bluesign®

bluesign® SYSTEM PARTNER

Impact Scorecard

2023

Words from Our CEO

"Together with our bluesign® SYSTEM PARTNERs, we are on a transformative journey.

It is our partners' dedicated hard work in reducing their environmental impacts (eKPIs) that this report celebrates.

These numbers are proof that effort brings reward, not for us, but, better still, for the planet and its people.

Our collective dedication to reduce the environmental impact of textile production reflects our shared vision for a sustainable future.

We are determined to continue the journey, and with your support, having more partners join us on that journey of transformation.

Thank you allowing us to join you on this journey, for your collective effort, your continued partnership and most of all for your shared determination to make a positive difference to our planet and its people."

Daniel Rüfenacht, bluesign CEO

Daniel Rüfenacht

Our System

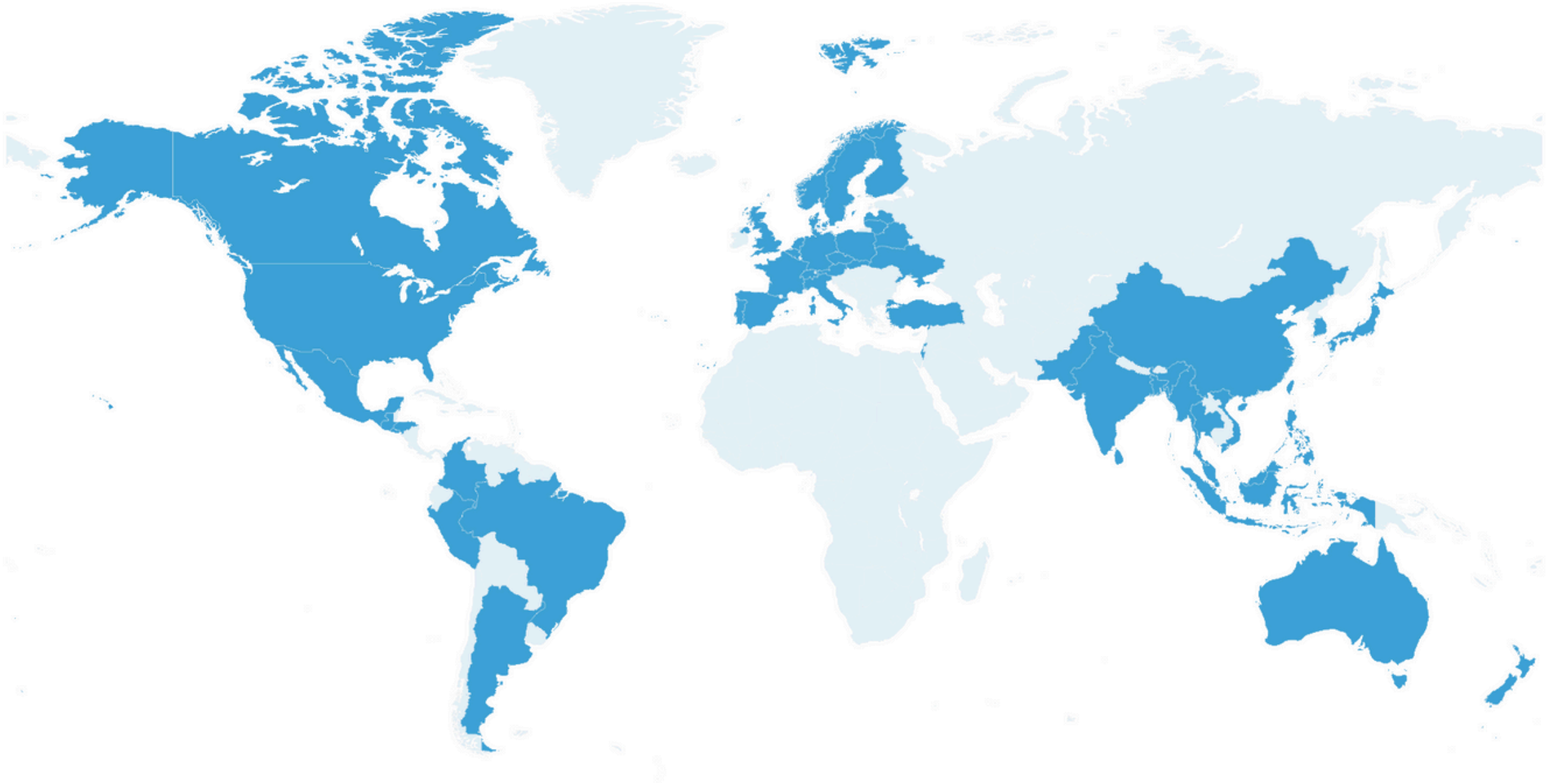
The bluesign® SYSTEM encourages the responsible use of resources in the global textile supply chain. An integral part of how we deem this use responsible is by quantifying and measuring the environmental impact during manufacturing. Although tracking this data is key to the bluesign® SYSTEM, environmental impact data is increasingly becoming required by legislative bodies for traceability, benchmarking, and external reporting.

