how to use the individual modules in eliot.

SPOTLIGHT ON ELIOT® OPTIDYE® N

Improving right-first-time dyeing processes for polyamide

The Optidye® N tool determines the optimum dyeing conditions when using Telon® and Isolan® dyes and Sera® auxiliaries in the exhaust dyeing process.

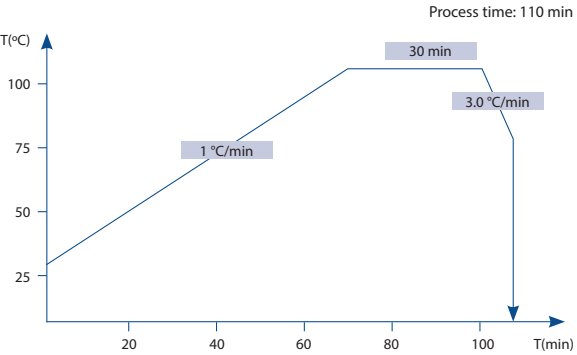
Optidye® N is designed to improve the reliability of the dyeing process for better right-first-time processing and improved quality of finished products. The tool calculates the pH, the optimum concentration of auxiliaries, the heating rate and the minimum dyeing time for a given machine settings and substrates.

Benefits:

- Improved combinability of dyes
- Accurate temperature control
- Optimized dye bath exhaustion
- Improved levelness
- Shorter dyeing cycles
- Improved quality
- Lower process costs
- Better reproducibility

STANDARD PROFILE

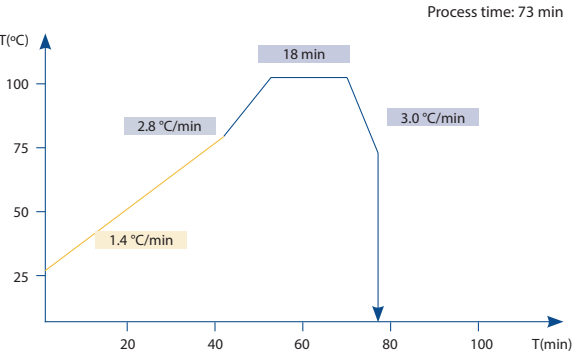
Pale shades



0.2	% C.I. Acid Yellow
0.05	% C.I. Acid Red
0.1	% C.I. Acid Blue
1.0	% Leveling agent with dye affinity
pH	8.5

OPTIDYE® N PROCESS OPTIMIZATION

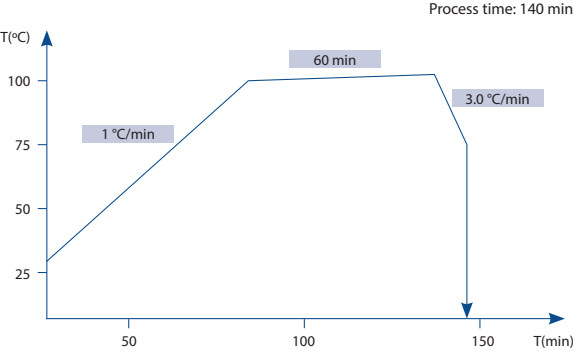
Pale shades – Optidye® N calculation



0.2	% Telon Yellow A2R	Critical temperature range: 28 – 78 °C DIK¹ = 0.7
0.05	% Telon Red A2R	
0.1	% Telon Blue A2R	
0.4	% Sera Gal N-FS	
pH	8.2	

Benefits in process savings: up to 30% Electricity | 5% Steam | 25% Process time
Benefits in productivity: up to 35% Productivity Increase

Dark shades



1.5	% C.I. Acid Yellow
0.5	% C.I. Acid Red
1.2	% C.I. Acid Blue
3.0	% Leveling agent with dye affinity
pH	5.5

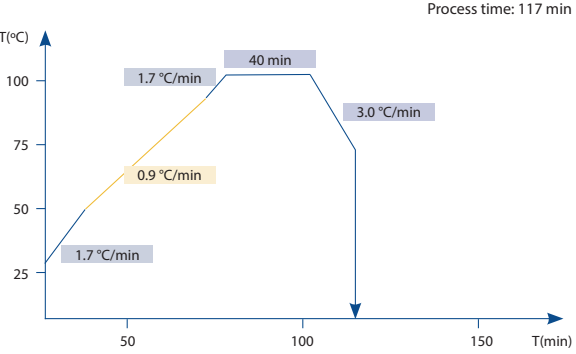
A guideline for the correct handling of Optidye® N in eliot is available in the module 'eliot® manuals'.

¹ DIK = Difference in K-value (index for the combinability of dyes)

² SF – value = Fiber saturation value

³ V – value = Fiber dyeing rate

Dark shades – Optidye® N calculation



1.5	% Isolan Yellow NHF-S	Critical temperature range: 52 – 92 °C DIK = 0.85
0.5	% Isolan Red NHF-S	
1.2	% Isolan Blue NHF-S	
2.0	% Sera Gal N-FS	
pH	6.0	

Benefits in process savings: up to 20% Electricity | 5% Steam | 15% Process time
Benefits in productivity: up to 20% Productivity Increase

Product Life Cycle and Circular Economy

Throughout the industrial era, most products have followed a linear, take-make-waste pathway. That is, the modern economy is built on materials being taken out of the environment, made into a product that is used, and then thrown away at the end of its useful life. This “cradle-to-grave” approach has created enormous pollution problems, environmental damage, and harm to human health. As the planet earth is a finite system with limited space and resources, this linear economic model cannot continue.

Instead of a linear economy, a circular economic model has been proposed to combat problems like these. Rather than materials being used and thrown away, products should be designed from the onset to be continually reusable (a “cradle-to-cradle” approach rather than “cradle-to-grave”). This means that technical and biological components are repeatedly captured and remanufactured into new things, rather than discarded. This forms a more eco-effective product lifecycle and a circular economy built on the reuse of materials where waste is obsolete.

While it is still early days, innovative businesses and responsible industry leaders are already pursuing this circular economy paradigm. To help transform the industry towards a clean and healthy future, DyStar has cooperated with the Cradle to Cradle Products Innovation Institute™ for many years in applying aspects of the Cradle to Cradle Design Concept in its product offerings. In 2016 itself, DyStar had a few carefully selected textile dyes assessed against the criteria of the Material Health category in Cradle to Cradle® product standard and was awarded a Material Health Certificate by the Cradle to Cradle Products Innovation Institute™.

The Cradle to Cradle Certified™ Product Standard guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories: material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. Products earn an achievement level in each category — Basic, Bronze, Silver, Gold, or Platinum — and an overall achievement level equal to the lowest-ranking category.

Meanwhile, 25 DyStar dyes have received the Cradle to Cradle Product Innovation Institute’s Gold Level Material Health Certificate. A Material Health Certificate is awarded to products that meet the Material Health requirements of the multi-attribute Cradle to Cradle Certified™ Product Standard.

VAT Dyes	Reactive Dyes	Disperse Dyes	Indigo Dyes	Reactive Dyes for Wool
Indanthren® Brilliant Orange GR Coll	Remazol® Brilliant Yellow GL 150%	Dianix® Yellow AM-SLR 200%	DyStar Indigo Vat 40% Solution	Realan® Black MF-PV
Indanthren® Red FBB Coll	Remazol® Yellow GR 133%	Dianix® Yellow S-3G		
Indanthren® Brilliant Green FBB Coll	Remazol® Ultra Orange RGBN	Dianix® Orange AM-SLR		
Indanthren® Olive Green B Coll	Remazol® Brilliant Red F3B	Dianix® Turquoise S-BG		
Indanthren® Scarlet GG Coll	Remazol® Ultra Carmine RGB	Dianix® Blue S-BG		
	Remazol® Brilliant Blue RN	Dianix® Brilliant Violet R		
	Remazol® Luminous Yellow FL 150%	Dianix® Red AM-SLR		
	Levafix® Eco Forest	Dianix® Rubine XF2		
	Levafix® Eco Black	Dianix® Black HF		



SUCCESS STORIES - G-STAR RAW

G-Star RAW, together with DyStar and Artistic Milliners, evolved the cleanest indigo technology in the world. It was formulated using 70% lesser chemicals, no salts and salt by-products were produced during the reduction and dyeing process, consequently saving water and leaving clean and recyclable water effluent.

This solution was based on DyStar’s “Cadira® Denim” concept. Cadira Denim combines the most eco-awarded Indigo in the world, DyStar Indigo Vat 40% Solution, with the ecological advanced reducing agent Sera® Con C-RDA, which replaces the conventional use of Sodium Hydrosulphite. Doing so overcomes the issue of contaminated toxic wastewater, and also improves color fastness of dyed samples—two common problems in indigo dyeing.

“By introducing our most sustainable jeans, which incorporated DyStar’s chemistry and certifying the chemicals, we were able to meet our goal of attaining Cradle to Cradle® standard. We are open to work with DyStar on anything that is leaning towards sustainability, and towards changing our practises.” Adriana Galijasevic, G-Star RAW (Demin Research, Design and Development).

“We are really proud to have collaborated with our partners G-Star RAW and DyStar in developing the most sustainable denim fabric ever made at Artistic Milliners. Together we have pioneered a radical new dyeing method which is hydro and salt-free. We call the process Crystal Clear. This is perhaps the most radical change to the indigo dyeing process since its industrialization. Even though this formula is in its infancy, we are hopeful that over time it will be adopted by the denim industry at large as there is an unprecedented environmental/ water saving potential in using this method.” Omer Ahmed (Director of Artistic Milliners)



Leadership Close up

Fanny Vermandel

Vice President, Global Marketing Coloration

What is your key priority for this year?

Fanny Vermandel: It is our priority to secure supply of our existing product ranges. We have key partnerships with our customers, the textile industry, and they value our continued services. Due to the volatile chemical supplier landscape in India and China caused by many chemical company closures in both countries (due to pollution or other incidents, global textile dyes supply chains face many challenges. Together with our Operations and Technology Teams, we have several projects in place to increase the production capacities, e.g. in our Japan and Indonesia factories.

What differentiates DyStar's products from their competitors?

Fanny Vermandel: DyStar is one of a handful of chemical companies that are still doing real Research and Development work for Textile Dyes. As such, we regularly launch new dyes which are based on novel chemistry. Due to this, DyStar's textile dyes ranges are protected by more than a thousand patents.

Dianix® XF2 Dyes are products with a difference, how does the difference benefit customers and/or end-users?

Fanny Vermandel: The range consists of 13 dyes which are mostly based on new chemistry. The Dianix XF2 items provide the highest levels of wet-fastnesses on critical fabrics and comply with major brand and retailer eco-requirements. Excellent reproducibility and therefore Right-First-Time performance in ternary shades is achieved through good reduction stability of Dianix Royal XF2 new, Dianix Dark Blue XF2, Dianix Navy XF2 & Dianix Black XF2 and the compatibility of dyes.

How does the econfidence® program affect the value chain?

Fanny Vermandel: econfidence is backed up by the most extensive eco-testing process of any textile chemical supplier. It is designed to ensure that DyStar dyes and chemicals meet ecological specifications, to ensure they fulfill all applicable statutory restrictions in the markets they are sold, and comply with communicated voluntary requirements.

How has the econfidence® program succeeded in making the value chain downstream more sustainable? Can you give examples?

Fanny Vermandel: Currently, approximately 1360 DyStar dyes and chemicals are listed on bluesign's bluefinder. The bluesign system has been independently reviewed as one of the highest sustainable standards and certification organizations. This is our contribution to stakeholders in our textile supply chain which choose to produce and/or purchase bluesign approved textiles. Also, the Cradle to Cradle Products Innovation Institute™ has certified 39 DyStar dyes with Material Health Gold Standard. This is our contribution to our partners which are moving towards textile articles ready for the circular economy.

What happened since DyStar launched its first Cadira® module in 2016?

Fanny Vermandel: We have meanwhile launched 9 Cadira modules in total. The latest ones were Cadira Reactive/Disperse Continuous, Cadira Printing PX and Cadira Laundry. We group them all in a special folder in eliot®, our online marketing tool, to make them easily retrievable for our partners and stakeholders.

What is the main target that the Global Marketing Coloration Team want to achieve this year?

Fanny Vermandel: We realized that many brands and retailers (B&R) are still not requiring their suppliers to implement the "Best in Class" processes in dyehouses and printing factories. There are several reasons for this, and it is mainly because of the overemphasis on price. At DyStar, we need to ensure that B&R are well informed about our Cadira modules and their role in improving performance. For the first time, DyStar participated in PERFORMANCE DAYS, the Functional Fabric Fair, in Munich on May 19th, 2019. We offered several workshops to the industry to raise awareness of how our Cadira modules, together with our certified dyes and chemicals, can be used to reduce B&R's global carbon footprint, and ensure their textiles do not contain any unwanted contaminants.

How do you see the future of DyStar?

Fanny Vermandel: Our future is about sustainability—this is how we as a company differentiate ourselves. For us, it is essential to protect our planet and the colorful life on it. We strive to be the environmental and innovation leader, and therefore it is our obligation to provide "Best in Class" products and competitive solutions. Every day, we strive to prove and communicate that our products are high-performing.

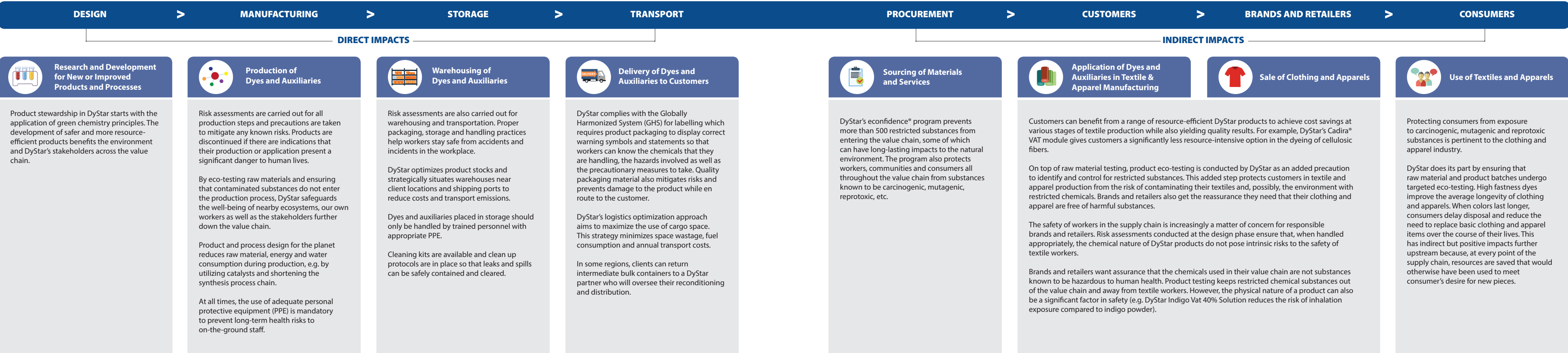
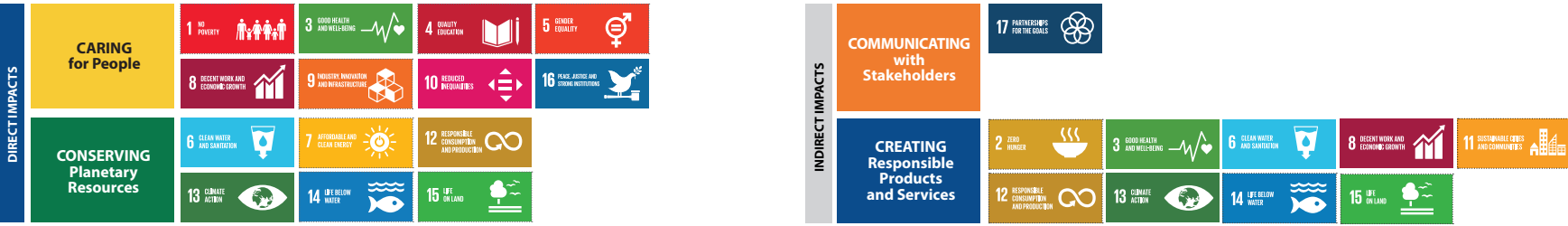
The UN SDGs Across DyStar’s Value Chain

To help the world become more sustainable by 2030, the 17 United Nations (UN) Sustainable Development Goals (SDGs) serve as a common framework for all countries, companies and civic societies to take part. DyStar is a responsible corporate citizen and has joined the global movement, evaluating the alignment of its sustainability strategy to this worldwide agenda.

