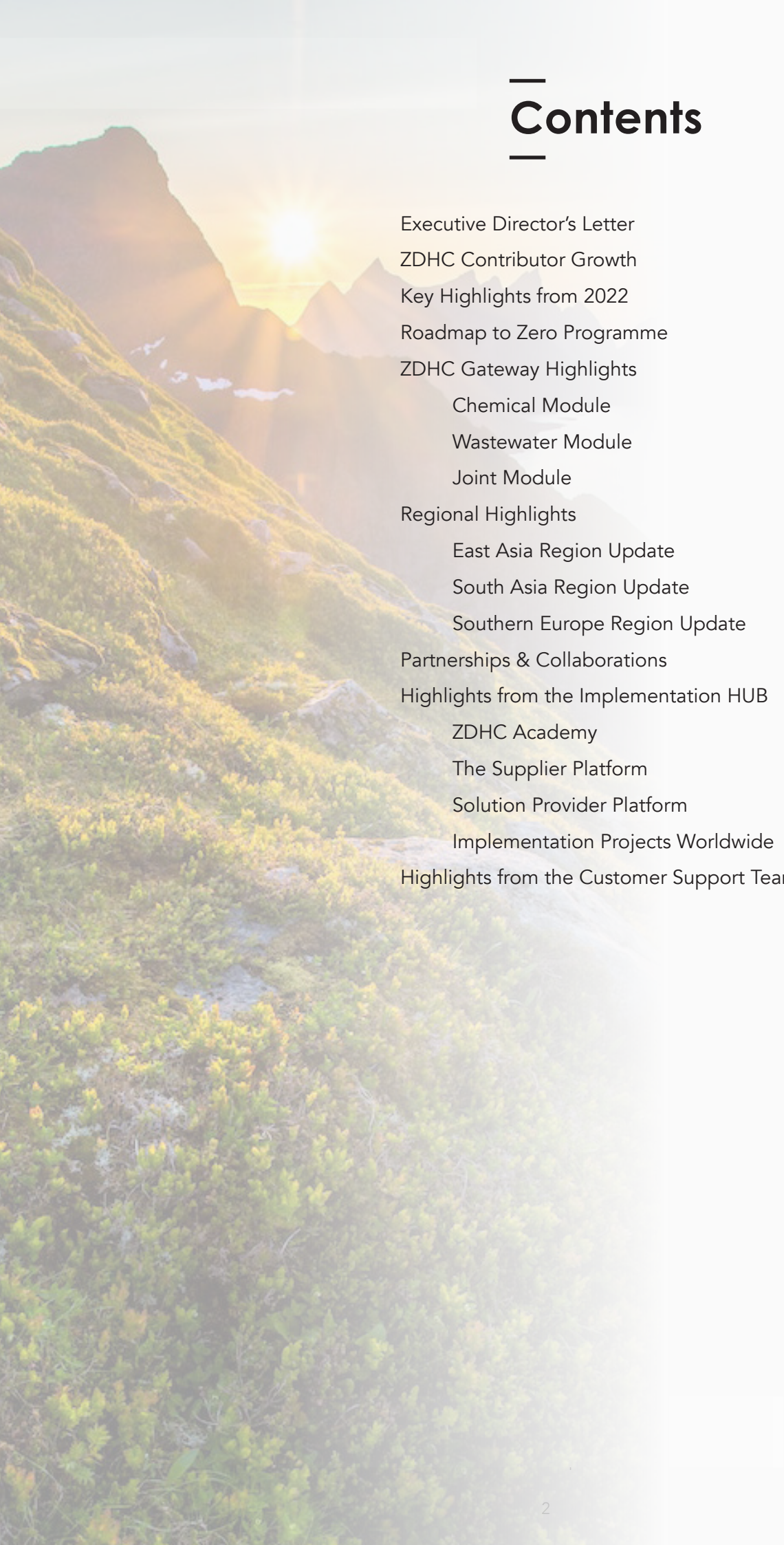

Annual Report 2022





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Executive Director’s Letter

Dear ZDHC Committed Community,

I am pleased to present our Annual Report for 2022, which highlights our organisation's achievements, challenges, and impact over the past year. As the Executive Director, I am proud of our progress towards our mission and grateful for the continued support of our dedicated staff, board members, signatories and partners.

Despite the ongoing pandemic and its impact on our operations and communities, we remained committed to advancing our Roadmap to Zero Programme, innovating our strategies, and responding to emerging needs. We adapted to virtual and hybrid delivery models, increased our online presence, and strengthened our collaboration with local and global stakeholders.

While we have achieved many positive outcomes, we also faced several challenges and lessons learned in 2022. The pandemic and its repercussions have exposed and exacerbated existing inequalities and vulnerabilities, which require more systemic and transformative solutions. We need to strengthen our resilience, agility, and innovation while staying true to our values and principles.

Looking ahead, we are excited to continue our journey towards our vision to create a world where better chemistry leads to the protection of life, land, air, and water.

In closing, I would like to express my gratitude to our staff, board, contributors, and partners for their dedication, support, and trust. We could not have achieved our successes without your contributions and collaboration. I also want to acknowledge the resilience and creativity of our community, which inspire us to do better and strive for more.

Thank you for your continued interest in and support of our organisation. We look forward to working with you towards a brighter future.