bluesign provides manufacturers with a secure platform for self-declaration and annual onsite verification to track and manage key environmental performance indicators (eKPIs) such as water, energy, and chemical consumption, greenhouse gas emissions, and textile waste. These eKPIs are summarized in a yearly impact report, which serves as an initial indication of resource savings.

For brands and retailers, bluesign offers a similar secure platform to access validated eKPIs of their supply chain. The annual impact report gives an aggregated view of a brand's bluesign® SYSTEM PARTNER network, helping monitor and manage supply chain emissions and highlighting environmental achievements.

Here in our **Impact Scorecard**, we break down how we define our eKPIs, provide a snapshot of our own impact data, and highlight some of the impact data of select bluesign® SYSTEM PARTNERs.

2023 System Partners



864

bluesign® SYSTEM PARTNER (Brands, Chemical Suppliers, and Manufacturers) in over 50 different countries.

At the end of 2023, the bluesign® SYSTEM consisted of 864 bluesign® SYSTEM PARTNERS. **296** of our partners are Tier 2 Textile Manufacturers and out of those, **226** had primary plausible data that were used in this scorecard.

Our Sustainable Standard and SDGs

PERFORMANCE MEASURE	GRI RELEVANT SECTIONS (EFFECTIVE FOR REPORTS PUBLISHED FROM JAN 2021)		SUSTAINABLE DEVELOPMENT GOALS (SDG'S) , BY THE UNITED NATIONS	SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) APPAREL, ACCESSORIES & FOOTWEAR SUSTAINABILITY ACCOUNTING STANDARD	CARBON DISCLOSURE PROJECT (NON-PROFIT ORGANISATION)
Total fresh water use (l/kg textile)	GRI 308: Supplier Environmental Assessment 2016	GRI 303: Water and Effluents 2018		Management of Chemicals in Products (CG-AA-250a.1 and CG-AA-250a.2) Environmental Impacts in the Supply Chain (CG-AA-430a.1 and CG-AA-430a.2)	Water security questionnaire
Total energy consumption (kWh/kg textile)		GRI 302: Energy 2016			Climate change questionnaire
GHG emissions (g/kg textile)		GRI 305: Emissions 2016			Climate change questionnaire
Basic Chemicals (g/kg textile)		GRI 301: Materials 2016			-
Auxiliaries (g/kg textile)		GRI 301: Materials 2016			-
Dyestuffs (g/kg textile)		GRI 301: Materials 2016			-
bluesign® APPROVED chemicals (%)		GRI 301: Materials 2016			-
Textile Waste (%)		GRI 306: Waste 2020 GRI 306: Effluents and Waste 2016			Climate change questionnaire

Our Sustainable Development Goals (SDGs)

Central to our mission is a commitment to competitiveness and adherence to legislative frameworks and international standards. We believe in continuous improvement and compliance to ensure sustainable growth within the industry.

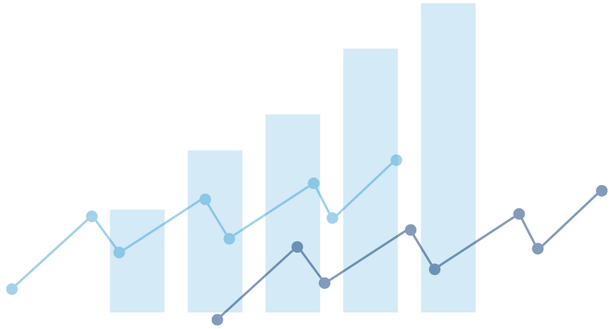
Our dedication to the United Nations Sustainable Development Goals (SDGs) underscores our commitment to sustainable development.