While eight of the SDGs are targets DyStar can make significant contributions, there is some engagement by the company with the other nine goals, where feasible. DyStar acknowledges the interconnection of all the SDGs and pledges its support as opportunities arise.

To illustrate, Goal 12, which promotes responsible consumption and production is one area where DyStar has direct and positive impact through its internal commitment of the second ‘C’ – to conserve planetary resources in its own operations. The company also indirectly contributes to Goal 12 through the first ‘C’ – to create responsible products and services, as many of which are designed to help customers become more resource-efficient. Moreover, DyStar’s colors are made to last; this is not just a matter of product performance, since high quality dyes can also reduce quantities of items (e.g. t-shirts) purchased over a consumer’s lifetime.

The UN SDGs Across DyStar’s Value Chain





DyStar Data Protection Team



DyStar Boehme Africa with external audit for ISO9001:2015 transition

With compliance as a key focus of DyStar’s activities as an industry leader, the company works closely with regulators and industry-related bodies to meet a number of requirements, such as GDPR, PDPA, ISO9001 and ISO9001:2015 Transition, REACH, and Environmental Legal Compliance Audits, as highlighted below:

DATA PROTECTION LAW

DyStar headquarters and each of its subsidiaries and affiliates respect the privacy of individuals and are committed to safeguarding personal data in accordance with the Singapore Personal Data Protection Act (No. 26 of 2012) (“PDPA”) and other applicable data protection laws, including the European Union (“EU”) General Data Protection Regulation (“GDPR”), where applicable.

As part of our commitment to protecting personal data, DyStar adopted and implemented the privacy policy, which sets out its practices regarding the collection, processing, use and disclosure of personal data, and describes privacy rights.

With this legislation, data controllers including companies and their employees must comply with certain obligations pertaining to personal data. Failure to do so will result in legal consequences. DyStar’s operations such as Germany and Turkey, have taken steps to ensure business compliance with the new regulations. A GDPR compliance training for company staff was completed for the year 2018. In an effort to comply with local law and regulations, DyStar headquarters also reviewed its Data Protection Policy under Management Manual to comply with PDPA in Singapore.

In terms of bringing the business into compliance, an exercise was also conducted in August 2018 to obtain employees’ consent for the use of their personal data for work and employment-related purposes.

GLOBAL QUALITY MANAGEMENT

The DyStar Global Quality Policy articulates the company’s commitment to produce reliable and high ecological standard products which are environmentally friendly and safe for human use. The main objective of this policy is to ensure product quality compliance and risk-free product usage by its customers and end-users.

To achieve this, DyStar Global Quality Management system has been upgraded to the new ISO9001:2015 standard in 2017 across all DyStar manufacturing sites and sales offices. The new version of the ISO9001:2015 standard is streamlined to improve control on all work processes in DyStar business operations. This has brought about improved product quality, which is evident from the continuous improvement of the company’s product quality performances over the years since 2009.

DyStar customer service quality performance for FY2018 yielded a customer satisfaction rating close to 90%, further endorsing DyStar’s Service Quality class. The new ISO9001:2015 quality management system has also introduced risk management control into DyStar business operations to lower risk susceptibility. In summary, the quality management system that DyStar has put in place is a framework to achieve best in class quality excellence in the dyestuff industry.

REACH

Protecting environmental and public health from unsafe chemicals is significantly important to a business like DyStar.

On May 31st, 2018, the implementation period of the European chemicals regulation REACH ended. Transitional provisions no longer are valid and all rules now are fully effective.

To entirely fulfill its obligations in line with the deadline, DyStar created more than 130 new registration dossiers and updated further 25 dossiers in the complex IT-system IUCLID and successfully submitted them to the European Chemicals Agency (ECHA) via their REACH-IT platform.

Accordingly, DyStar successfully handled all registrations within the given timeline. In total, more than 450 substances are now registered by DyStar.

Obligations on updates of dossiers and initial registration of substances newly brought onto the market did not stop with the deadline. In the second half of 2018, more than additional 50 dossiers were submitted to ECHA.

DyStar’s compliance-related business activities with REACH obligations do not stop with the end of the deadline and will continue indefinitely. Annual imported and manufactured volumes of each substance will be determined to elucidate whether they trigger upgrading or downgrading obligations. New experience with properties of registered substance has to be carefully counter-checked and implemented in the respective registration dossiers and risk assessments. Additionally, ECHA now evaluates the submitted registration dossiers and in case of any uncertainties, they will request the registrants for revision of the dossiers and even for further testing.

DyStar Korea’s operation is working to meet the obligations of chemicals management legislation by the Korean Ministry of Environment, known as the Act on Registration and Evaluation of Chemical Substances in South Korea, or “K-REACH”. This legislation requires registration of chemical substances, screening of hazardous substances, hazard and risk assessment of products containing chemical and hazardous substances, and sharing of chemical information. DyStar is closely monitoring K-REACH legislation updates to comply with the legal requirements.

ENVIRONMENTAL COMPLIANCE AUDIT

Environmental compliance audits are undertaken to investigate the adherence of a facility to environmental legislation and any resulting liability from non-compliance. This typically includes a scope of examining operations, waste streams, permit requirements, regulatory reporting and recordkeeping, chemical and hazardous material usage and handling, any discharges to air, land, or water. Audits like these are conducted at facilities to confirm that environmental management systems have been effective, and to identify any related issues. They can help maintain compliance, identify any deficiencies on site, and take required corrective actions to improve these areas. DyStar operations such as Boehme Africa production plant undertook an Environmental Legal Compliance Audit. The auditor further commended the commitment and understanding that all staff exhibited during the audit.



DyStar’s Environmental Compliance



DyStar’s compliance-related business activities with REACH



Conserving Planetary Resources



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THE 2020 TARGETS

Now eight years into their sustainability journey, DyStar’s production teams are tracking towards reducing their production footprint by 20% for every ton of production by the year 2020. Included in this goal are the resources used for production, including energy, water and raw materials, as well as their corresponding outputs – greenhouse gas (GHG) emissions, waste and wastewater. Keeping an efficient production system operational is essential to keeping the company functioning within planetary boundaries. It is also cost-effective, enabling DyStar’s industry competitiveness.

Through the talent and commitment of its production teams, the company has successfully met or surpassed five of the six 2020 targets. These were supported by a series of wise decisions made in recent years resulting in markedly more efficient facilities into the Group. Because of these changes, the average resource requirements across all product offerings have been reduced, due to newer ranges that demand less energy and water to produce.

Scope and Methodology

To monitor DyStar’s impacts across all production sites, warehouses, offices, and laboratories, a centralized reporting platform has been used. A standardized dashboard tool also helps teams understand their performances against all six 2020 targets. This dashboard serves as a reporting tool to facilitate and align communication across business units.

DyStar’s dataset includes production sites, smaller office locations in South America and Northeast Asia, as well as warehouses owned or operated by DyStar across the five continents. Many of these smaller locations do not contribute significantly to the company’s overall environmental profile. However, reporting on their footprint provides a truly complete overview of all locations the company owns or operates. The majority of the company’s environmental impacts come from production activities and hence they receive the most attention.

	2016	2017	2018
Raw Material (thousand tons)	132.66	137.45	111.80
Raw Material Usage Intensity (tons per ton production)	0.79	0.79	0.72
Packaging Material (thousand tons)	5.53	6.69	4.43
Associate Material (thousand tons)	1.74	1.55	1.52
Direct Energy Consumed (TJ)	673.80	631.56	654.93
Indirect Energy Consumed (TJ)	924.47	1,018.79	822.52
Energy Consumption Intensity (GJ per ton production)	9.28	9.33	9.30
Water Withdrawal (million m³)	7.60	7.80	7.95
Water Withdrawal Intensity (m³ per ton production)	45.05	45.07	50.38
Water Reused (million m³)	1.80	1.97	2.03
Direct GHG Emissions – Scope 1 (thousand tCO₂e)	39.26	35.96	37.15
Indirect GHG Emissions – Scope 2 (thousand tCO₂e)	117.44	125.88	86.77
GHG Emissions Intensity (tCO₂e per ton production)	0.91	0.91	0.78
Wastewater Discharged (million m³) ¹	2.17	2.04	1.68
Wastewater Intensity (m³ per ton of production)	12.29	12.86	13.23
Hazardous Waste (thousand tons)	6.84	5.87	6.05
Non-hazardous Waste (thousand tons)	3.85	4.25	3.97
Overall Waste Intensity (kg per ton production)	71.43	66.61	70.81
Number of Spills, Total Amount Spilled ²	0 spills, 0 tons	2 spills , 3 tons	2 spills, 0.57 tons
Environmental Protection Expenditure (million USD)	10.31	8.00	4.52

¹ Wastewater discharged 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.

² Number of spills refer to significant spills that affected soil or water surfaces.

Conserving Planetary Resources

ENERGY

DyStar's energy portfolio includes purchased electricity, steam, natural gas, and liquefied petroleum gas (LPG). Most of the electricity is used to run plant machinery, IT systems, and air conditioning. Steam use, whether generated on-site or purchased from external providers, is mainly required for process heating.

As production sites are major consumers of energy, they are major targets for energy savings. Enabling this, production heads work to meet specific annual reduction targets. During the reporting period, energy and other resources undergo joint routine reviews with members of senior management. These discussions are valuable to monitor progress and also give production teams an opportunity to debate on the feasibility of newly proposed measures on a regular basis.

In FY2018, DyStar's overall energy consumption was 1,477 TJ a 10% reduction from FY2017. While work has been underway to diversify the company's product portfolio in favor of less carbon-intensive resources, energy intensity remains unchanged at 9.3 GJ per ton of production in FY2018. Intensive efforts are underway to ensure that the company's less efficient acquisitions are provided the support required to align with the rest of the company in terms of energy management.

Textile dye production usually utilizes the largest proportion of energy in manufacturing. In FY2018, this accounted for 1,041TJ in energy consumption. The production of auxiliaries and the chemical production activities used 405.7 TJ by comparison. Energy use in offices, laboratories, and non-production site warehouses was combined 30.8 TJ.

Also in FY2018, indirect energy from purchased electricity and steam comprised roughly 56% of DyStar's overall energy use, totalling over 823 TJ. Annual consumption in this category was just 18% lower than our baseline in 2011, despite

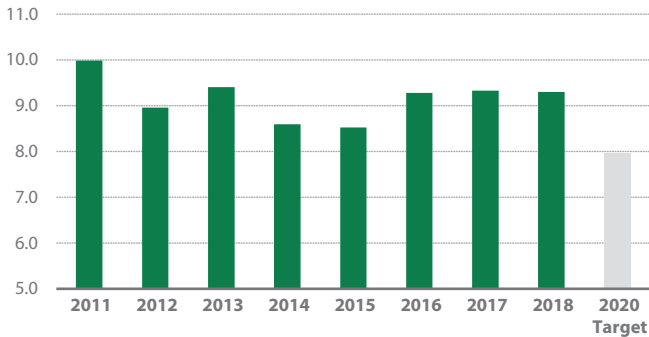
production volumes going up by over 26.4% in that same period. This indicates a positive impact that auxiliaries are having on the company's overall environmental footprint, and attest to the efforts of dyes production engineers, where the per ton demand for energy would ordinarily trend significantly higher.

Direct energy sources in FY2018 included about 44% of DyStar's total demand compared to just 28% in 2014. Between 2014 and 2018, there was a notable shift from purchasing steam to generating more of it on-site. This shift, along with the acquisition of three new production sites, caused direct energy consumption to rise from 353 TJ to 655 TJ over a four-year period. Among direct energy sources, the company consumed more than 588 TJ of natural gas and 46 TJ of LPG, accounting for 40% and 3% of the overall total direct and indirect energy consumption respectively.

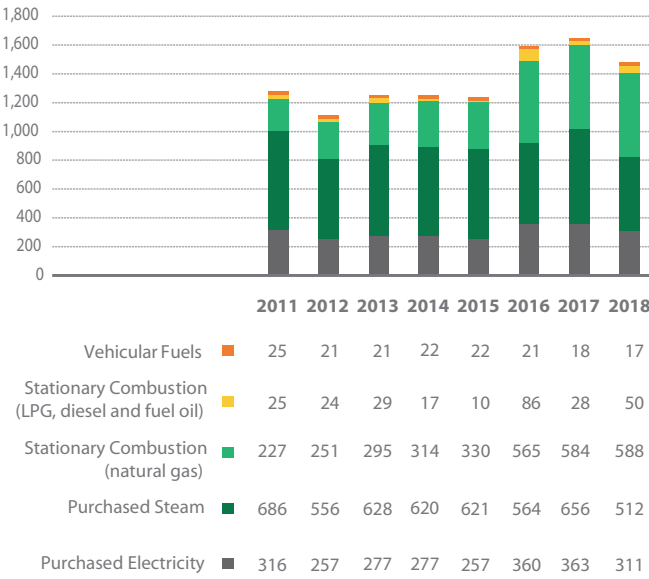
The remaining 1% of energy, amounting to 21 TJ, was derived from a combination of other stationary combustion fuels and vehicular fuels. The steep rise in direct energy consumption is noted, and DyStar is continually exploring more advanced technologies to mitigate this trend. These include more fuel-efficient combustion units and carbon capture technology. However, the importance of diligently implementing simple and cost-effective solutions has been found to be the best practice for reducing energy use. Installing variable frequency controllers for water pumps, reducing, canceling or shortening processing steps, and replacing live steam with indirect heating through a heat exchanger have all been useful initiatives.