Frank Michel
Executive Director

ZDHC Contributor Growth

Brands

- DECATHLON SE
- Desigual
- JCPenney
- Nordstrom Product Group
- The Children's Place

VCA - Chemical Industry

- Gruppo Biokimica
- Nan Pao
- Proklean Technologies
- RESIL CHEMICALS PVT LTD
- SUDEEP Industries Debag Kimya

Friends

- CCC SA
- KiK
- LUZ Bodywear GmbH
- Marc O'Polo
- Mustang
- s.Oliver Group
- Under Armour
- VARNER

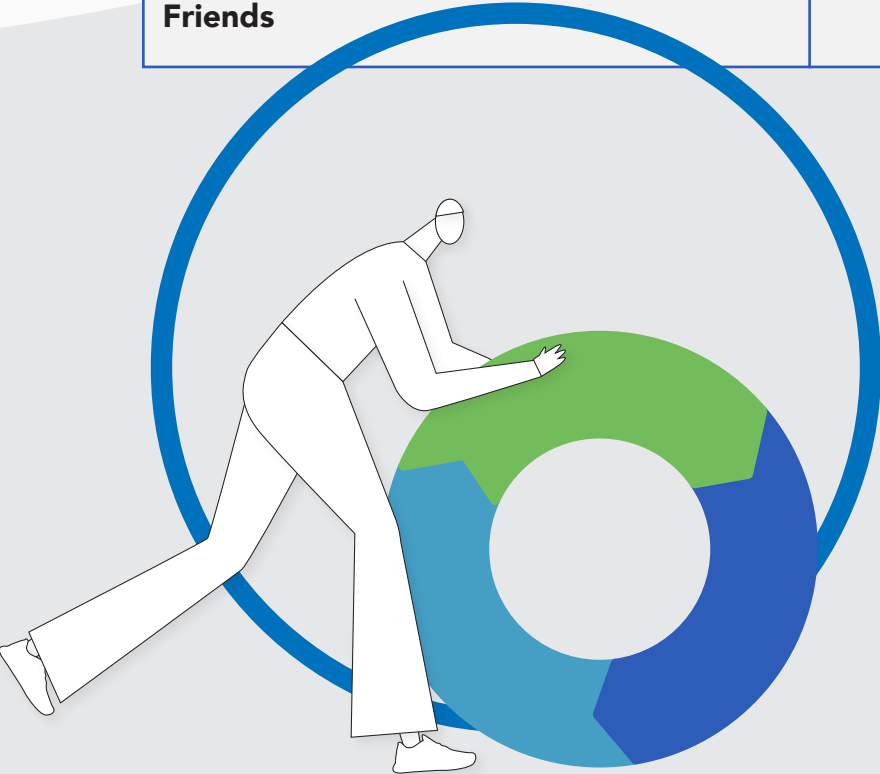
VCA - Textile Industry

- Bangladesh Export Import Company Limited
- ECHOTEX LIMITED
- FRAMIS ITALIA Soorty Enterprises (Pvt) Ltd.

Associates

- TFMA
- TMC
- UNPAC

	2021	2022
Brands	34	39
VCA Chemical Industry	50	57
VCA Textile Industry	42	44
VCA Solution Provider	25	25
Associates	18	21
Friends	18	25



In 2022, ZDHC welcomed the following organisations:

Brands

DECATHLON

Desigual.

JCPenney

NORDSTROM
MADE

THE CHILDREN'S
PLACE

Value Chain Affiliates

Chemical Industry

BF

CK

BK

gruppo
biokimica

NANPAO

proklean®
GREEN CHEMISTRY THAT DELIVERS

RESIL
Science For Change

SUDEEP
INDUSTRIES

Textile Industry

BEXIMCO

ECHOTEX
PLANET PEOPLE PRODUCT PARTNERS

FRAMISITALIA

Associates

UNPAC
ITALIAN LEATHER CHEMICALS
MANUFACTURERS ASSOCIATION

Key Highlights from 2022

JANUARY

- Launch of Resource Efficiency Module on Supplier Platform
- ZDHC Knowledge Base Now Available in Chinese
- New ZDHC MRSL Submission Platform

APRIL

- South Asia Grand Regional Conference at Mumbai, India
- ZDHC Introduction Webinar for suppliers based in Türkiye in collaboration with 14 ZDHC Brands sourcing from Türkiye

JULY

- Release of ZDHC InCheck Solutions and ZDHC Verified InCheck – Level 1
- Implementation HUB signs MoU with UNESCO-IHE Institute for Water Education

OCTOBER

- Workshops for leather tanneries at leather centres Ambur and Ranipet in India on ZDHC RtZ Guidelines and platforms.

MARCH

- ZDHC Wastewater Guidelines V2.0 including its supporting documents; the ZDHC Sludge Reference Document V1.0, and ZDHC Wastewater and Sludge Laboratory Sampling and Analysis Plan V2.0.