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a universal agreement to end poverty, protect the planet, and ensure peace and prosperity for all. Adopted by all UN member states in 2015 for the period 2016–2030, these goals respond to the urgent need for a sustainable approach. The SDGs offer a scientifically robust, politically acceptable, and publicly intuitive framework and are our best chance for global collaboration to secure a fair, healthy, and prosperous future for ourselves and future generations.

Specifically, we focus on six key SDGs:

Together, we strive to create a future where the textile industry not only thrives but also serves as a beacon of sustainability and prosperity for generations to come.

Verified Data



The data verification for bluesign is a process in which different types of data are checked on accuracy and plausibility.
Using the examples of water, energy, and chemicals, please see below how the bluesign assessors do the on-site accuracy and plausibility check for data.

	WATER	ENERGY	CHEMICALS
ACCURACY	stated quantities can be validated with: • water bills (e.g., for municipal water) • calibrated flowmeters • consistent historical recordings	stated quantities can be validated with: • energy bills (e.g., for purchased coal) • determined by calibrated meters • by consistent historical recordings	• the water balance to evaluate the traceability of input with the usage of processes and comparison with the output (wastewater) • the completeness of different water sources; groundwater, rainwater, municipal water, process water (recycled and/or re-used), surface water (river, sea)
PLAUSIBILITY	stated quantities of chemicals are based on: • inventory management • purchased quantities within the reference period	• the completeness of different energy sources [electricity (local grid and/or on-site generated), coal, gas, oil, renewable energy] • whether on-site energy supply units are mutually compatible with stated energy sources, if necessary, convert all energy sources to a uniform unit like kWh – one unit for total energy (electrical and heating energy) • clarification of the primary energy source of secondary energy sources like steam • whether calorific values are known and correct, if necessary, replacement by default values • whether specific/normalized data are in the bandwidth of other facilities with same process profile in the bluesign database	• whether measures are installed to record delivered chemicals by quantity (SOP) • completeness of different chemical types (dyestuffs, textile auxiliaries and basic chemicals) by CUBE chemical inventory (e.g., check if there are printing agents on the inventory list if printing is performed) • whether consumed chemical amounts are mutually compatible with existing process technology • whether specific /normalized data are in the bandwidth of other facilities with same process profile (bluesign database)

eKPIs

Environmental Key Performance Indicators (eKPIs) are quantitative measures that put values on a business' environmental performance.
To assure comparability and scalability, consumptions and emissions are expressed/calculated as specific eKPIs against a baseline/normalising factor. Usually, the annual production volume in kilograms sets the baseline for determination of specific eKPIs.

Typical eKPIs that are collected from bluesign® SYSTEM PARTNER Manufacturers and further calculated are related to the most important resource consumptions and emissions in textile industry, for example:

- primary energy (solid fuels, gaseous fuels, liquid fuels)
- secondary energy (e.g. steam, electricity)
- type of energy (renewable, fossil, nuclear)
- air emissions (VOC, TOC, etc.)
- process and sanitary water
- wastewater quantity
- wastewater quality (COD, AOX, Total N, etc.)
- chemicals (auxiliaries, dyestuffs, basic chemicals, chemicals for other purposes)
- raw materials and intermediates
- waste streams (recyclable, composted, waste to energy, landfilled)

In this scorecard we concentrate on 7 selected eKPI:

WATER CONSUMPTION

ENERGY CONSUMPTION

CARBON EMISSIONS

RENEWABLE ENERGY

CHEMICAL CONSUMPTION

NON COAL ENERGY

bluesign® APPROVED CHEMICALS

Impact Results

Only verified and plausible data sets were used for the following eKPIs.
We used primary data from 226 bluesign® SYSTEM PARTNERs to compare the total impact in 2023 with the 2019 baseline.

TOTAL WATER SAVED[1]

6,293,287,000

liters

TOTAL ENERGY SAVED[1]

773,567,120

kWh

TOTAL CARBON EMISSIONS REDUCED[1]

3,268,276,695

kg

WATER CONSUMPTION

↓ 22%

91 l/kg per textile

ENERGY CONSUMPTION

↓ 23%

11 kWh/kg per textile

CARBON EMISSIONS

↓ 37%

2 kg CO2e/kg per textile

RENEWABLE ENERGY[2]

↑ 3%

5% out of total use

CHEMICAL CONSUMPTION

0%

388 g/ kg per textile

NON COAL ENERGY[2]

↑ 17%

80% out of total use

bluesign® APPROVED CHEMICALS[3]

→ 56%

use of responsible chemicals

1. Absolute Savings from all 226 manufacturers from 2019-2023, normalized production volume to 100% = 2019.
2. Renewable and non coal energy specific to heating energy generated at facility site.
3. Share of bluesign® APPROVED chemicals remained constant from 2019 to 2023.