For FY2018, consumption of renewable energy made up 2.2 TJ at the company. Most site leads face limited access to cost-effective forms of renewable energy that are also appropriate for the geography and climate of their respective locations. Nevertheless, renewable energy technology development is being carefully monitored with the hope that appropriate innovations will soon become available.

NON-RENEWABLE ENERGY INTENSITY (GJ energy used per ton production)



NON-RENEWABLE ENERGY CONSUMPTION BY SOURCE (TJ)



GHG EMISSIONS

DyStar production sites evaluate GHG emissions in terms of tons of CO₂-equivalent (tCO₂e) per ton of production as a performance metric. Non-production sites, comprising a minor fraction of the company's emissions footprint, also contribute to the company's commitment to reduce emissions intensity by 20% by the year 2020 by tracking and assessing their emissions profiles in absolute quantities.

Scope 1¹ and Scope 2² GHG emissions in FY2018 amounted to about 123,915 tCO₂e, representing a 4% decrease since the 2011 baseline year and 23% decrease compared to FY2017. Collectively, Scope 2 sources made up about 70% of DyStar's emissions in FY2018, with purchased steam (38,513 tCO₂e) accounting for less emissions than purchased electricity (48,254 tCO₂e). The remaining 30% were Scope 1 emissions, of which natural gas alone accounted for 32,065 tCO₂e. LPG combustion resulted in 3,123 tCO₂e in emissions, while the remaining stationary combustion fuels combined with vehicular fuels accounted for 1,524 tCO₂e in emissions.

Production facilities generated emissions totaling about 120,765 tCO₂e, more than 97% of DyStar's entire footprint. The remaining 3,150 tCO₂e stemmed from non-production sites including laboratories, offices, and warehouses.

Energy reduction measures are coordinated with Scope 1 and Scope 2 GHG emissions management. DyStar actively mitigates daily energy use by streamlining production operations and product ranges. The company has also discontinued manufacturing products proven to be cost or energy inefficient. The current company focus is on reversing the impact of the new acquisitions temporarily impacting the GHG emission intensity (currently at 0.78 tCO₂e for every ton of production) 22% below 2011 levels and 15% below 2017 levels, in line with the 2020 target.

Since 2017, Scope 3³ emissions have been calculated, that total nearly 3,219 thousand

tCO₂e. Similar to the pattern observed in other companies, Scope 3 emissions at DyStar accounted for majority of the company's total emissions profile, when taken into account alongside of its Scope 1 and Scope 2 emissions. The categories that contributed most significantly to Scope 3 emissions are goods transportation (1,671 thousand tCO₂e), product consumption and treatment (856 thousand tCO₂e), spending for various supplies and services (286 thousand tCO₂e), packaging (383 thousand tCO₂e), and energy (23 thousand tCO₂e). This class of indirect emissions represents a new challenge for corporations like DyStar. The company will increasingly focus on partnerships with all upstream and downstream businesses and suppliers to make quantifiable change in this area.

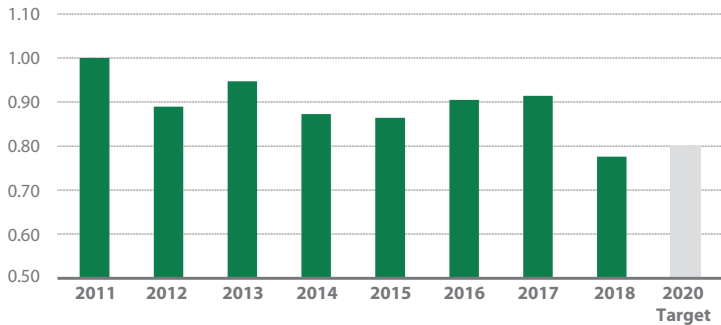
The methodology employed to quantify Scope 1, Scope 2 and Scope 3 emissions is in accordance with the Greenhouse Gas Protocol Corporate Standard, developed by the World Resources Institute (WRI) and World Business Council for Sustainable Development. Scope 1 emissions are selected for reporting based on their presence in company operations. Hence, CO₂e figures for Scope 1 emissions sources include carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Global Warming Potentials (GWP) and Scope 1 emission factors are sourced from the GHG Protocol guidelines. Scope 2 and Scope 3 emission factors were drawn from a variety of sources, chiefly the 2011 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting, jointly developed by the United Kingdom Department for Environment, Food and Rural Affairs and the Department for Energy and Climate Change.

¹ Scope 1 emissions: Occur from sources owned or operationally controlled by DyStar. These include emissions from stationary combustion fuels, vehicular fuels, process emissions, refrigerants, and ozone-depleting substances. A large proportion of the company's direct emissions come from the stationary combustion of fossil fuels.

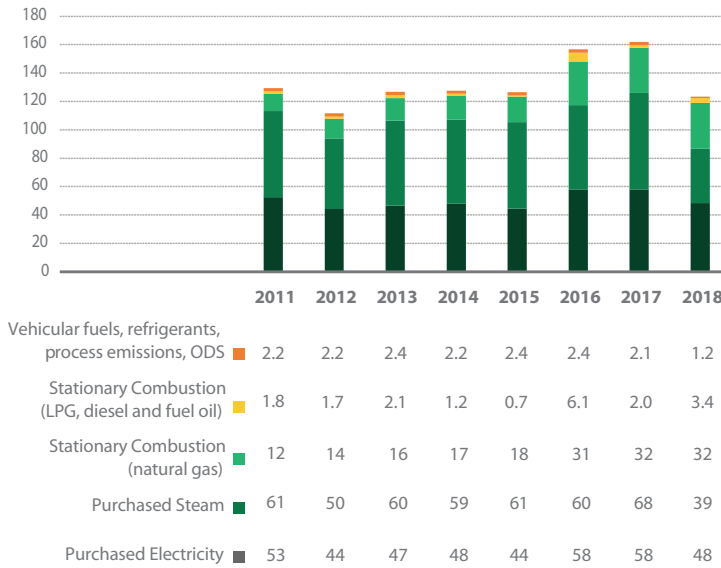
² Scope 2 emissions: Produced during the generation of purchased electricity and purchased steam.

³ Scope 3 emission: Those resulting from company operations, but not directly owned or controlled by DyStar.

GREENHOUSE GAS EMISSIONS INTENSITY (tons CO₂e emitted per ton production)



GREENHOUSE GAS EMISSIONS BY SOURCE (thousand tons CO₂e)



Conserving Planetary Resources

OZONE-DEPLETING SUBSTANCES

Ozone-depleting chemicals (ODCs) are not intended components of DyStar’s dyestuffs, pigments, and auxiliary preparations, and as far as the company is aware, these substances are not used in the synthesis or finishing of DyStar products. Accordingly, ODCs are unlikely to be present in company products. GHG emissions calculations exclude any ODCs that are used as refrigerants at any company locations. Scope 1 emissions from ODCs amounted to 436 tons, mainly from use of R-22 (Chlorodifluoromethane). Use of refrigerants in production, such as R134A, have been reduced, resulting in corresponding reductions in GHG emissions. The GWP for refrigerants, including R-22, are derived from the Intergovernmental Panel on Climate Change’s Fifth Assessment Report.

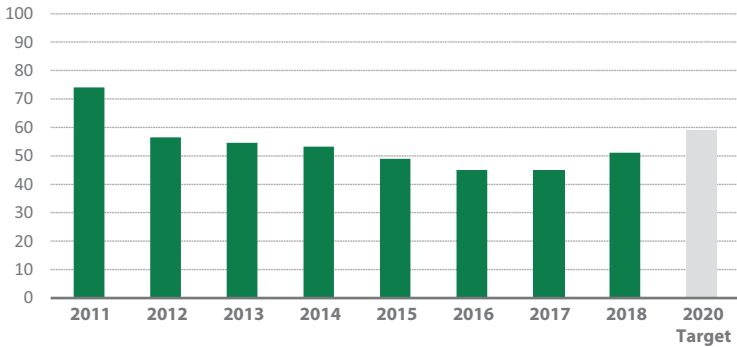
WATER

Water is an important resource for DyStar that is required as an ingredient in synthesis, as a medium for dispersions that are required at various stages of processing, and is frequently added as a formulant in many products. Water is also used for routine purposes such as equipment cleaning in plants and staff hydration.

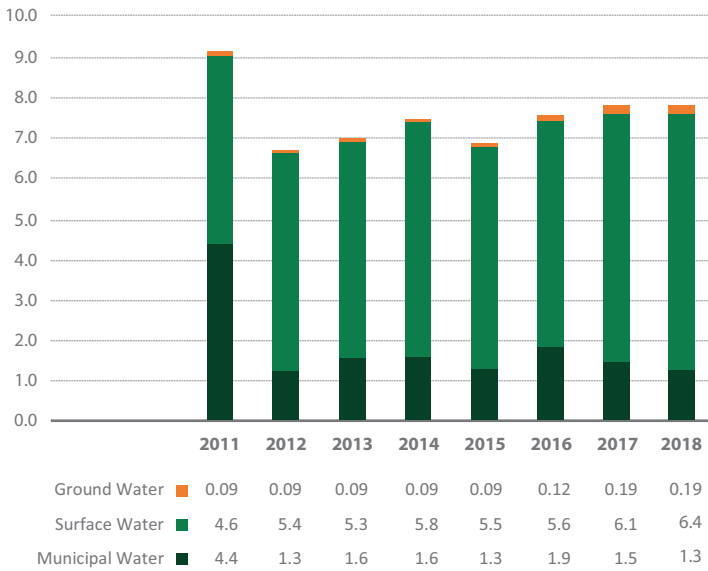
In FY2018, DyStar’s overall water withdrawal increased to 7.95 million m³, a 2% increase since 2017. Despite this year-on-year increase in volume, the overall water intensity has improved and improvements in efficiency are noted for the sixth consecutive year. Water withdrawal intensity stands at 51 m³ per ton production, showing an improvement of 31% since 2011. Business development teams have continually demonstrated the importance of taking the environment into account with each new investment or divestiture. Technology upgrades have also improved the overall performance of the company. Likewise, continuing outdated methods and technologies is detrimental to the environment and can affect long-term profits.

Diligent planning by DyStar’s production managers also has been an important factor in reducing the company’s water intensity. To minimize water withdrawal, one effective method employed has been the reuse of steam condensate. Production typically requires large quantities of steam, and the resulting liquid condensate can be safely reused for a range of purposes such as floor cleaning. As the condensation process takes place through indirect heat exchange mechanisms, steam condensate remains uncontaminated by chemical mixtures and can be used in place of municipal water, surface water, or ground water sources. This is a basic and easily applied practice, which reduced water withdrawal quantities at multiple locations. For FY2018, the quantity of reused water made up 2 million m³, which is equivalent of 26% of the company’s total consumption needs.

WATER WITHDRAWAL INTENSITY (m³ water withdrawn per ton production)



WATER WITHDRAWAL BY SOURCE (million m³)



WASTEWATER

Responsible wastewater management is employed in order to ensure minimal risk to communities and environment. In wastewater treatment, DyStar uses a combination of onsite and offsite approaches. Each plant has effective treatments tailored to the unique characteristics of its activities. The sequence of chemical, biological, mechanical, or thermal treatment processes depends on the physical and chemical nature of the wastewater generated at each production plant.

Whether final treatment is carried out by DyStar or by an external contractor, treated wastewater will only be discharged in accordance with all applicable legal frameworks and local permits. Further, treated wastewater that is intended for final treatment elsewhere will undergo monitoring to ensure that regulatory or contractual threshold limits are not exceeded. This also applies to wastewater bound for final treatment at a municipal plant, as well as wastewater handled by third-party contractors. DyStar does not allow the reuse of its wastewater by other organizations.

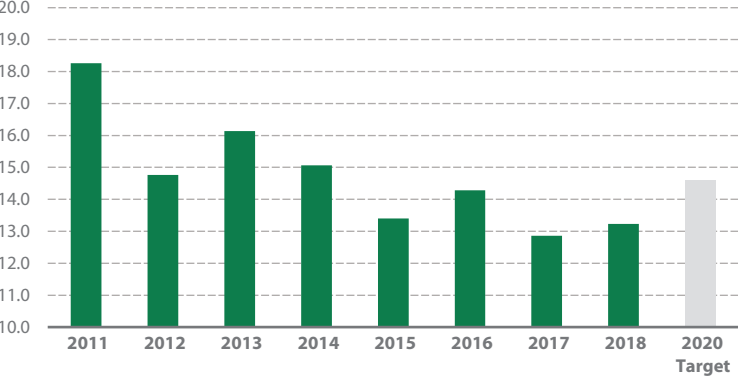
A combination of wastewater treatment methods is employed by all DyStar production sites, including those utilizing licensed external contractors. Various forms of pre-treatment methods—such as sedimentation and flocculation—are employed before wastewater is transferred for final treatment by the external contractor.

DyStar treated 1.68 million m³ of wastewater in FY2018 compared to 2 million m³ in the previous year. Likewise, wastewater intensity stands at 13.23 m³ per ton of production, which is 27.6% below 2011 levels, surpassing the 20% target. Many production teams are working along similar lines when it comes to wastewater, addressing the water-demanding processes that result in wastewater. For example, by maximizing batch sizes wherever and whenever possible, DyStar has been able to reduce the volume of cleaning

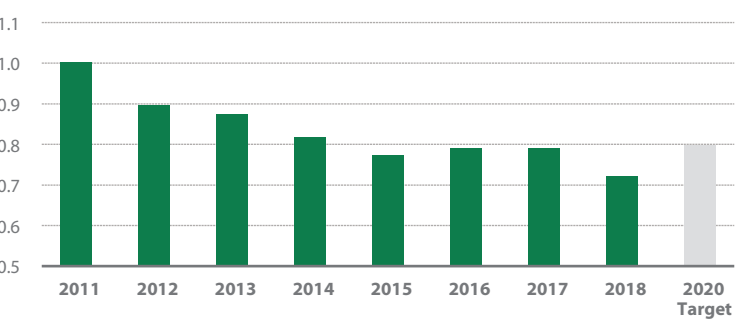
water needed for product changeover processes. Another approach included the conversion of two sizeable production plants to zero wastewater discharge plants. For many years, productions sites in India and Indonesia have employed a combination of evaporation and spray drying methods to convert their wastewater into solid or semi-solid sludge. Conversion in this way minimizes difficulties in handling and treating wastewater, but the trade-off is that active drying processes tend to be energy-intensive.