JUNE

- ZDHC Impact Day 2022 and launch of ZDHC Impact Report 2021
- Launch of Detox Fashion Radar
- ZDHC Foundation Signs MoU with Water Environmental Federation
- ZDHC Foundation and the Microfibre Consortium Announce Collaboration to Address Microfibres Within Wastewater
- ZDHC InConnect – ZDHC Programme & ZDHC Implementation for the Supply Chain

SEPTEMBER

- ZDHC Knowledge Base Now Available in Turkish
- Implementation HUB to Host Its First Stakeholder Engagement Day in Türkiye
- South Asia Event: Accelerating the ZDHC Programme in the Leather Industry held at Chennai, India
- Implementation HUB to organise its first Africa Event, in cooperation with UNIDO

NOVEMBER

- Southern Europe Annual Conference & ZDHC Annual Meeting
- Launch of the ZDHC MRSL V3.0, and its supporting documents; the ZDHC MRSL Conformance Guidance V2.0, ZDHC MRSL Update Principles and Procedures V3.0, and the ZDHC MRSL Industry Standard Implementation Approach V2.0
- Launch of the ZDHC Wastewater Guidelines V2.1 including its supporting documents; ZDHC Wastewater Guidelines V2.1, ZDHC Wastewater and Sludge Laboratory Sampling and Analysis Plan V2.1, ZDHC Gateway Electronic Data Reporting System Guidelines V3.0, and ZDHC Wastewater Guidelines Industry Standard Implementation Approach V1.0
- Awareness Workshops in South Asia

DECEMBER

- East Asia Regional Conference: ZDHC Solutions Conference 2022
- 2022 Board Election Results
- Launch ZDHC CMS Framework Training



Roadmap to Zero Programme: Our Progress in 2022

Roadmap to Zero 2022 Activities

We are proud to have successfully completed significant projects that support the core fundamental value of eliminating hazardous chemicals and implementing better chemistry to protect life, land, air, and water.

To further improve the quality of our guidelines in 2023, we are restructuring our programme team into Competence Centres and Delivery Teams. Competence Centres will have dedicated subject matter experts on sustainable chemical management, air, water stewardship, fibre, and materials. Meanwhile, the Delivery Team will focus entirely on project management and ensure that all guidelines are delivered as planned and communicated to all stakeholders.

Input focused guidelines and publications



In July 2022, we published ZDHC InCheck Solutions V1.0, along with the ZDHC Verified InCheck Level 1, helping suppliers demonstrate their efforts to improve their chemical inventory management towards sustainable chemistry and conformance with the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL).

- ZDHC InCheck Solutions also enable suppliers to assess their own chemical inventory conformance to ZDHC MRSL and share the results with brand customers without sharing details of the chemical inventory itself. ZDHC InCheck Solutions explains each solution and how it can be implemented.

In November 2022, to provide guidance and support on restricting hazardous chemicals from intentional use within the manufacturing process, helping to protect workers and the environment, we published the ZDHC MRSL V3.0 alongside three other documents to support its implementation.

- The ZDHC MRSL Update Principles and Procedures V3.0 ensures that the update process of the ZDHC MRSL remains transparent, inclusive, and efficient whilst keeping

in mind that the updates should reduce hazard and impact based on the best available information.

- The ZDHC MRSL Conformance Guidance V2.0 explains the process and requirements of organisations that want to become a ZDHC Approved MRSL Certifier. As well as the criteria for conformance of a chemical formulation to the ZDHC MRSL and how it is transitioned in the ZDHC Gateway.
- The ZDHC MRSL Industry Standard Implementation Approach V2.0 was created so that each stakeholder group connected to the ZDHC Roadmap to Zero Programme has clarity on the timelines and actions required for the successful adoption and implementation of the guidelines.

Output focused guidelines and publications



In March 2022, we published the ZDHC Sludge Reference Document V1.0 to support changes in practices at facilities worldwide by setting a worldwide process with consistent requirements for sludge handling and disposal that minimise the negative impact of sludge on human health and the environment.

- The Sludge Reference Document supports the understanding and implementation of the sludge portion in the ZDHC Wastewater Guidelines, which were updated in November 2022 along with documents to support implementation.

The ZDHC Wastewater Guidelines V2.1 is a living document which sets a single, globally unified expectation across the textile, leather and footwear industry supply chain for industrial wastewater and sludge. They define the guidelines for wastewater discharge, sludge quality and disposal pathways.

- The ZDHC Wastewater and Sludge Sampling and Analysis Plan V2.1 is a key support for implementing the ZDHC Wastewater Guidelines. It provides ZDHC Approved Laboratories with a set of requirements to guide them as they sample and test to determine the concentration of parameters in wastewater and sludge. Helping to ensure the integrity and comparability of wastewater and sludge test data.
- The ZDHC Gateway Electronic Data Reporting System Guidelines V3.0 gives directives to ZDHC Approved Laboratories on submitting test data to the ZDHC

Gateway - Wastewater Module. It explains the standardised way in which data should be submitted to the Gateway platform. By showing these laboratories what data we expect them to upload, it increases the consistency and comparability of test data on the platform.

- The ZDHC Wastewater Guidelines Industry Standard Implementation Approach V1.0 details how the industry stakeholders should implement the updated ZDHC Wastewater Guidelines V2.1 across their value chains. By implementing in a collaborative, connected way, these stakeholders can reduce the impact of the implementation efforts. This document provides a standard approach to help achieve this.