Impact Case Study

bluesign® SYSTEM PARTNER – DONGJIN TEXTILE

On-site Assessment

After the on-site assessment at the company DONGJIN TEXTILE VINA CO., Ltd in Vietnam, bluesign assessors predicted the highest percentage saving potential in the field of process water and heating energy.

Reassessment

Recommendations were made for water consumption to be collected on machine level in dyeing process, reducing the high redyeing rate, suggesting the reuse of low polluting rinsing bathes from exhaust processes, and the switch away from coal as the main source of thermal energy. After the next reassessment, company's data showed significant reduction in heating energy and carbon emissions, mainly due the change from coal to biomass.

Impact

A reduction of a spectacular 77% in total carbon emissions and a 17% reduction in total heating energy (2023 compared to 2021) is the result of this incredible work.

TOTAL CARBON EMISSIONS

↓77%

TOTAL HEATING ENERGY

↓17%

Impact Testimonial

bluesign® SYSTEM PARTNER

“Product, Lives, and Planet form the bedrock of the MAS Plan for Change, serving as the pillars of sustainable apparel manufacturing at MAS Holdings. With a clear vision for the future, the company has set 12 sustainability goals to be accomplished by 2025, and within it, MAS intends to ensure a cleaner manufacturing process and thereby minimize harmful impacts to the environment.

The partnership with bluesign has supported MAS Fabrics - Intimo to move forward on this journey. This partnership demonstrates a commitment to meet specific sustainability criteria, with four particular areas in mind; resource efficiency, environmental impact, health and safety at work, and consumer protection.

Systems and standards such as bluesign act as catalysts to disrupt the way clothes are made, offering solutions for sustainable apparel manufacturing. Adhering to such systems helps eliminate harmful substances and sets stringent standards for environmentally friendly manufacturing. This also allows final textile products to meet consumer safety requirements worldwide, while giving consumers confidence in their purchase decisions.”

Sugath Disanayake, Manager – Chemical Sustainability at MAS Capital

Outlook

With the 226 bluesign® SYSTEM PARTNER Manufacturers included in this Impact Scorecard were already able to achieve big savings:

TOTAL WATER SAVINGS: **6,293,287,000** liters
TOTAL ENERGY SAVINGS: **773,567,120** kWh
TOTAL CARBON EMISSIONS REDUCED: **3,268,276,695** kg

One of our eKPIs is the percentage of bluesign® APPROVED chemistry, currently at 56%. Although this may seem modest, our system was initially implemented in the outdoor industry and has recently expanded to other sectors like footwear, equipment, and denim. This expansion includes more partners using non-typical chemicals not yet in the bluesign® FINDER. We are committed to adding more chemicals to the bluesign® FINDER to facilitate the transition to bluesign® APPROVED chemistry.

bluesign® APPROVED chemistry ensures more than consumer safety; it promotes sustainable practices for clean production.