As an illustration, several site-specific wastewater treatment processes can be noted as follows. In the German location nearby Frankfurt, the process includes cooling the water below 35°C and adjusting the pH value before discharge. DyStar’s licensed wastewater contractor cleans water both mechanically and biologically according to German standards in a municipal sewage treatment plant. In the Ankleshwar Production Plant, physical processes of filtration and ultra-filtration are utilized by an external contractor to treat solid and semi-solid wastewater residue generated on-site. Also, filtered material like powder from dust catcher bags and sludge from the filter press of water treatment plant are also treated. In the Gabus Production Plant, wastewater is treated with a Flocculation-Coagulation system, concentrating raw wastewater by Multi Effect Evaporator, dried using a spray dryer into powder waste, and disposed by a licensed disposal vendor. In general, at other production plants, treated wastewater is discharged by the licensed external contractor.

INTENSITY OF WASTEWATER PRODUCTION (m³ water withdrawn per ton production)



RAW MATERIAL USAGE INTENSITY (tons of raw material per ton production)



Conserving Planetary Resources

MATERIALS

Raw material consumption in DyStar’s production plants—the chemical substances that are either processed or manufactured into a finished product—totaled 111,797 tons in FY2018. Utilization intensity stood at 0.72 tons per ton of production, a slight 8% decrease from base year, exceeding the company’s 2020 reduction target by 8%. Associate materials, such as glass beads used for grinding press cakes, are necessary for in the production process but do not actually become part of a product. In FY2018, 1,521 tons of associate materials were purchased.

Beyond lignin-based dye dispersants, the majority of DyStar’s materials are sourced from non-renewable origins. This is common in many chemical industries, as limitations exist for many essential materials. The majority of raw and associate materials are sourced from virgin materials, rather than recycled sources. DyStar recognizes all materials have an environmental footprint and aims to use them in an efficient manner.

DyStar has been able to improve its efficiency in recent years, preventing excess inventory from accumulating. This is enabled by frequent and accurate communication between master planners, sales teams and production heads. Master planners are smart about what and when to purchase, and mitigation options can be used to limit impacts from extracting, processing, and delivering raw and associate materials. Upon passing testing requirements, orders are accepted for manufacturing purposes, but it is up to the R&D chemists and process development teams to ensure the final product is obtained with the least amount of steps possible. DyStar’s best scientific minds are focused on pathways to maximize the utilization of material inputs.

HAZARDOUS AND NON-HAZARDOUS WASTE

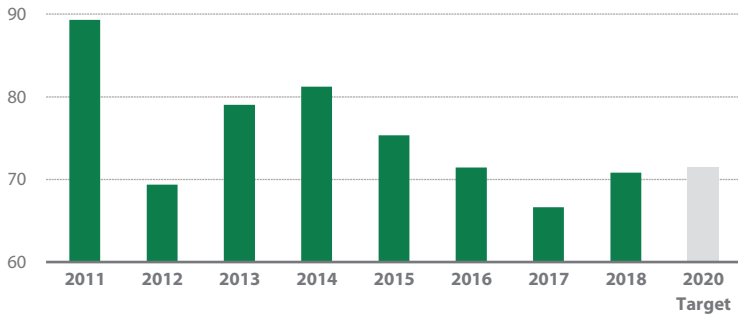
Most of DyStar’s hazardous waste is derived from manufacturing activities. Hazardous waste comprises primarily of packaging material, product residues, residues resulting from the distillation recovery of solvents, solutions and other liquids that cannot be disposed as wastewater, and residues remaining after wastewater evaporation at certain plants.

Non-hazardous waste comprises a small proportion of overall waste quantities, mostly consists of office waste, uncontaminated packaging material, and pallets. DyStar’s teams aim to reuse and recycle as much of their non-hazardous waste as possible. Material categories deemed acceptable for recycling by contractors vary from country to country. Non-hazardous waste unsuitable for recycling due to local limitations is disposed of as municipal waste. For FY2018’s totals, hazardous and non-hazardous waste came to 10,021 tons, roughly the same as FY2017, and a 2% decrease compared to 2011. The amount of hazardous and non-hazardous waste generated per ton of production fell 20.7% since 2011. Hazardous waste intensity alone dropped 13.6% since 2011¹. FY2018 had no major hazardous waste spillage incidents of at any of DyStar’s locations.

Of the total waste generated by DyStar sites, 13.1% (1,315 tons) was either reused or recycled, 53.3% (5,342 tons) was incinerated, and 32.9% (3,208 tons) was landfilled. The bulk of landfill waste was non-hazardous, with a small quantity of hazardous waste contained on licensed sites dedicated to stabilized industrial waste. Hazardous waste was the main category of material sent for incineration, and converted to energy at vendor-located waste-to-energy incineration plants.

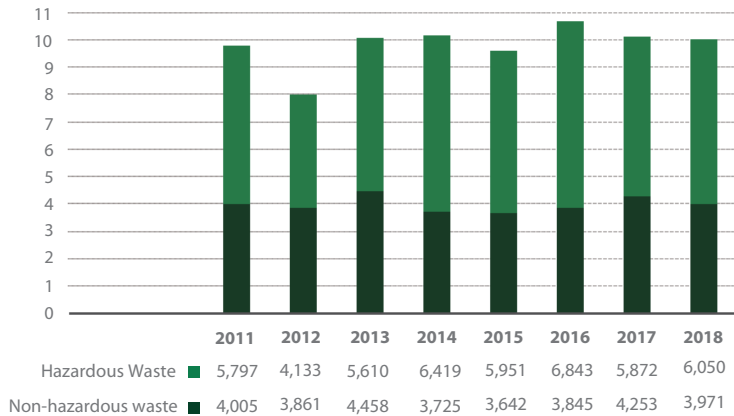
WASTE PRODUCTION INTENSITY

(kg of waste per ton production)



WASTE PRODUCTION BY CATEGORY

(thousand tons)



¹ Waste data includes DyStar production sites and laboratories only, as they account for the majority of waste generated. Presently, there are no known significant impacts on local biodiversity due to DyStar production activities in any of its operational locations. However, inadequate treatment of DyStar products by customers after the use phase do have the potential to damage ecosystems. There is little transparency as to the fate of dye products post-sale. However, DyStar communicates with clients to encourage outreach and technical advice regarding wastewater treatment.

Conserving Planetary Resources



DyStar used 4,430 tons of packaging material in FY2018 – including cardboard boxes, plastic drums, bulk containers, plastic wrapping, etc. In countries where the service is available, specialized service providers can be engaged to collect, clean, and re-distribute the company’s Intermediate Bulk Containers (IBCs) for reuse, thereby encouraging a more circular approach to packaging. More than 28.56% of DyStar’s 2018 global packaging needs were met by these reconditioned IBCs.

The overall packaging intensity was 28% lower than the year 2011.

Ahead of product shipping, appropriate warning labels are applied on every box, drum and container, in accordance with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Without these labels, customers working directly with DyStar products would have limited information on the appropriate handling and emergency response requirements. DyStar’s products are 100% compliant with GHS requirements and have not had a serious labelling-related incident.

For product transport, the in-house logistics team has taken active steps to minimize DyStar’s indirect environmental impacts. Coordination is undertaken with a multitude of customers and transport companies with the aim of meeting the expectations of all partners. The logistics team also aims to make optimal use of each container loads, with the priority to dispatch full, rather than partially empty, containers. By doing so, they help mitigate the company’s indirect emissions impact and cut overall transportation costs.

DyStar’s distribution networks are also organized with efficiency in mind, using direct shipments from production plants to sales regions. Regionally, the company maintains a distribution center as well as a network of smaller local warehouses that are strategically located near clusters of textile producers. Ultimately, the careful selection of warehouses based on geographical locations helps reduce the number of partial truckload trips required to reach our various customers. In areas where purchase volumes tend to be consistently high, the company also provides on-site consignment stocks. Though DyStar bears risks for any consignment inventory that goes unsold, the benefits from being able to reduce trucking frequency make this a feasible arrangement at certain locations.

SUSTAINABLE PACKAGING AND LOGISTICS

Safety surrounding the transportation of dyes, auxiliaries, and other chemicals is important. This is because transporting these chemicals presents the possibility of spillage caused by cargo mishandling. There are potentially significant consequences to human health and safety, and environmental damage that can take place.

To manage this risk, multiple precautionary layers are required to ensure that DyStar products arrive safely and intact. Selecting experienced and licensed transportation contractors minimizes many of the potential risks. Packaging must be suitable to effectively contain and protect the products throughout the journey. It also requires strength to withstand the unique weather conditions of each destination.



Caring for People



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Caring for People

OUR EMPLOYEES

DyStar is committed to promoting diversity throughout its offices, laboratories, and production plants worldwide. In all areas of the company's work, a fair and equitable workplace should be provided for all employees at all times. Across its 50 countries of operation, it practices fair treatment of employees, provides equal access to opportunities, encourages teamwork and collaboration, focuses on developing innovation and creativity in the workforce, promotes organizational flexibility, responsiveness, and agility, and has collaborative conflict resolution processes in place. The company does not support any form of discrimination, and no employee may be disadvantaged based on ethnicity, religion, ideology, gender, age, disability, or sexual orientation. DyStar's Code of Conduct does not allow any kind of harassment. The company will act on reported incidents pertaining to discrimination or harassment. Embracing the principle of equality, the company actively recruits, promotes, and rewards employees based on merit.

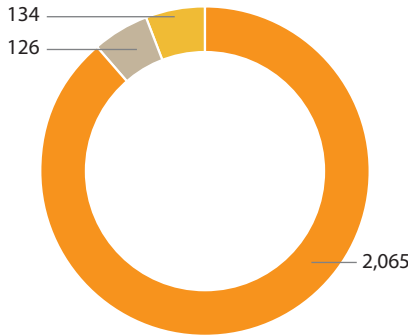
DyStar's leadership has a commitment to diversity and actively seeks women to be a part of its workforce. However, at company production sites, the clear majority of applicants and employees continue to be men due to the nature of the job. Roles requiring manual labor and machinery are ones that many women choose not to work in. Currently, women comprise about 30% of the workforce and 28% of management roles. Women have greater representation in non-production sites, where they make up 56% of the administration staff. The company is fortunate to have a considerable number of talented women serving as engineers, chemists, and laboratory technicians at many production sites. In FY2018, 37% of new hires at the company were women. Of the 27 women employees that went on maternity leave in 2018, nearly 90% of them had returned to the workforce before the close of the year. There is still clear room for improvement and it is hoped that as women increasingly opt to make careers of their own in developing markets, more opportunities will arise to further narrow the workplace gender gap.

Number of Workforce¹

	2016	2017	2018
Number of Senior Management Staff	92 (17)	119 (24)	107 (22)
Number of Middle Management Staff	333 (115)	322 (100)	329 (99)
Number of Admin / Support Staff	612 (292)	671 (358)	625 (348)
Number of Technical Staff	363 (146)	457 (184)	493 (174)
Number of Production Workers / Supervisors	700 (46)	779 (26)	771 (55)
Total Workforce	2,100 (616)	2,348 (692)	2,325 (698)

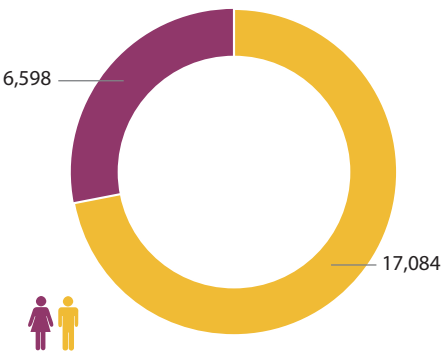
¹ Non-bracketed figures include all employees. Statistics for women employees are displayed in brackets ().

TOTAL WORKFORCE BREAKDOWN



- Full-time Employees
- Part-time Employees
- Fixed-term or temporary employment

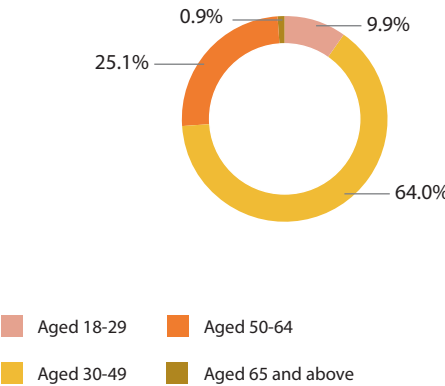
TOTAL TRAINING HOURS



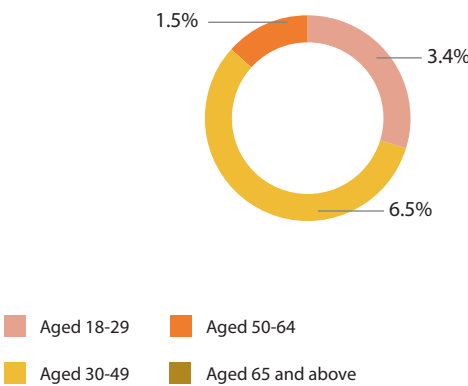
23,683
Total training hours

OUR EMPLOYEES

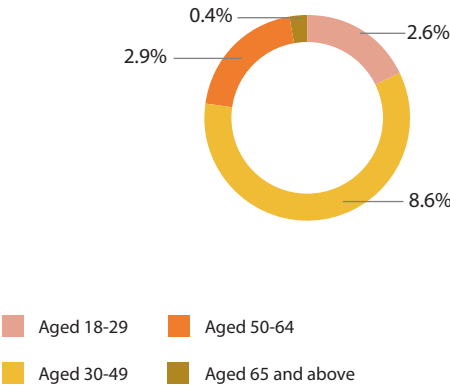
Total Workforce by Age



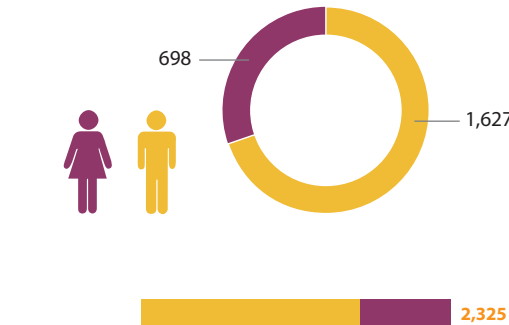
New Employee Hires Rate by Age



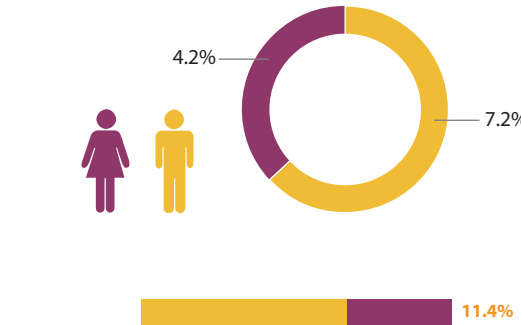
Employee Attrition Rate by Age



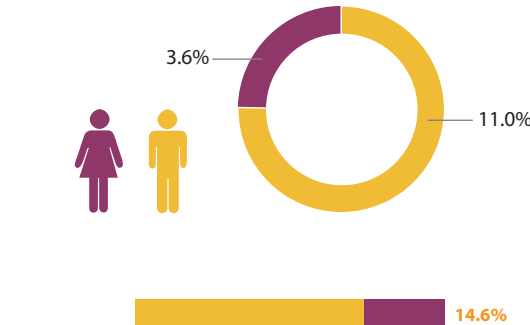
Total Workforce by Gender



New Employee Hires Rate by Gender



Employee Attrition Rate by Gender



INTERVIEWS WITH STAR EMPLOYEES

Profile of Award-Winning Employees

The DyStar Global Employee Recognition Awards recognizes outstanding staff who have gone the extra mile to create a positive impact within DyStar. This year, several employees were recognized for their efforts.