Roadmap to Zero 2023 Planned Activities

We have created and communicated the 2023 work plan to all stakeholders, providing an overview of the guidelines we plan to develop and update and potential task teams that will be formed. This allowed stakeholders to contribute to the development/updating of the ZDHC guidelines.

From 2023 onwards, ZDHC will transition from the Programme Team to Competence Centres for Sustainable Chemical Management, Water Stewardship, Air Emissions and Fibres & Materials. These Competence Centres will comprise of Technical Experts and a Technical Writer and will focus on:

- Leading the update of the ZDHC Wastewater Guidelines V2.1 to ZDHC Wastewater Guidelines V3.0. These guidelines define the expectations across the industry for wastewater and sludge.
- Preparing guidance sheets on ZDHC MRSL V3.1 substances for inclusion in the e-MRSL
- Publishing a Responsible Solvents Guideline document for supporting the textile, leather and footwear industries on best practices for emission and exposure controls for solvents included in the ZDHC MRSL V3.1
- Developing the Chemicals to Zero - Progressive transitional roll out on the ZDHC Gateway and prepare a Chemicals to Zero - Progressive guideline
- Developing an ETP efficiency evaluation module
- Initiate work on a Commodity Chemicals guideline for ZDHC MRSL conformance
- Preparing groundwork for a Waste guideline to manage and dispose hazardous waste
- Publishing an Air Emissions guideline V1.0
- Publishing the MMCF guideline V2.0 to include MMCF fibres other than VSF & Modal

ZDHC Gateway Highlights



In the past year, the ZDHC Gateway has experienced significant growth and increased its reach tremendously. The number of formulators using the platform grew by 78.9%, with 2,179 accounts populating the platform with ZDHC MRSL conformant products. The number of suppliers using the Gateway Chemical and Wastewater Module to improve their chemical management performance increased by 40.3%, resulting in a total of 8,741 supplier accounts by the end of the year. Furthermore, 89.5% of our brands actively engage with the ZDHC Gateway to measure their impact and communicate with their suppliers. These achievements demonstrate our commitment to promoting sustainable chemical management practices throughout the textile and leather industries.

Chemical Module 2022 Activities

ZDHC InCheck Guidelines - Implementation

The ZDHC InCheck Solution helps a Supplier to establish transparency in its efforts to better manage its chemical inventory towards sustainable chemistry. After the release of the Performance InCheck (self assessment of the chemical inventory), we have been working on the Verified InCheck - Level 1 implementation on the ZDHC Gateway to facilitate the roll out of a pilot in 2023. The Verified InCheck - Level 1 includes an on-site spot check by an accepted 2nd, or 3rd party ZDHC Approved InCheck Verifier. This addition will demonstrate the credible implementation of the ZDHC MRSL conformant chemical products.

Enabled Brand APIs to automate Performance InCheck data export

ZDHC InCheck Solutions help brands monitor their suppliers' efforts in chemical management. Currently, over 73,000 ZDHC Performance InCheck reports are available for brands to download on the ZDHC Gateway. To enable brands to access their connected suppliers' overall chemical inventory performance more efficiently, we have enhanced the ZDHC Gateway APIs and enabled direct accessibility to suppliers' performance data.

Onboarding of three new Performance InCheck Solution Providers

In 2023, we have fully onboarded three new Performance InCheck Solution Providers. This will speed up the adoption of our ZDHC InCheck Solutions and further drive sustainable practices in the brand's value chains.

Chemical Module 2023 Planned Activities

Implementation of ZDHC MRSL V3.1

The ZDHC Gateway is undergoing important updates to facilitate a smooth transition from ZDHC MRSL V2.0 to ZDHC MRSL V3.1. The objective of these updates is to ensure successful industry adoption of the new, more stringent chemical management requirements of ZDHC MRSL V3.1. To achieve this objective, the updates to the ZDHC Gateway will include enhancements to product visibility, and Performance InCheck Reports both during and after the ZDHC MRSL transition period.

New features on the ZDHC Gateway to enable the implementation of the Chemicals to Zero Guidance document

In 2023, ZDHC will work on the Chemicals to Zero Programme to go beyond MRSL conformance. The ZDHC Gateway will be updated to assign formulations that meet the Chemicals to Zero - Progressive level requirements to enable Suppliers to make informed choices for meeting their RSL requirements in finished products.

Wastewater Module 2022 Activities

Integration of the ZDHC Wastewater Guidelines V2.1 in the ZDHC Gateway Wastewater Module

In 2022, the ZDHC Gateway Wastewater Module has undergone an update that includes an expanded scope on the Output Focus Area, as well as the release of ZDHC Wastewater Guidelines V2.1. The updates to the Wastewater Module reflect revised reporting parameters and limit values, along with changes to the Electronic Data Reporting (EDR) System Guidelines and an improved ClearStream Report.

Wastewater Module 2023 Planned Activities

Integration of ZDHC Man-Made Cellulosic Fibres (MMCF) V2.0 Guidelines in the ZDHC Gateway Wastewater Module

The updated Man-Made Cellulosic Fibres (MMCF) V2.0 Guidelines have expanded their scope beyond Viscose and Modal Staple Fibres to include additional fibres such as Lyocell, Viscose Filament Yarn, Cupro, and Acetate. To ensure a fair assessment of MMCF suppliers, the Wastewater Module and Electronic Data Reporting (EDR) process on the ZDHC Gateway will be updated to allow for reporting against the new requirements. These changes will also be reflected in the ClearStream Report.