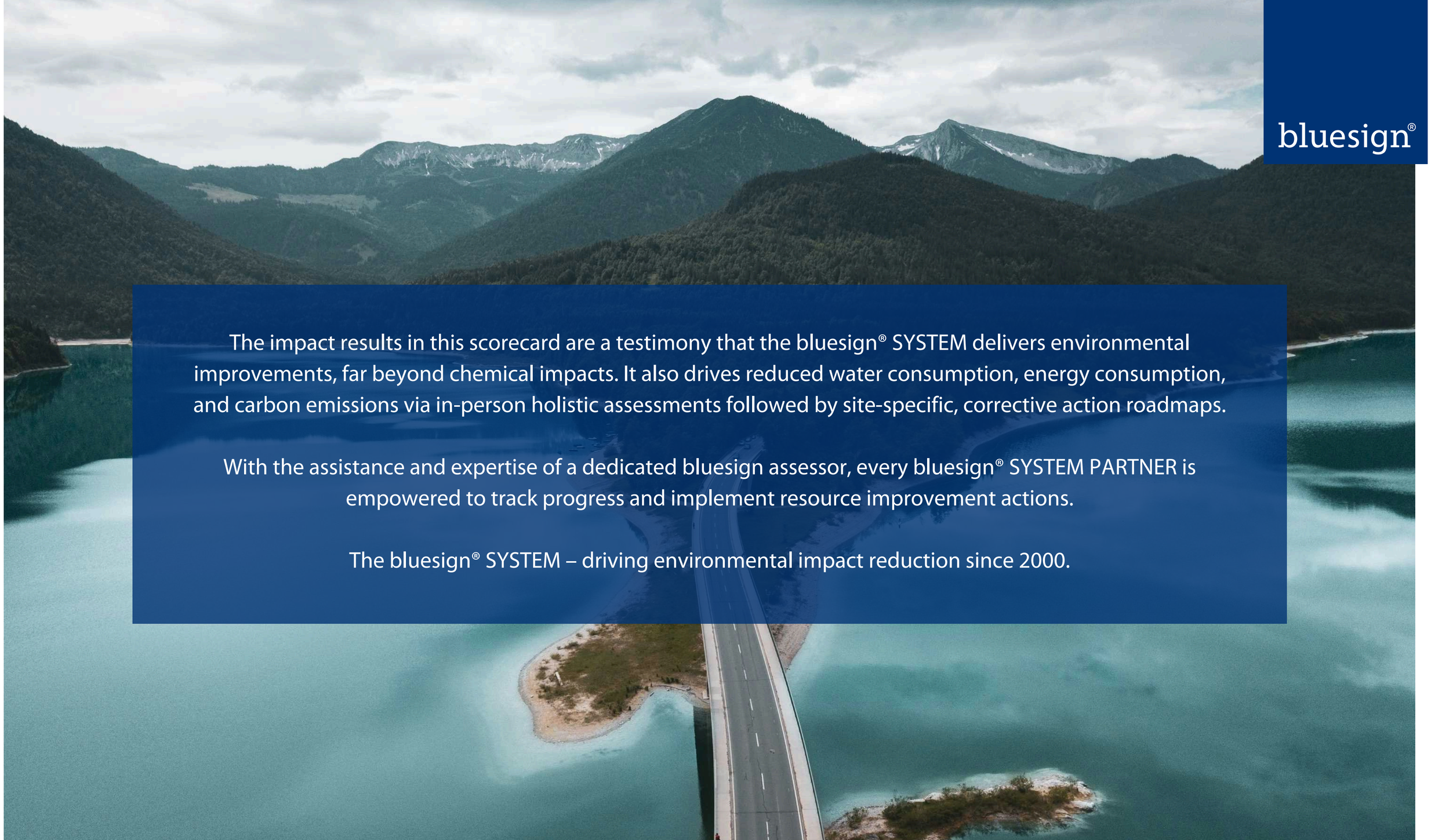
Key aspects of bluesign® APPROVED chemistry include:

- Environmental Safety: Chemicals must not pose significant risks to the environment during production, use, and disposal, reducing water pollution, air emissions, and waste.
- Worker Safety: Certified chemicals ensure the health and safety of workers in the manufacturing process.
- Resource Efficiency: bluesign® promotes efficient use of resources like water and energy, minimizing environmental impact.
- Consumer Safety: Chemicals must not contain harmful substances, ensuring final textile products are safe for consumers.

When a chemical is bluesign® APPROVED, it has been thoroughly evaluated and meets strict criteria for sustainable textile production, from raw materials to finished products.

Ultimately, our goal is to grow our network of bluesign® SYSTEM PARTNERs, increasing the use of bluesign® APPROVED chemistry, in turn creating more of a positive impact. To support this effort, quantitative targets will be set in 2024.

WE ARE COMMITTED TO REDUCING IMPACT IN OUR INDUSTRY



bluesign®

The impact results in this scorecard are a testimony that the bluesign® SYSTEM delivers environmental improvements, far beyond chemical impacts. It also drives reduced water consumption, energy consumption, and carbon emissions via in-person holistic assessments followed by site-specific, corrective action roadmaps.

With the assistance and expertise of a dedicated bluesign assessor, every bluesign® SYSTEM PARTNER is empowered to track progress and implement resource improvement actions.

The bluesign® SYSTEM – driving environmental impact reduction since 2000.