DR NAVANTH PINGALE

Dr Navanth Pingale helped to grow product development through technology transfer initiatives. "I've been lucky to have a great learning experience under the guidance of the regional as well as the global colleagues who helped me to introduce the product portfolio. The year 2018 was a special year for us as we received the board approval for expansion in production capacities. This has brought further excitement in the team and lit up a desire to achieve higher business growth through a focus on unexplored areas with the addition of a new product line in our portfolio."

JIANG BO

Jiang Bo facilitated 50% cost reduction through production and testing time reduction. "I appreciate the company for offering me this good chance to develop myself and to realize my self-value. As always, I will keep working hard together with DyStar."

GABRIEL PEDROSO

Gabriel Pedroso built up reporting tools to ensure prudent stock management and cut costs. "Together with the team and other departments, we have been seeking out new ways to keep improving our internal process, reducing costs, exploring more saving opportunities, while always keeping quality and safety in highest standards."



AYDOGDU BIHTER

Aydogdu Bihter ensured strict controls of system planning parameters, and right time and right quantity material delivery. "I feel lucky being a member of DyStar family. As a member of a strong team with good management, my colleagues and I are committed to bringing the best for DyStar. I was not able to make this achievement alone — my team offered me a lot of support to achieve this success."

TIMO MAYER

Timo Mayer stepped up to take new responsibilities when his manager left and operational challenges emerged. "Receiving this award is not just the result of my own efforts, but the achievement and outcome of the whole Auxiliaries team."

SAFE WORKING CONDITIONS

Occupational health and safety of DyStar employees is a top priority for the company. Manufacturing of dyes and chemicals can involve harsh elements requiring careful management, as well as powerful, high-speed equipment, and large volumes of chemical mixtures in production. Accordingly, managers must ensure that employees take precautions in areas like production plants, laboratories, and warehouses, and are vigilant to avoid risk from factors like these.


As a baseline, DyStar ensures compliance with all applicable laws and regulations. It also implements health and safety policies specific to activities at each of its locations. A global network of HSE team function under central leadership. Each local HSE manager and their team ensure all employees and subcontractors adhere to laws, regulations, and internal policies on site. Also, the HSE team develops vigilance-related guidelines and training programs. These are used to educate technical and production staff on keeping themselves and their colleagues safe.

DyStar's health and safety framework consists of three pillars to enable a safe working environment. The first pillar addresses adequate personal protective equipment for employees to shield them from both direct and long-term health risks. The second pillar focuses on implementation of regular and rigorous site inspections, which are essential to identify potential health and safety risks. Any inspection gaps are remediated within a set timeframe with appropriate follow-up actions. The third pillar addresses that when an incident or accident takes place, the on-site management is required to conduct thorough investigations into its cause and subsequent implementation of remediation plans to prevent recurrences.


Safety First, Last and Always

DyStar aims to provide a safe environment for both employees and visitors. To support this aim, a strict safety policy is in place to help eliminate risks and inculcate a safety mindset. This policy provides guidelines for the implementation of safety rules for office premises and production sites, an indication of potential risks encountered in facilities with clear visual displays, availability of emergency plans, and an indication of site evacuation routes in the case of an emergency. Making safety a success requires the support of all those working in company facilities.


Our General Safety Rules for Office Premises




- All guest are to register at Security
- Wear your visitor pass at all time



- Electronic devices may not be connected to the company network without authorization



- Visitors must be escorted by their host at all times



- Smoking is only allowed in designated areas
- No person under the influence of alcohol and/or drugs are allowed

Our Safety Rules for Production Sites



- All guest are to register at Security
- Wear your visitor pass at all time
- Laptops, cameras and other electronic equipment must be specified and signed in at the Security



- Electronic devices may not be connected to the company network without authorization
- Do not make or receive any cell phone calls and/or SMS when entering DyStar premises
- Photography and videography without authorization are forbidden



- Visitors must be escorted by their host at all times
- Always use designated walk-way and adhere to Personal Protective Equipment requirements
- Obey all site safety rules and signs
- Only enter authorized area and never enter prohibited areas



- Smoking is only allowed in designated areas
- No person under the influence of alcohol and/or drugs are allowed
- No firearms are permitted on site

SAFE WORKING CONDITIONS

Fire safety is extremely important, especially in many of DyStar's production facilities and laboratory environments. Fires can be extremely destructive and lead to loss of life, structures, equipment, investments, and jobs.

DyStar Firefighting Training

To help ensure that staff are aware of this danger and equipped to help in fire prevention, DyStar provides regular training and drills at its locations.

For example, mandatory firefighting training was completed in Turkey with the participation of all employees. Following a theoretical training, a firefighting simulation was done. The employees had the opportunity to get hands-on experience using the fire extinguishers. Also, in Shanghai, to ensure all employees are familiar with the escape routes and are trained to meet emergencies such as fire, a fire drill was also conducted. The fire alarm squadron dispatched three fire trucks to simulate the fire scene, demonstrated the water spraying and explained to staff on how to use the fire extinguishers.

Emergency Preparedness Training

As emergencies can arise quite unexpectedly, both at home and in the work environment, staff should be prepared to take action and help. For instance, all DyStar Korea staff members visited Euiwang fire station and went through emergency preparedness and CPR training. They are now more equipped to deal with situations arising like common household fires or medical emergencies.

Understanding Health Risks

The health of staff is vitally important, so to ensure its employees understand many of the common health risks faced in the work environment, DyStar conducts trainings. This year, occupational health awareness training was conducted with all staff and organized in cooperation with the company doctor at DyStar Turkey.

DyStar Pietermaritzburg wins safety award

Another huge safety milestone was reached by the DyStar's Pietermaritzburg plant in March 2018, when it reached 1,500 working days without an injury on duty. To commemorate this momentous achievement, all employees, as well as on-site contractors, were presented with personalized awards. The achievement was possible due to the ongoing commitment to safety by all those working on-site to ensure a safe working environment.



CREATING A COMFORTABLE WORKPLACE

To provide staff with a suitable work environment and to build a strong identity as a company, DyStar sponsors a variety of activities aimed at including all staff and promoting a diverse and inclusive work culture within the organization. Here are a handful of examples from FY2018:



- 1. China Office Annual Party
- 2. Shanghai Team two-day outing at Xianshan Lake to encourage healthy living
- 3. India Shade Card Night



- 4. Apiuna team gathering for SAP S/4HANA workshop
- 5. Colleagues from China, Pakistan, Turkey, Mexico and the Marketing Global Printing team at Zimmer Austria for a digital printing training



- 6. India Experiential Learning
- 7. India Women's Day
- 8. Turkey employee recognition award

RESPECTING CULTURAL IDENTITY

As a multinational business with a global presence, DyStar knows the importance of diversity. To help ensure a successful working environment, traditions and cultures of different employees are celebrated and respected across the business.

To encourage local traditions, DyStar offices often engage in traditional practices relative to their geographies of operation. Also, in appreciation of the hard work and achievements of staff during the year, year-end dinners were organized by management to boost employees' confidence towards the new challenges in the New Year.



- 1. Singapore Headquarters New Year Annual Dinner
- 2. India production and office team Christmas celebration events
- 3. Shanghai Chinese New Year and Annual Dinner

EMPLOYEE EMPOWERMENT

The success of DyStar as a company depends on its employees. Accordingly, the company attracts and recruits the best people while aiming to cultivate a diverse and inclusive work culture. DyStar has an extensive workforce engagement program that is structured to enhance the skills and advance the career aspirations of its employees. Staff development opportunities are created by mapping employees' needs to the relevant training and development opportunities. This approach demonstrates results in both workforce diversity and growing employee retention, often over extended periods of time.

Out of DyStar's 2,325 employees, 91% are permanent full-time employees and roughly 4% are permanent part-time employees. Non-permanent employees, including employees with fixed-term or temporary employment contracts, make up 5% of the company's workforce. About 11% of work performed on company premises are handled by external contract workers including those overseeing security, cleaning, IT and maintenance services, based on the number of man-hours. Excluding gender and age groups, about 5% of the global workforce is composed of employees from groups that are identified as being minority or vulnerable groups in their country locations. In the United States, 27% of the workforce is composed of members from minority groups. Employment numbers at DyStar are not subject to seasonal variation. All permanent employees receive annual performance reviews.

All DyStar employees have the right to establish and support labor unions and to collective bargaining. The company will not discriminate against labor union representatives and their members have access to the workplace. There were no labor-related violations or related fines for DyStar in 2018.

SKILLS ENHANCEMENT

DyStar's talented workforce have contributed enormously to its market leadership. The company's leadership pursues high-quality skills development for the workforce through a variety of training and development programs. The company aims to provide skilled, knowledgeable, tenured members of the workforce with opportunities to keep their skills cutting edge and up-to-date. Additional learning opportunities are offered to encourage development in line with industry trends and technological advances. Across the board, DyStar has a push towards HSE and language training for its staff.

Annual performance appraisals, career development planning, and training opportunities to fulfill tasks and targets enable staff with a clear trajectory for their development. Training opportunities extend across all levels of the company, from boots-on-the-ground production workers and laboratory technicians through to middle and even senior management.

With a global presence in over 20 countries, DyStar views the use of English as a common language as a decisive advantage. Clear communication enables the best ideas to be realized. Teams also benefit from sharing information and gaining knowledge from colleagues across the business' many locations.

Rural production plants and other locations face human resource challenges and lack of skilled labor. To meet this challenge, DyStar provides opportunities in the local community through hiring, providing on-the-job training, and facilitating personal coaching. This approach provides greater opportunity to ensure a good job fit for staff from the local area and provides residents skills and lasting employment prospects.



Employees should always be given the opportunity to enhance their knowledge, skills, abilities, and also take ownership of situations that may arise in the workforce. In FY2018, DyStar sponsored over 23,000 training hours for its staff covering a wide range of topics, including roughly 14,000 hours towards HSE topics alone. Several workshops and hands-on training were conducted as well in areas like fire safety and CPR so staffs are ready to step up in the event of an emergency.

DyStar's Global HR Training Plan

Globally, DyStar's Human Resource (HR) team is working with regional offices to upscale training objectives. This includes areas like mandatory training for regulatory, safety, quality, certification work, technical training related to improving and enhancing job competencies, and soft skills training for areas like supervisory and interpersonal skills. This will help DyStar staff improve competencies and perform their jobs better.

Hours of training or education provided	Total	Male	Female
Senior Management	938	702	236
Middle Management	3,012	2,142	871
Admin/Support Staff	4,994	2,074	2,920
Technical/Laboratory Staff	4,855	2,637	2,218
Production Workers/Supervisors	10,656	9,844	812
Total	23,683	17,084	6,598

Beyond training, the company also works through a variety of other means to create a vibrant workforce. It hosts internship program for young textile professionals, maintains an employee referral program to connect talented people with jobs, and also has an employee recognition award to profile the efforts of those creating a positive impact within DyStar.

DyStar Job Grading Communication

As an establishment that nurtures employee growth and excellence, DyStar has introduced a Job Grading System to reinforce this philosophy while ensuring equity. This will encourage employees to strengthen their skillsets and stay relevant in an evolving and competitive job market. During FY2018, DyStar communicated the new grading system to employees of different offices around the world with the help of regional HR teams, after extensive consultation and evaluation of job descriptions and grades.

DyStar Management Trainee Programme (MTP)

Like many businesses, DyStar faces challenges finding and retaining talent to meet current and future management needs. To help overcome this and ensure the company is a place where young talents can be an innovative force, DyStar introduced the MTP. Its objectives include a balanced pace of assignments so participants get different experiences, providing a global approach to leadership. The program durations aimed at improving engagement and retention, and strengthening the competitive edge in the labor market.

FOSTERING LOCAL NETWORK AND BELONGING

DyStar realizes the importance of working closely with the communities in which it operates. As a company, it not only needs the communities' social license to operate but also as a source of talent and expertise for its workforce. Because of this, DyStar aims to form a synergy with communities, providing jobs and training to residents, and also investing in the local area with the goal of helping to secure its own workforce.

This strategy departs from typical philanthropy and is an important area of focus. The success of these efforts is not measured in terms of monetary value from company donations, but rather by the quality of social impacts in the local community. All teams across the business are empowered and responsible to initiate social programmes that help meet the needs of the local community. Active dialogue between the stakeholders and company management takes place to establish the needs, and to help focus corporate social responsibility programs accordingly.

In addition to investing in the community, DyStar also listens to any concerns raised its business operations and treats this feedback as a high priority. Engagement with the local community helps the company address most grievances and mitigate corresponding impacts. At all its facilities, the local communities are able to visit DyStar plants to observe equipment, safety measures, and pollution control devices.



1. Turkey elderly outreach day
2. Singapore Blood Donation Drive

Caring for People

Plant managers use this transparent approach to handle any concerns relating to impacts from operations. Thus far, there has been no site identified with significant negative impact in the local community.

As a company, DyStar has a commitment to engage all sections of society as part of its social responsibility work. To build relations with its local community and spread positivity in this regard, DyStar Turkey planned an elderly outreach day. During this visit, the elderly people had a good time where they enjoyed a traditional dinner as well as traditional music and singing. In support of the local community, the cost of the function was fully funded by staff donations.

In partnership with the Singapore Red Cross, a group of DyStar Singapore employees participated in a blood donation drive on August 17th, 2018.

HUMAN RIGHTS

As a responsible transnational business, DyStar respects the fundamental rights of all, regardless of whether they are company employees or external parties. Across all countries of operation, labor laws are adhered to without exception. Any changes in operation are notified at least two weeks in advance. During the reporting periods, DyStar has received no fines or penalties related to labor practices and human rights abuse. There were no cases of illegal conduct surrounding the treatment of local communities and indigenous peoples.

An important aspect of DyStar's Code of Conduct is the Social Accountability Declaration. The company subscribes to the philosophy that discrimination based on race, ethnic origin, gender, religion, philosophy, political or union membership, disability, age, or sexual orientation will not be tolerated.



DyStar empowers and depends on its management teams to adhere to the Code of Conduct and the Codes of Business Conduct. Instead of formalized procedures for human rights assessments, and actively monitoring activities at its respective locations, this approach ensures that the company's activities are conducted in a locally relevant manner and to address any risks or known breaches in ethics at a local level.