ZDHC Gateway Joint Modules 2022 Activities

Launch of the ZDHC Gateway Onboarding Virtual Environment for Brands

ZDHC has launched a new ZDHC Gateway Onboarding Virtual Environment for our brand community. The tool is hosted on ZDHC's intranet and provides our brand community members with a centralised hub where they can easily access guidance and engagement materials with respect to the ZDHC Gateway. Brands can access a wide range of platform feature videos, training and engagement materials that can help them speed up their Roadmap to Zero implementation work.

Introducing Vendor accounts on the ZDHC Gateway

ZDHC has launched the Vendor user category on the ZDHC Gateway, a major development that will enhance transparency and efficiency in supply chain monitoring. Vendors play a critical role in the supply chain as intermediaries between brands and retailers that use the ZDHC Gateway to connect with their suppliers. With the introduction of the Vendor category, brands will now be able to access even more information about their supply chain and gain greater visibility into their overall sustainability performance.

Joint Module 2023 Planned Activities

ZDHC Gateway platform performance and user experience improvements

To ensure the ZDHC Gateway application is scalable from a functional and technical perspective, we will review the overall ZDHC Gateway application with respect to the infrastructure, response time and general user journey. We will identify areas of improvement within the remit of security, performance, architecture and maintainability to ensure our growing user community and an improved ZDHC Gateway experience.

Quarterly ZDHC Gateway Introduction Webinars

ZDHC will introduce a series of informative webinars that will introduce stakeholders to the features and benefits of the ZDHC Gateway. The webinars are designed to provide valuable insights and guidance to all stakeholder groups, including Formulators, Suppliers, ZDHC Approved Wastewater Laboratories, and ZDHC Approved MRSL Certifiers.

New functionalities for Vendors on the ZDHC Gateway

Following the successful launch of Vendor accounts on the ZDHC Gateway in 2022, we are excited to announce that we are planning to introduce new functionalities that will enable vendors to share more detailed information with brands about their business partners' sustainability activities. These features will be optional, meaning that vendors can choose to share this information as a report at their discretion.

Increased transparency on suppliers' chemical inventory

In 2023, the ZDHC Gateway will introduce a new feature that enables suppliers to share additional details about the chemical products reported in the Performance InCheck with their brand and vendor business partners. The connection feature already allows for automatic sharing of the Performance InCheck Report, confirming ZDHC MRSL conformance of the inventory. With this new feature, suppliers can also share the underlying information regarding the chemical products they reported, providing brands with a more comprehensive understanding of the chemical formulators and products in their value chains.

Regional Highlights

East Asia Region Update

2022 Activities

- We have expanded our Supplier to Zero Programme through public webinars and individual events for brands, resulting in three times as many certificate issuances this year compared to the last. In total, we have issued 427 Supplier to Zero Foundational Level certificates and 15 Progressive Level certificates.
- To increase awareness and accelerate ZDHC implementation in the East Asia region, we conducted more than 50 webinars and events, including the ZDHC Solutions Conference 2022 and the ZDHC East Asia Regional Conference. In 2022, over 7,600 participants joined from China, Japan, Korea, and Vietnam. We also held ZDHC InConnect events with 12 ZDHC Brands and Friends of ZDHC to support their suppliers in implementing ZDHC on the ground. Furthermore, we are collaborating with our Approved Training Providers to hold ZDHC Implementation events in local languages to support implementation in these countries.
- We are working on aligning the China National Standard of Green Product Assessment for dyes with ZDHC MRSL V3.1, as well as coordinating the alignment between the CNTAC Group Standard update and ZDHC MRSL V3.1.



2023 Planned Activities

- ZDHC, together with its Approved Solution Providers, will conduct various workshops in person and/or online under the ZDHC Solutions Roadshow 2023, in different languages including Cantonese, Chinese, English, Japanese, Korean, and Vietnamese at various locations to support the value chain in connecting with our Approved Solution Providers for a deeper implementation of ZDHC.
- The Accelerating DMFa Phase Out project and Accelerating DMFa Phase Out Exchange Meeting will be arranged to support ZDHC Brands and Friends of ZDHC DMFa phase-out journey.
- We aim to engage targeted chemical and leather/footwear manufacturers to increase registration in the ZDHC Gateway and implement guidelines/tools.
- To support ZDHC Brands and Friends of ZDHC, we will arrange ZDHC InConnect events continuously to implement the ZDHC Roadmap to Zero Programme into their supply chain.
- Regular webinars and an annual regional conference will also be held to increase awareness among the supply chain of ZDHC Guidelines and Implementation Tools.

South Asia Region Update

2022 Activities

- The number of Suppliers with Foundational level certificates on the Supplier to Zero platform has increased from 196 in 2021 to 366.
- We organised various events, such as the South Asia Regional Conference and Leather Engagement Day, along with several webinars, online events, and in-person workshops for ZDHC Brand suppliers to raise awareness and enhance their understanding of ZDHC Guidelines and Platforms. Additionally, we represented ZDHC at external events, including the GIZ workshop in Mumbai, DMAI Conference in Ludhiana, Apparel Sourcing Week Conference in Bangalore, AEPC event in Delhi, SDC Sustainability Series webinar, and UNEP/CEE project at Surat for sustainable cluster development.
- We completed Advisory Projects at Colorband Dyestuffs on improvements in product stewardship systems and NML Sri Lanka on the implementation of the ZDHC CMS Framework in collaboration with Next Retail PLC.