To avoid any oversight by the local management, employees are encouraged to report any violations directly via a feedback channel to the Global Compliance Officer, and these contact details are shared with all new recruits. Any breaches of ethical principles can also be brought to the attention of DyStar's Sustainability Committee via the DyStar's website contact page on Sustainability.

At DyStar, 100% of new employees are required to read the company's Code of Conduct, including the Human Rights policy. Additionally, all of DyStar's agreements and contracts include a clause that requires business partners to abide by all local laws and regulations.

DyStar regularly monitors for signs of human rights abuses in its supply chain through its supplier engagement process and regular onsite visits. To ensure that the basic standards of business conduct are maintained, DyStar routinely reassesses its approach to supplier management.

The chemical manufacturing industry does not face child labor as a significant risk. DyStar does not allow child labor and no sites controlled by the company employ children. Frequent travels to sites by the head of compliance ensure adherence to this policy. Also, for safety reasons, those below 18 years old are also not employed for safety reasons regardless of local legal working age. DyStar also has a zero-tolerance policy toward child labor when it comes to its suppliers, and all significant suppliers are audited onsite either annually or once every two years.



Beyond child labor, DyStar is also vigilant for forced or compulsory labor in every market, especially in the case of developing countries and emerging markets. Both internal and external audits are conducted to ensure no forced labor takes place in DyStar operations. While there is low internal risk, suppliers are a source of concern, and the company is vigilant for signs of forced labor, including prison labor, when auditing suppliers.

DyStar's presence is modest in its areas of operation and would seldom impact at the state, provincial, or national level. When it comes to public policy, DyStar's position is not to make political contributions or influence local policy. There is no support for lobbying activities on laws or regulations which impact its industry.



However, economically, its impact on towns and villages near its operations may be significant in some instances. DyStar as a company respects that communities are the bedrock of society and the pool from which DyStar's talent is drawn. Often when DyStar invests in local communities, the company is also indirectly securing the future of its own workforce. When operating near local communities, the company is responsible for managing environmental risks and also adopts a mutually beneficial approach by actively providing jobs and training opportunities to residents.

Any concerns raised by the community leaders on the local impacts of DyStar's business operations are treated seriously. DyStar's engagement with the community ensures it can address any grievances and mitigate any impacts that arise. Residents of communities have been invited to tour plants, observe equipment, safety measures, and pollution control devices that are used.

Having an open-door policy has enabled plant managers to effectively handle any concerns relating to operations and their impacts. To the best of company knowledge, there are no locations that have an actual or potential negative impact on local communities.

In terms of significant indirect impact on the local economy, DyStar aims to contribute positively toward water and food accessibility, capacity building, and education. This approach helps fulfill an important strategic imperative, not just a philanthropic one. DyStar's teams take the lead in identifying and executing social initiatives to fulfill local community needs. Through regular, active dialogue with key community stakeholders, company management is enabled to understand the fundamental needs of its neighbors.

Ongoing collaborations with local authorities, non-governmental organizations, and research institutions further helps DyStar provides support in the areas of education, training, drinking water, water conservation, green energy, and other areas.

INVESTMENT IN INFRASTRUCTURE

To ensure its resilience, workforce capabilities, and operational performance, DyStar invests in improving its business in areas like information technology (IT) and human resources. Here are several examples of work undertaken in FY2018.

Business Process Improvement with SAP S/4HANA

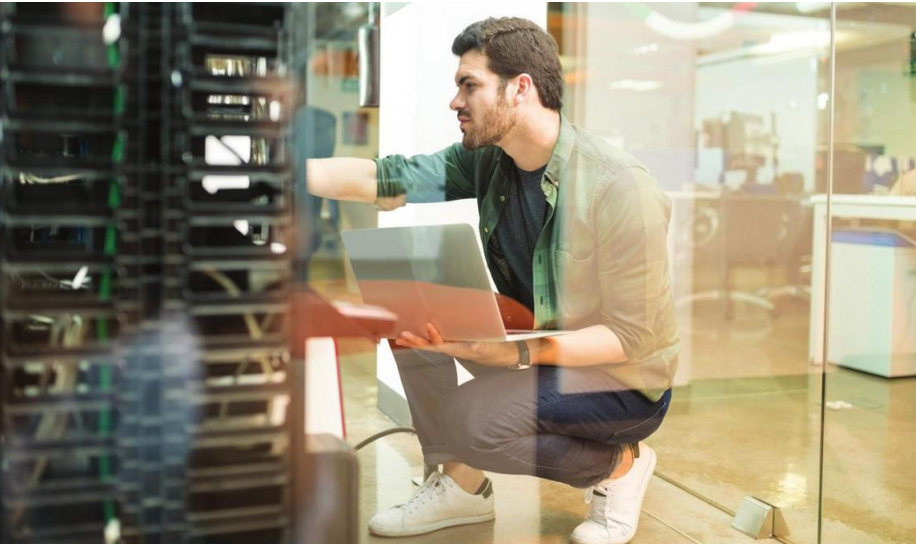
To improve its business, DyStar has embarked on a journey to help standardize and harmonize many operational procedures and systems. To enable this improvement, from mid-2018 through the end of 2019, the company will be leveraging on the SAP S/4HANA real-time platform.

SAP S/4HANA is an intelligent Enterprise Resource Planning solution which can help businesses capture opportunities and remove common problems with legacy applications, helping businesses to function more effectively and efficiently.

As part of DyStar's digital transformation, this will provide re-engineered and simplified business processes, offer an improved user digital experience, automate tasks, and help run next-generation processes. It will also enable the company to make better use of its capital and better engage its stakeholders across multiple channels.

Launch of SAP Sales Cloud system

DyStar regularly invests in its IT infrastructure and improving company controls. In order to have better management controls of company information, a new Customer Relationship Management system called SAP Sales Cloud was launched in January 2019. During the system configuration phase, all counties in North Asia cleaned up historical data and completed User Acceptance Test and training sessions in this new system. The system is a more systematic management of customer information as well as opportunities across the business.





Communicating with Stakeholders

Supplier Evaluation

The Importance of Responsible and Sustainable Sourcing

As a responsible company, DyStar is cautious about what it buys and sells. It is conscious of the critical role it plays in ensuring the supply chain quality. Accordingly, among DyStar's stakeholders, suppliers are one of the most important groups for ensuring sustainable outcomes. By working closely with suppliers, DyStar undertakes a wide range of actions to ensure responsible sourcing.

Engaging the Supply Chain to Enable Sustainability

Responsible procurement begins inside DyStar, with practices made to ensure the procurement process is fair and transparent. This is enabled by its Code of Business Conduct for Suppliers & Third-Party Service Providers. For more policy details, please refer to the Ethics and Compliance.

DyStar's suppliers are required to comply with basic standards of ethical conduct. This requires constant vigilance by DyStar and continuous improvement by suppliers. Its business environment is one where vital raw materials are available from a limited number of specialized suppliers. For suppliers that meet or exceed the minimum expectations, DyStar aims to develop long-term business relationships, allowing the opportunity to influence and improve suppliers' decisions and practices in a positive way.

The majority of DyStar's Tier 1 suppliers – roughly 1,200 companies – produce raw and intermediate materials required for the production of dyes and auxiliaries. At the onset of the supplier screening procedure, all companies are requested to submit samples for targeted eco-testing. 100% of new direct suppliers of material are screened using environmental and social criteria. DyStar will not partner with businesses having a high actual or potential negative impact on the environment.

Suppliers passing these testing requirements advance to the second step of the selection process, with further evaluation against an extensive list of criteria. A supplier reaching the final stage of the screening process then hosts visits by DyStar's sourcing team, which investigates the quality and reliability of services provided, competitiveness in pricing, adherence to environmental laws and regulations, waste and wastewater management capabilities, and treatment of worker etc.

After the screening procedure concludes, accepted suppliers submit routine samples for targeted eco-testing by DyStar. This ensures that even in the event of contamination, restricted chemicals are identified and removed before reaching the DyStar's product chain. Also, the procurement team conducts an annual re-evaluation of the companies.

Beyond raw and intermediate material suppliers, DyStar's Tier 1 supplier base also consists of equipment and packaging providers, and a variety of service contractors, which includes waste management, wastewater treatment, cleaning, maintenance, IT, security, etc. For these suppliers, the assessment employed is specific to the nature of the services provided and their associated risks. For example, the selection of waste and wastewater contractors requires extra vigilance due to the possibility of illegal dumping. Accordingly, contractors like these are subject to site audits during the screening process and annual site visits from members of DyStar's HSE team to ensure the safe transport, treatment, and disposal of hazardous materials.

For all suppliers, DyStar also conducts three sustainability-related supplier surveys. The Environmental Incidents Summary documents all major accidents that occur within a reporting period—including explosions, leaks, and spills. The Ecological Compliance Questionnaire is a self-

declaration that touches on all major classes of regulated substances in the industry. The Supplier Sustainability Questionnaire provides suppliers with the opportunity to share their principles and targets on environmental and social issues. Survey topics include areas such as energy consumption, emissions targets, community relations, health and safety, labor conditions etc.

Together, these surveys give an overall picture of supplier performance across a spectrum of material issues. For new suppliers that are keen to join the sustainability agenda, these surveys encapsulate the expectations that are required from DyStar's best business partners.

Also, in FY2018, an "Eco Letter" was introduced. This Eco Letter is based on regulations and industry-leading standards, including key restricted ingredients and ones that should not exceed certain concentrations in specified supplies. The Eco Letter was first distributed to the top 80% of DyStar's supplier companies to sign in order to demonstrate their commitment, understanding, and fulfillment of these terms as a matter of priority. This is yet another practice that DyStar has enacted with the aim of keeping potential product contamination out of its supply chain. So far, more than 200 suppliers have cooperated in this fashion.

The combination of desktop reviews, site visits, and pledges covers a range of topics that touch on commercial, quality and sustainability performance. Suppliers with consistently strong performance are fully audited in alternate years, and new or less established vendors are required to undergo full annual assessments. Following audits, suggestions are shared with suppliers on how to improve and monitor their annual progress.

The New Audit Process: Introducing DOLPHIN

Beyond evaluations, sample testing, surveys, and the Eco Letter, in FY2018, DyStar initiated a more comprehensive and in-depth supplier audit named "DOLPHIN" Project. In Greek mythology, dolphins are known as helpers of humankind. With this project, DyStar is also making an effort to help nature and humanity, by cooperating closely with suppliers to help them make improvements.

DOLPHIN aims to comprehensively identify core suppliers' potential strengths and risks. DOLPHIN's development involved DyStar experts from the technology team, which enhanced the technical capabilities of the audit team and inspired new insight on the supplier evaluation. Audits of crucial suppliers have begun, and after two successful trials in 2018, DyStar will proceed with the next 10-15 suppliers in 2019, with subsequent mass rollout thereafter.

It is essential that selected suppliers are fully equipped to meet the requirements of their local authorities. This is not only important for environmental protection, but also from the business continuity point of view since non-compliant suppliers are at constant risk of being closed for flouting local laws and regulations. Significant environmental factors like management of solid waste, wastewater treatment and gaseous emissions are intensively monitored since the public environmental agencies in many countries of operation are increasingly stringent in the enforcement of environmental regulations and standards.

Supplier Evaluation

To mitigate risks in this area, the DOLPHIN project checks performance on Quality Management System, business, production, Quality Assurance/Quality Control (QA/QC), Research & Development, Supply Chain Management, Environmental, Health & Safety, and sustainability become focus areas in the supplier audit process. Compared with the risks associated with environmental violations, human rights violations such as child labor or forced labor are not commonly observed in this niche industry thus far. However, this does not preclude the possibility of future instances among certain subsets of suppliers. Ongoing vigilance is required to ensure that there are no human rights violations.

Where suppliers’ staff are concerned, health and safety are the main focus. For example, selected suppliers should provide their staff with necessary training on how to handle chemicals as well as equip them with appropriate personal protective equipment. The working environment should be well-maintained and free from dust and noxious odors. Adequate medical attention should be available in the event of an accident.

Based on DOLPHIN’s findings, the auditors indicate the perceived strengths and weaknesses of the supplier. Essential improvements are worked through together with an implementation plan agreed by both parties. Such continuous improvement plan ensured the basis of a longer and healthier business operating condition for the supplier, enabling them to be a more reliable and sustainable partner with DyStar. Internally, audit findings are key supporting documents for supplier positioning analysis, as well as for providing guidance on strategic cooperation with new and existing suppliers.

Results

While the opportunity exists for negative environmental impacts, regulators in major markets like China and India are clamping down on errant companies. For minor breaches of basic principles for good conduct, DyStar works with the supplier to improve performance and enact corrective actions. Suppliers in material breach of laws and regulations or scoring 60% or less in audits will have business relations terminated

or suspended until an audit can establish that all required actions are implemented. As a result of these combined efforts, even if issues occasionally arise, DyStar’s supply chain for raw and intermediate materials is expected to remain largely intact. Also, to help meet client demands and demonstrate its responsibility and care in the food & beverage industry, DyStar also implemented a supplier diversity program in the USA. A new supplier diversity section has been incorporated site by site into existing supplier responsibility questionnaires. Product quality remains the first priority, but greater effort will be taken to support businesses in the USA that are at least 51% owned by minority groups, women, veterans and people with disabilities.

DyStar awarded “A-Supplier” Status

Thanks to the continued efforts by the team, DyStar was awarded “A-Supplier” status by AUNDE TAP South Africa for deliveries done during Q3 2018. Being evaluated as an A-Supplier means that the company is a favored supplier and its performance matches AUNDE’s demands.

Engaging Our Partners

Today’s consumers want transparency and trustworthy products from reliable brands. Brands and manufacturers can work together to provide credible information and reassurance for consumers. This will enable them to buy environmentally sound products and transition to a more sustainable lifestyle. Providing transparent information establishes trust and loyalty with young, skeptical, and sustainability-minded consumers.

DyStar is an environmental leader and a Tier 3 supplier of dyes and chemicals for many products sold by leading brands and retailers. From this position, there is great opportunity to work closely with these stakeholders, enhance connections, and achieve marketing success.

Typically, brands and retailers communicate directly with their factories to define requirements for finished products. Aspects like price, material composition, and quality standards are clearly defined. The kinds of chemicals and processes used in manufacturing are not always of interest to brands, so long as final products are made to specification.

However, a paradigm shift in textile chemical management has been taking place. Whereas brands and retailers previously relied on an end-of-pipe approach, monitoring finished products against restricted substances lists (RSL), a shift towards the use of Manufacturing Restricted Substances List (MRSL) is underway. Unlike an RSL, an MRSL restricts substances which pose a risk for workers or the local factory environment. This is regardless of whether these substances wind up in the final garment or not.

These new industry developments provide a big opportunity to intensify communication with these groups, share the value of DyStar’s offerings, and strengthen global back-selling efforts. DyStar has solutions for brands and retailers that enable them to produce more sustainable products that their customers are looking for.

To help reach out to today’s sustainability-minded consumer, stories and tools are available to differentiate brands from their competitors and share their journey as environmentally responsible businesses.

In 2019 and beyond, DyStar has planned several events with these stakeholders. The goal is to evaluate and kick-off projects that create meaningful products with a predefined package of dyes, chemicals, and processes, which reduce the natural resource required and keep the environment clean. DyStar’s 9 Cadira® modules will be at the center of these Brands & Retailers’ activities.

Workshops are slated at PERFORMANCE DAYS in Munich, as well as at the most important conferences and shows globally. Work is already underway to assist brands in the creation process with digital tools.



Cadira® Dyeing Excellence
DyStar’s Resource Efficiency Program

Polyester | Denim | Reactive | VAT | Wool
Laundry | Reactive / Disperse Continuous | Recycled Polyester | Printing PX

Cadira modules are essential in DyStar’s Resource Efficiency program. The Cadira concepts considerably reduce water, waste and energy consumption. Cadira helps Brands & Retailers and their production partners to save valuable resources and to reduce the carbon footprint of their textile goods.

Working with Suppliers to Make Indigo Dyeing More Sustainable

The sustainability efforts made in the early stages often have a long-lasting impact down the value chain. With DyStar’s pre-reduced Indigo Vat 40% Solution, a clean and efficient dyeing process can be achieved. Although Indigo raw materials are simpler compared to traditional complex colorations, it does not mean that maintaining the quality requirements is easier. Besides QA/QC programs, DyStar’s Indigo specialists dedicate at least one month per year to work closely with suppliers at plants on process improvements.

To ensure sustainability obligations are carefully evaluated, DyStar also kicked off DOLPHIN audits with our Indigo suppliers to a robust and reliable Indigo supply chain.



Staying Involved and Connected

There are many parties which enable DyStar’s business to thrive. Communicating with these stakeholders is an important focus of the company’s operational approach. As a business, it aims to respond to all feedback it receives with the goal of creating long-term, endearing relationships. Serving stakeholder interests and adding value to the business are synergistic benefits of this approach.

Engage, Listen and Respond: The Cornerstone of Sustainable Stakeholder Relationships

Throughout each financial year, DyStar makes efforts to communicate with its key stakeholders, prioritizing those groups fundamental to creating a sustainable textile industry. Selection of these stakeholders is due to DyStar’s ability to impact their value chain and their potential impact on DyStar’s business. Key stakeholder groups are comprised of company employees, customers, brands and retailers, industry groups, NGOs, suppliers, and shareholders.

A biannual stakeholder engagement exercise last took place in FY2017, and the results of this process relating to stakeholder feedback are discussed in this FY2018 report. As background, both formal and informal channels were used in the company’s stakeholder engagement. DyStar’s stakeholders were consulted to gauge their views on the company’s sustainability performance and reporting practices. Brands and retailers were also consulted through individual phone interviews, with priority given to those able to speak authoritatively on topics relevant to DyStar’s sustainability performance and future priorities. The next stakeholder engagement exercise will be conducted in FY2019.

Industry Organizations

- American Association of Textile Chemists and Colorists (AATCC)
- Ankleshwar Industries Association
- Associação Brasileira das Indústrias Químicas (ABIQUM), Brazilian Association of Chemical Industries
- The Association of Thai Textile Bleaching Dyeing Printing and Finishing Industries (ATDP)
- China Dyestuff Industry Association
- The Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD®)
- German Chemical Industry Association (VCI)
- Gujarat Dyestuffs Manufacturers Association
- Japan Dyestuff & Industrial Chemical Association
- Society of Dyers and Colourists, United Kingdom
- Society of Leather Technologists and Chemists (SLTC)
- South African Dyers & Finishers Association
- Sindicato das Indústrias de Produtos Químicos (SINPROQUIM), Brazilian Union of Chemical Products Industries
- Taiwan Dyestuffs & Pigments Industrial Association

Business Associations

- Corlu Chamber of Commerce and Industry
- Greater Dalton Chamber of Commerce
- Employers’ Association of Indonesia (APINDO)
- Importers and Exporters Association of Taipei
- Pietermaritzburg Chamber of Business
- Reidsville Chamber of Commerce
- Singapore Business Federation
- National Committee of Responsible Care, Indonesia (KNRCI)
- Responsible Care®

Sustainable Textile Standards and Organizations

- American Apparel & Footwear Association (AAFA)
- Associação Brasileira das Indústrias Têxteis (Abit), Brazilian Textile and Apparel Industry Association
- bluesign®
- Cradle to Cradle®
- Global Organic Textile Standard (GOTS)
- Oeko-Tex®
- Sustainable Apparel Coalition (SAC)
- Textile Exchange
- Zero Discharge of Hazardous Chemicals (ZDHC)

Staying Involved and Connected



Stakeholder Groups	Mechanism for Engagement	Typical Frequency
Employees	Internal communication channels Team building events Performance reviews Employee Sustainability Survey Sustainability enquiry page at DyStar Website	Frequently Yearly Yearly Yearly Frequently
Customers	Website, product brochures, social media, newsletter Meetings with sales associate Interaction with DyStar’s Ecology team for chemical guidance Forums, seminars and conferences Visits to DyStar production sites DyStar’s Customers, Brands and Retailers Sustainability Survey Sustainability enquiry page at DyStar Website	Frequently Frequently Frequently Frequently As and when requested Yearly Frequently
Suppliers	Tendering process Supplier site audits Supplier Ecological Survey on chemical compliance Supplier Sustainability Performance Questionnaire DyStar’s Supplier Sustainability Survey	As and when needed Yearly Yearly Yearly Yearly
Brands and Retailers	Meetings with sales associates Color design process Forums, seminars and conferences DyStar’s Customers, Brands and Retailers Sustainability Survey Visits to DyStar production sites Sustainability enquiry page at DyStar Website	Frequently Frequently Frequently Yearly As and when needed Frequently
Shareholders	Shareholder meetings Long-term planning with senior management and key committees DyStar’s Shareholder Sustainability Survey	Quarterly Quarterly Yearly
NGOs and Industry Groups	Forums, seminars and conferences Working groups Collaborative projects DyStar’s NGO and Industry Group Sustainability Survey	As and when opportunities arise Quarterly or yearly As and when opportunities arise Frequently Yearly



About this Report

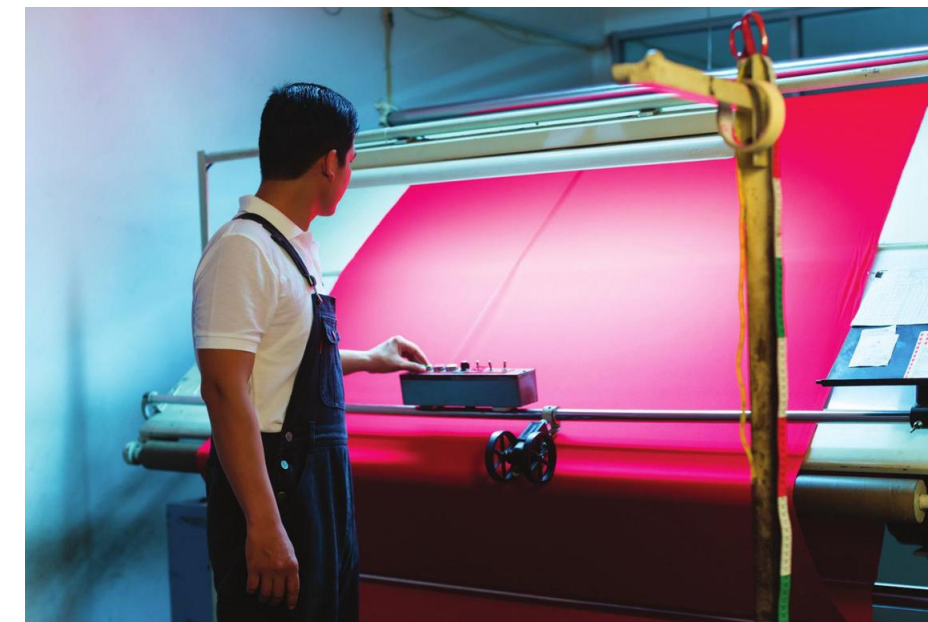
Methodology

This is DyStar Group's ninth annual Sustainability Performance Report. It aims to provide details of our commitments, and performance to date on the environmental and social issues that matter most to our stakeholders. The content of this report also communicates DyStar's vision and plans to further the sustainability agenda throughout the industry.

With this report, the company hopes to reach out to as many of its stakeholders as possible and provide a transparent account of DyStar's progress toward driving sustainable practices across the value chain. From DyStar's perspective, its success in this endeavor is going to be one of the most accurate predictors of our ability to succeed as a business in the long-term.

The company values the opinions of both its internal and external stakeholders on how it can perform better. We welcome your questions, feedback and suggestions. You may contact us at:

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DyStar Sustainability Reporting
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SCOPE OF THE REPORT

This report covers DyStar's global operations for the financial year January 2018 to December 2018, inclusive of all GRI-specific disclosures. It contains performance data for all production sites, warehouses, offices and laboratories that are either owned or operated by DyStar. The previous and most recent report was the FY2017 Sustainability Performance Report. DyStar reports on an annual basis and there have been no significant changes observed between reporting years.

DATA AND EXTERNAL ASSURANCE

DyStar takes a standardized approach to data collection and data analysis across all its operations. A centralized data management system is used to collect and assess sustainability performance data from its business entities. Information supplied to this system undergoes a two-step verification process to ensure the integrity of the final report's data. The procedure also lends accuracy to the year-on-year performance results. Wherever relevant, applied methods and assumptions are detailed within the body of the report.

The data disclosed in this report is not externally assured. DyStar is currently exploring options to externally assure sections of high materiality in subsequent sustainability reports.

REPORTING FRAMEWORK

This report is prepared in accordance with the GRI Standards: Core option. The GRI Standards provide the principles and disclosures required by organizations to report their economic, environmental, and social performance and impacts. DyStar applies the GRI's principles in defining report content and quality, as set out by the GRI Standards. Readers may refer to the full GRI Standards Index at the end of this report for an overview of the company's approach in this regard.

APPROACH TO MATERIALITY

During FY2017, a comprehensive stakeholder engagement exercise was undertaken. Out of this, a materiality matrix was created to provide structure and focus on the key issues important for DyStar stakeholders.

For FY2018, the company is reporting back on their progress and achievements for the material issues identified earlier. The next biannual stakeholder engagement exercise will take place in FY2019.

Materiality Matrix



Focus Areas:

- Conserving Planetary Resources
- Caring for People
- Creating Responsible Products and Solutions
- Communicating with Stakeholders
- Responsible Business Practices

Topic	Issues	Aspect Boundary	Priority
Circular Economy	Life cycle considerations in value chain Circular business model	▲	◆
Climate Change	Energy efficiency Global warming Air pollution Renewable energy Mitigating risks of releasing substances	▲	◆
Priority	Economic impact Labour and social policy rights Feedback channels Volunteering Social investment	▲	◆
Compliance with Product-Related Laws and Standards	Restricted substances Commitment to voluntary standards	▲	◆
Customer Satisfaction	Customer satisfaction	▲	◆
Development of Human Capital	Employee training and development Remuneration Benefits Recruitment Retention	●	◆

Materiality Matrix

Topic	Issues	Aspect Boundary	Priority
Diversity and Equality	Gender Age Ethnicity Job security Preventing the exploitation of labor	▲	◆
Economic Performance	Financial expectations	▲	◆
Ecosystem Biodiversity	Impact of manufacturing operations	▲	◆
Environmental Regulations	Compliance with local environmental laws and regulations	▲	◆
Ethics and Integrity	Code of Conduct Workplace and labor practices	▲	◆
Expansion in New and Emerging Markets	Catering to newer clients in emerging markets	▲	◆
Exposure in Mature Markets	Exposure in mature markets	▲	◆
Green Chemistry	Green chemistry practices and principles Energy efficiency Water efficiency Mitigating or removing potential impact to land, air, water bodies, flora or fauna	▲	◆
Product Impact Assessment	Chemical analysis Product life cycle assessment Research and development	▲	◆
Responsible Marketing	Accessible online tools and information Availability of expertise in all major markets Ethical marketing communications practices Responsible advertising	▲	◆
Responsible Sourcing	Traceability Chemical testing Supplier environmental performance Code of Conduct for supplier workplace ethics Supplier diversity Supplier health and safety performance	▲	◆
Waste Management	Treatment of hazardous chemicals Mitigating soil and water contamination risks	▲	◆
Stakeholder Engagement	Opportunities for dialogue Transparency Accountability Due diligence	▲	◆
Sustainable Logistics	Green logistics Efficient packaging Warehousing Transportation	▲	◆
Water and Wastewater	Water use efficiency Water management Wastewater management Water Pollution	▲	◆
Worksite Health and Safety	Process and plant safety Laboratory safety Worksite health, hygiene and wellness Emergency preparedness and response	▲	◆

Boundary ● Within the Organization ▲ Within and outside the organization Priority ◆ Moderate ◆ High ◆ Critical

GRI Content Index

This report was prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. For many categories, the information provided in this document exceeds the GRI core disclosure requirement. Depending on the availability of information, some GRI disclosures are only partially addressed.