2023 Planned Activities

- To accelerate the implementation of new guidelines such as the Wastewater Guidelines V2.1, ZDHC MRSL V3.0, ZDHC MRSL Conformance Guidance V2.0, and Verified InCheck Level 1, we will conduct awareness webinars and monitor the adoption of tools among suppliers. Additionally, we aim to raise awareness and encourage registration of suppliers for Supplier to Zero Foundational and Progressive levels, as well as for the Resource Efficiency Module.
- To increase adoption of our tools, we will engage the leather and footwear industry more proactively and encourage registration in the ZDHC Gateway. Furthermore, we will reach out to more domestic Indian apparel brands to onboard them as Friends in the Vendor category and support them in implementing the ZDHC Roadmap to Zero Programme at their supply chain partners.
- We plan to conduct events as per the 2023 Event Calendar for the South Asia region and onboard more textile and chemical industry stakeholders to the ZDHC Committed Community.



Southern Europe Region Update

2022 Activities

- The engagement of the Southern Europe Region in the Supplier to Zero platform is increasing, with 148 Foundational Level Certificates issued in 2022 (compared to 52 in 2021) and 5 Progressive Level Certificates awarded in 2022 (compared to 3 in 2021).
- To promote the ZDHC Roadmap to Zero Programme, we organised 25 events (both online and in-person) in the region, including two workshops in Portugal, the Southern European Conference in Lisbon, and two events organised by UNIDO and UNECE in Egypt. Furthermore, several webinars have been conducted in Italian to support the dissemination of ZDHC guidelines and solutions.
- We also coordinated the Italian Working Group, which published the Restricted Substances List (RSL) for natural fibres in textile products made with recycled materials in February 2022.

2023 Planned Activities

- We plan to accelerate the implementation of new guidelines, including the Wastewater Guidelines V2.1, ZDHC MRSL V3.1, ZDHC MRSL Conformance Guidance V2.0, and Verified InCheck Level 1 at suppliers. To achieve this, we will conduct awareness webinars and workshops, whenever possible, in local languages, mainly Italian, but we are also working to adding Portuguese and possibly Spanish by the end of 2023.
- In the Southern Europe Region, we offer the possibility of in-person and/or online workshops under ZDHC Solutions Roadshow 2023 in different languages, together with ZDHC Approved Solution Providers.
- We will continue to build relationships to improve the implementation of the Roadmap to Zero Programme in the leather and footwear sector.
- The ZDHC InConnect event will be continuously offered to support ZDHC Brands and Friends of ZDHC to implement the ZDHC Roadmap to Zero Programme into their supply chain.
- We will announce upcoming in-person workshops and events via our newsletter and publish them on the Event Calendar.
- We are working to engage new local contributors and expand our network.

Partnerships and Collaborations

ZDHCs aim is to:

- work together towards the common goal of creating a more sustainable and responsible textile, apparel, and footwear industry with like-minded organisations
- secure beneficial partnerships and funding for projects that drive business growth and advance ZDHC's mission.

Some of the highlights are given below:

amfori

In December 2022, ZDHC and amfori signed a new collaboration agreement to improve environmental performance in the textile, apparel, and footwear supply chain. The agreement focuses on sustainable chemical management and includes implementing the ZDHC Supplier to Zero Programme, joint monitoring of high-level results, raising awareness, joint training, capacity building, and fundraising for mutual projects. The collaboration aims to continuously improve environmental performance in the industry.

apparel alliance

In 2020, the Apparel Impact Institute (Aii), Sustainable Apparel Coalition (SAC), Textile Exchange and ZDHC formed the apparel alliance to accelerate industry impact improvement by aligning their goals, solutions, tools, reporting, events and training. Together, we aim to achieve a minimum goal of 45% reduction in GHG emissions by 2030 and have created a sustainability framework across four resource areas.

An outcome for 2022 is that the ZDHC Wastewater Guidelines is seen as the industry standard. The outcome is that for FEM 4.0, ClearStream is seen as a leading practice in terms of wastewater management.

Fashion Conveners (FC)

ZDHC, a key member of Fashion Conveners (FC), is playing a vital role in strengthening the vision and action plan to reduce duplication and create a collective impact in the fashion industry. In 2022, FC agreed on collaboration principles and focus areas on education, tools, data, policy and consumer awareness. Five working groups were created to work on these areas with defined teams from individual FC members.

French Development Agency (AFD)

AFD & ZDHC are exploring a joint project to create a financing vehicle supporting production facilities in developing countries implementing the ZDHC Roadmap to Zero Programme. The loan criteria are dedicated to reducing chemical footprints and preventing water pollution. In 2022, ZDHC and AFD conducted a market research and feasibility study in India, Bangladesh, Thailand, Cambodia, and Vietnam to evaluate the market size, pollution levels, and interest in project participation. AFD also conducted a separate feasibility study to evaluate the financial infrastructure to support the textile, apparel, and leather industry in these countries. Vietnam and Bangladesh were selected as priority countries to set up the financial mechanism via national and local bank partners following the 2022 feasibility study. AFD will request grants from EU partners for managing the project and build up a credit line from AFD for loans to facilities in Bangladesh and Vietnam in 2023 and onward. This collaboration has the potential to scale up ZDHC Guidelines and Solutions to prevent water pollution in the textile, apparel and leather industry.