GRI 102: General Disclosures			
GRI 102: General Disclosures 2016	Indicator	Description	Page number(s)
1. Organizational Profile	GRI 102-1	Name of the organization	6
	GRI 102-2	Activities, brands, products and services	6, 8-10, 23-26
	GRI 102-3	Location of headquarters	7
	GRI 102-4	Location of operations	7
	GRI 102-5	Ownership and legal form	6
	GRI 102-6	Markets served	7
	GRI 102-7	Scale of the organization	4-5, 7, 20, 41-46, 49-50, 57
	GRI 102-8	Information on employees and other workers	49-50, 56
	GRI 102-9	Supply chain	19, 27-28, 30-32, 36-37, 62
	GRI 102-10	Significant changes to the organization and its supply chain	7
	GRI 102-11	Precautionary principle or approach	18
	GRI 102-12	External initiatives	14
	GRI 102-13	Membership of associations	64
2. Strategy	GRI 102-14	Statement from senior decision-maker	2
	GRI 102-15	Key impact, risks and opportunities	2, 17-18
3. Ethics and Integrity	GRI 102-16	Values, principles, standards, and norms of behavior	14
	GRI 102-17	Mechanisms for advice and concerns about ethics	14
4. Governance	GRI 102-18	Governance structure	11-13
	GRI 102-19	Delegating and authority	11-13
	GRI 102-20	Executive-level responsibility for economic, environmental and social topics	13
	GRI 102-21	Consulting stakeholders on economic, environmental and social topics	13, 65
	GRI 102-23	Chair of the highest governance body	11
	GRI 102-26	Role of highest governance body in setting purpose, values and strategy	11
	GRI 102-27	Collective knowledge of highest governance body	11
	GRI 102-29	Identifying and managing economic, environmental and social impacts	13
	GRI 102-30	Effectiveness of risk management processes	13
	GRI 102-31	Review of economic, environmental and social topics	13
	GRI 102-32	Highest governance body's role in sustainability reporting	67
	GRI 102-33	Communicating critical concerns	13
	GRI 102-36	Process of determining remuneration	11
	GRI 102-37	Stakeholders' involvement in remuneration	11

GRI 102: General Disclosures

GRI 102: General Disclosures 2016	Indicator	Description	Page number(s)
5. Stakeholder Engagement	GRI 102-40	List of stakeholder groups	65
	GRI 102-41	Collective bargaining agreements	56
	GRI 102-42	Identifying and selecting stakeholders	65
	GRI 102-43	Approach to stakeholder engagement	65
	GRI 102-44	Key topics and concerns raised	65
6. Reporting Practice	GRI 102-45	Entities included in the consolidated financial statements	7
	GRI 102-46	Defining report content and topic Boundaries	68
	GRI 102-47	List of material topics	68
	GRI 102-48	Restatement of information	4-5, 7, 20, 41-46, 49-50, 57
	GRI 102-49	Changes in reporting	67
	GRI 102-50	Reporting period	67
	GRI 102-51	Date of most recent report	67
	GRI 102-52	Reporting cycle	67
	GRI 102-53	Contact point for questions regarding the report	67
	GRI 102-54	Claims of reporting in accordance with the GRI Standard	67
	GRI 102-55	GRI content index	70
	GRI 102-56	External assurance	67
GRI 103: Management Approach 2016	Indicator	Description	Page number(s)
GRI 200: Economic	GRI 103-1	Management approach: Explanation of the material topic and its boundary	7, 14-15, 57-58, 61
	GRI 103-2	Management approach: The management approach and its components	7, 11, 14-15, 57-58, 61
GRI 300: Environment	GRI 103-3	Management approach: Evaluation of the management approach	13, 61
	GRI 103-1	Management approach: Explanation of the material topic and its boundary	13, 42-47, 61-62
	GRI 103-2	Management approach: The management approach and its components	13, 42-47, 61-62
	GRI 103-3	Management approach: Evaluation of the management approach	13
GRI 400: Social	GRI 103-1	Management approach: Explanation of the material topic and its boundary	14-15, 26, 36, 38, 49, 52-58, 61-62
	GRI 103-2	Management approach: The management approach and its components	14-15, 26, 36, 38, 49, 52-58, 61-62
	GRI 103-3	Management approach: Evaluation of the management approach	13

GRI Content Index

GRI 200: Economic			
GRI 201: Economic Performance 2016	Indicator	Description	Page number(s)
	GRI 201-1	Direct economic value generated and distributed	20
	GRI 201-2	Financial implications and other risks and opportunities due to climage change	19
GRI 202: Market Presence 2016	Indicator	Description	Page number(s)
	GRI 202-1	Ratios of standard entry level wage by gender compared to local minimum wage	7
	GRI 202-2	Proportion of senior management hired from the local community	7
GRI 203: Indirect Economic Impacts 2016	Indicator	Description	Page number(s)
	GRI 203-1	Infrastructure investments and services supported	57-58
	GRI 203-2	Significant economic impacts	7
GRI 204: Procurement Practices 2016	Indicator	Description	Page number(s)
	GRI 204-1	Proportion of spending on local suppliers	7
GRI 205: Anti-corruption 2016	Indicator	Description	Page number(s)
	GRI 205-1	Operations assessed for risks related to corruption	4
	GRI 205-2	Communication and training about anti-corruption policies and procedures	14-15
GRI 206: Anti-competitive Behavior 2016	Indicator	Description	Page number(s)
	GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	14-15
GRI 300: Environment			
GRI 301: Materials 2016	Indicator	Description	Page number(s)
	GRI 301-1	Materials used by weight or volume	46
	GRI 301-2	Recycled input materials used	46
	GRI 301-3	Reclaimed products and their packaging materials	47
GRI 302: Energy 2016	Indicator	Description	Page number(s)
	GRI 302-1	Energy consumption within the organization	42
	GRI 302-2	Energy consumption outside of the organization	42
	GRI 302-3	Energy instensity	42
	GRI 302-4	Reduction of energy consumption	42
	GRI 302-5	Reductions in energy requirements of products and services	27, 28
GRI 303: Water and Effluents 2018	Indicator	Description	Page number(s)
	303-2	Management of water discharge-related impacts	44
	303-3	Water withdrawal	44
	303-4	Water discharge	44
	303-5	Water consumption	44

GRI Content Index

GRI 300: Environment			
GRI 304: Biodiversity 2016	Indicator	Description	Page number(s)
	GRI 304-1	Operational sites owned, leased, managed in, or adjacent to, producted areas and areas of high biodiversity value outside protected areas	46
	GRI 304-2	Significant impacts of activities, products, and services on biodiversity	46
GRI 305: Emissions 2016	Indicator	Description	Page number(s)
	GRI 305-1	Direct (Scope 1) GHG Emissions	43
	GRI 305-2	Energy indirect (Scope 2) GHG emissions	43
	GRI 305-3	Other indirect (Scope 3) GHG emissions	43
	GRI 305-4	GHG emissions intensity	43
	GRI 305-5	Reduction of GHG emissions	43
	GRI 305-6	Emissions of ozone-depleting substances (ODS)	44
GRI 306: Effluent and Waste 2016	Indicator	Description	Page number(s)
	GRI 306-1	Water discharge by quality and destination	45
	GRI 306-2	Waste by type and disposal method	45
	GRI 306-3	Significant spills	45
	GRI 306-4	Transport of hazardous waste	47
	GRI 306-5	Water bodies affected by water discharges and/or runoff	45
GRI 307: Environmental Compliance 2016	Indicator	Description	Page number(s)
	GRI 307-1	Non-compliance with environmental laws and regulations	39
GRI 308: Supplier Environmental Assessment 2016	Indicator	Description	Page number(s)
	GRI 308-1	New suppliers that were screened using environmental criteria	61, 62
	GRI 308-2	Negative environmental impacts in the supply chain and actions taken	61, 62
GRI 400: Social			
GRI 401: Employment 2016	Indicator	Description	Page number(s)
	GRI 401-1	New employee hires and employee turnover	50
	GRI 401-3	Parental leave	49
GRI 402: Labor/Management Relations 2016	Indicator	Description	Page number(s)
	GRI 402-1	Minimum notice periods regarding operational changes	58
GRI 403: Occupational Health and Safety 2018	Indicator	Description	Page number(s)
	403-4	Worker participation, consultation, and communication on occupational health and safety	52–53
	403-5	Worker training on occupational health and safety	52–53
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	52–53
	403-9	Work-related injuries	5, 52–53

ABOUT DYSTANT

APPROACH TO SUSTAINABILITY

CREATING RESPONSIBLE PRODUCTS & SERVICES

CONSERVING PLANETARY RESOURCES

CARING FOR PEOPLE

COMMUNICATING WITH STAKEHOLDERS

ABOUT THIS REPORT










GRI Content Index









GRI 400: Social			
GRI 404: Training and Education 2016	Indicator	Description	Page number(s)
	GRI 404-1	Average hours of training per year per employee	49, 56, 57
	GRI 404-2	Programs for upgrading employee skills and transition assistance programs	49, 56, 57
	GRI 404-3	Percentage of employees receiving regular performance and career development reviews	49, 56, 57
GRI 405: Diversity and Equal Opportunity 2016	Indicator	Description	Page number(s)
	GRI 405-1	Diversity of governance bodies and employees	50
GRI 406: Non-discrimination 2016	Indicator	Description	Page number(s)
	GRI 406-1	Incidents of discrimination and corrective actions taken	50
GRI 408: Child Labor 2016	Indicator	Description	Page number(s)
	GRI 408-1	Operations and suppliers at significant risk for incidents of child labor	58, 59
GRI 409: Forced or Compulsory Labor 2016	Indicator	Description	Page number(s)
	GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	58, 59
GRI 411: Rights of Indigenous Peoples 2016	Indicator	Description	Page number(s)
	GRI 411-1	Incidents of violations involving rights of indigenous peoples	58, 59
GRI 412: Human Rights Assessment 2016	Indicator	Description	Page number(s)
	GRI 412-1	Operations that have been subject to human rights reviews or impact assessments	58, 59
	GRI 412-2	Employee training on human rights policies or procedures	58, 59
	GRI 412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	58, 59
GRI 413: Local Communities 2016	Indicator	Description	Page number(s)
	GRI 413-1	Operations with local community engagement, impact assessments, and development programs	57-58
	GRI 413-2	Operations with significant actual and potential negative impacts on local communities	57-58
GRI 414: Supplier Social Assessment 2016	Indicator	Description	Page number(s)
	GRI 414-1	New suppliers that were screened using social criteria	61-62
	GRI 414-2	Negative social impacts in the supply chain and actions taken	61-62
GRI 415: Public Policy 2016	Indicator	Description	Page number(s)
	GRI 415-1	Political contributions	58
GRI 416: Customer Health and Safety 2016	Indicator	Description	Page number(s)
	GRI 416-1	Assessment of the health and safety impacts of product and service categories	26–32
	GRI 416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	26–32
GRI 417: Marketing and Labelling 2016	Indicator	Description	Page number(s)
	GRI 417-1	Requirements for product and service information and labelling	36, 47
	GRI 417-2	Incidents of non-compliance concerning product and service information and labelling	47
	GRI 417-3	Incidents of non-compliance concerning marketing communications	47
GRI 418: Customer Privacy 2016	Indicator	Description	Page number(s)
	GRI 418-1	Substantial complaints concerning breaches of customers privacy and losses of customer data	38
GRI 419: Socioeconomic Compliance 2016	Indicator	Description	Page number(s)
	GRI 419-1	Non-compliance with laws and regulations in the social and economic area	14

SDG Index

HOW DYSTAR SUPPORTS THE SUSTAINABLE DEVELOPMENT GOALS (SDGs)

At DyStar, we believe businesses play an important role in helping achieve the SDGs. We reviewed how our sustainability activities through DyStar’s Four C’s (Creating, Conserving, Caring and Communicating) support the 17 Goals. As a global corporation, we acknowledge our ability to have an impact on all the goals but there are eight where we believe DyStar is able to contribute in meaningful ways.

	Sustainable Development Goal	How We Support The Goals	Page number(s)
	End poverty in all its forms everywhere	<ul style="list-style-type: none">• Providing stable jobs that pay fair wages• Enhancing livelihoods through youth capacity building	4, 5, 59-69
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	<ul style="list-style-type: none">• Organizing annual food donation drives in North Carolina• Providing food to local communities in Indonesia every year ahead of the Idul Fitri holiday	5, 57-58
	Ensure healthy lives and promote wellbeing for all at all ages	<ul style="list-style-type: none">• Promoting good occupational health and safety practices among employees• Introducing safer dyes and chemicals to the market• Facilitating occupational health and safety for textile production workers• Mitigating impact to consumer health through product testing	27-39, 52-53
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<ul style="list-style-type: none">• Supporting employees through knowledge, skills or technical training• Providing scholarships to students from rural communities• Providing dye samples and dyeing expertise to educational institutions	56-59
	Achieve gender equality and empower all women and girls	<ul style="list-style-type: none">• Ensuring a fair and equitable workplace, free from discrimination• Empowering underprivileged women through skills training	49-51
	Ensure access to water and sanitation for all	<ul style="list-style-type: none">• Providing water to nearby rural communities• Responsible withdrawal and consumption of water for manufacturing• Ensuring effective treatment and proper discharge of wastewater• Developing less water-intensive dyes and chemicals for application processes	27, 41, 44-45
	Ensure access to affordable, reliable, sustainable and modern energy for all	<ul style="list-style-type: none">• Adopting more energy-efficient technologies at production plants• Purchasing energy derived from renewable sources	41-42
	Promote inclusive and sustainable economic growth, employment and decent work for all	<ul style="list-style-type: none">• Protecting labor rights and ensuring safe working environments• Decent work for employees, with fair opportunities for career progression• Hiring and training employees drawn from nearby communities	38-39, 56-58
	Build resilient infrastructure, promote sustainable industrialization and foster innovation	<ul style="list-style-type: none">• Establishing industry and fostering innovation in the places we operate• Investing in state-of-the-art research facilities and scientific know-how• Upgrading technology and infrastructure for resource-efficient processes	32,59

	Sustainable Development Goal	How We Support The Goals	Page number(s)
	Reduce inequality within and among countries	<ul style="list-style-type: none">• Actively providing jobs and training opportunities to nearby residents• Supporting rural communities through education and capacity building• Zero tolerance for discrimination enforced through the Code of Conduct	49, 56
	Make cities inclusive, safe, resilient and sustainable	<ul style="list-style-type: none">• Quality clothing dyes reduce the burden on city water treatment systems• Volunteering work hours to keep the local community clean and green	44, 57
	Ensure sustainable consumption and production patterns	<ul style="list-style-type: none">• Actively reducing intensity of resource consumption in manufacturing• Designing products and modules for resource-efficiency in application• Developing lasting colors to mitigate consumer consumption	10, 30, 36, 41
	Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none">• Adopting newer technologies in manufacturing to mitigate GHG emissions• Optimizing transport and logistics to reduce Scope 3 GHG emissions• Awareness raising through training courses• Developing products that enable customers to be more energy-efficient	27, 41, 44
	Conserve and sustainably use the oceans, seas and marine resources	<ul style="list-style-type: none">• Ensuring effective treatment and proper discharge of wastewater• Incorporating end-of-life considerations in product design• Assessing wastewater treatment capabilities during supplier audits	27, 45
	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss	<ul style="list-style-type: none">• Opting not to develop on virgin greenfield land• Completing Environmental Impact Assessments before projects go live• Printing sustainability reports on Forest Stewardship Council (FSC) paper• Printing CSI Color Analysis magazine on 100% recycled paper• Virtual color management tools available via DyStar CSI Design Tools	46-47, 77
	Promote just, peaceful and inclusive societies	<ul style="list-style-type: none">• Maintaining a robust governance structure• Conducting business in keeping with highest ethical and legal standards• Effectively implementing the DyStar Code of Conduct• Code of Business Conduct for Suppliers and Third Party Service Providers• Code of Business Conduct for Sales Related Service Partners• Auditing all business units for corruption-related risks	11, 16-17
	Revitalize the global partnership for sustainable development	<ul style="list-style-type: none">• Collaborating with responsible textile producers, brands and retailers• Encouraging and facilitating sustainable practices among suppliers• Supporting NGO and non-profit initiatives that help further the Goals• Youth capacity building through partnerships with academic institutions• Active engagement with authorities, residents and community leaders	38-39, 61, 64

Committed to Sustainability

DyStar’s products and services help customers worldwide reduce costs, shorten lead times and meet stringent quality and ecological specifications.

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