Global Fashion Agenda (GFA)

GFA has launched a new addition to the Fashion CEO agenda for 2021, aiming to create a thriving fashion industry that works within planetary boundaries. One of its pillars is the efficient use of resources. ZDHC supports the agenda by defining criteria and action plans. The GFA Monitor Report for 2022 includes key actions like phasing out harmful chemicals from the design stage and using ZDHC solutions like InCheck and ClearStream for sustainable chemical management. The report was launched during the Global Fashion Submit, where ZDHC was invited as one of the Principal Stakeholders. GFA will share industry progress in the coming years.

IDH

IDH and ZDHC are collaborating to promote cleaner production of textile, apparel, footwear and leather products by increasing the adoption of best practices around the ZDHC MRSL and capacity building for facilities in various industrial parks. They are working on a project called "Building Sustainable Chemical Management Capacities as Best International Practice in Some Selected Industrial Parks in Ethiopia and Vietnam (IPEV)" from 2022-2024.

IOMC

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) proposed a concept paper to strengthen integrated chemical and waste management in the Strategic Approach to International Chemicals Management (SAICM) process. ZDHC's Sustainable Chemical Management Framework has been recognised as a frontrunner in the textile sector, and IOMC has invited ZDHC to showcase its approach to other sectors. ZDHC has been invited as a key panellist in various sessions of a multi-stakeholder workshop organised by IOMC in January 2023 to support the intersessional process for the Strategic Approach and sound management of chemicals and waste beyond 2020.

Leather Working Group (LWG)

Leather Working Group (LWG) is a global multi-stakeholder community committed to drive best practices and positive social and environmental change for responsible leather production.

LWG has provided input to the ZDHC CMS in respect to leather production. This supports all stakeholders through having a common approach to the management of chemicals within the leather industry. LWG has recognised and adopted the ZDHC MRSL as the minimum standard for limits that apply to substances in commercially available formulations used in the production of leather. This is supported through the use of the ZDHC Gateway which is made available to leather manufacturers audited against the LWG audit standards. LWG and ZDHC are exploring further opportunities for alignment to provide a consistent approach in these areas and greater value for all stakeholders.

Responsible Business Coalition (RBC)

Starting in 2022, Fashion Convener member organisations, the Responsible Business Coalition (RBC) and Fashion Makes Change (FMC), are collaborating to scale up Environmental, Social & Governance (ESG) solutions through partnership and collaboration. They have identified ZDHC as a critical partnership opportunity for brands and retailers to engage directly in sustainable chemical management to eliminate harmful chemicals from global supply chains. This effort aims to accelerate partnerships and promote industry adoption of ESG solutions.

SAICM (Strategic Approach for International Chemical Management)

The fourth meeting of the intersessional process for the Strategic Approach and Sound Management of Chemicals and Waste beyond 2020 was held in Bucharest from 29 August to 2 September 2022. ZDHC was invited to advocate for its Sustainable Chemical Management Framework as a successful global experiment in managing harmful chemicals. The SAICM community regards the ZDHC approach as a frontrunner in the textile, leather, apparel, and footwear industry. This process seeks to establish a global consensus-based framework for the sound management of chemicals and waste involving over 150 countries and other stakeholders, with arrangements to be considered and adopted at ICCM5 in Bonn in September 2023.

The Microfibre Consortium

In June 2022, The Microfibre Consortium (TMC) and ZDHC announced a collaboration to address microfibres in textile manufacturing wastewater by combining TMC's knowledge of fibre fragmentation with ZDHC's expertise with the ZDHC Wastewater Guidelines. The collaboration aims to measure and manage microfibre loss in wastewater between production facilities to ultimately avoid it. The work will be conducted in two phases, and a dedicated task team will focus on defining a test methodology, establishing a baseline, and identifying a harmonised infrastructure for measuring, reporting and controlling microfibres from manufacturing facilities.

UNEP

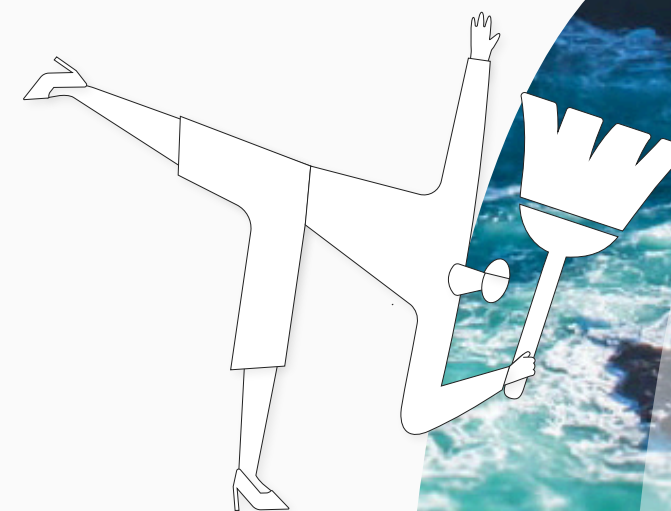
UNEP Chemicals and Health Branch has received funding for a five-year project to reduce the use, release, and exposure to chemicals of concern (CoCs) in the textiles industry in selected Asian countries, with ZDHC as one of the technical service providers. The project will target 500 textile companies to restrict the use, release, and exposure to priority CoCs, including Persistent Organic Pollutants (POPs), and develop a plan for scalability. The ZDHC Roadmap to Zero Programme will be utilised for input chemical management, Supplier to Zero assessment, and monitoring of wastewater using ClearStream solutions for output chemical management, alongside other market solutions and programmes.

UNIDO

UNIDO has received UNEP GEF funding for a five-year project to promote the circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Lesotho, Madagascar, South Africa, and Ethiopia. ZDHC is partnering with UNIDO to support sustainable chemical management in these African countries. A work plan has been finalised to define the key performance indicators for cooperation on this project, which will offer opportunities for ZDHC to implement its guidelines and solutions in new geographical areas, aiding various brands in enhancing the performance of their supply chain.

WRAP (Waste & Resources Action Programme) UK – Textile 2030

WRAP UK has launched a voluntary initiative called Textile 2030, to transform the UK fashion and textile sector into a more circular model. ZDHC has been invited to support this initiative by helping signatory companies implement sustainable chemical management using ZDHC guidelines and solutions and the Resource Efficiency Module in the Supplier Platform. In 2022, ZDHC became an associate signatory member to support Textile 2030 goals, and an action plan will be drafted in 2023 to define ZDHC's role.

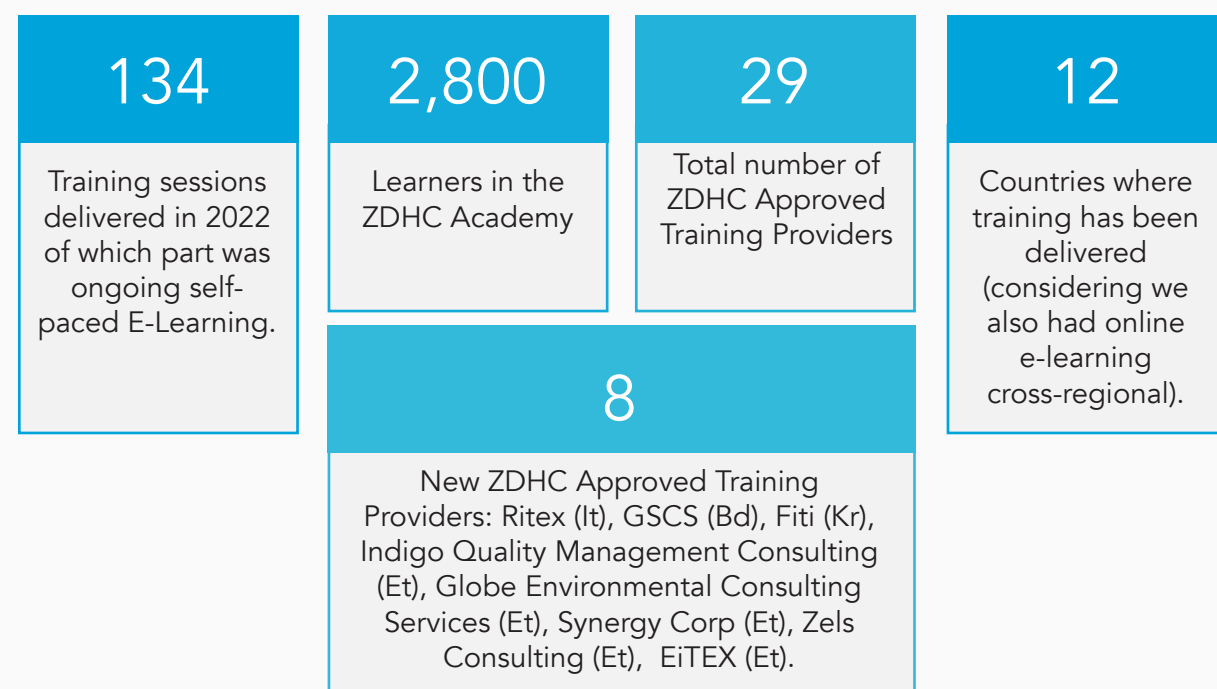


Highlights from the Implementation HUB



ZDHC Academy

Overview numbers



Training Launch & Revamp + e-Learning

In 2022, the ZDHC Academy expanded its training offer by adding a few new ZDHC Approved Training Providers (ATPs) led training courses, as well as the launch of the ZDHC e-learning. These training programmes are designed to support the implementation of ZDHC guidelines and solutions while enhancing the chemical management capabilities of the textile, footwear and leather industries.

- **Introduction to ZDHC e-learning**

The ZDHC Foundation offers various services, including the Introduction to ZDHC e-learning course. This self-paced course is intended for brands, suppliers, and others interested in learning about ZDHC and the Roadmap to Zero Programme. The course provides a thorough overview of ZDHC as an organisation, with a focus on the

guidelines, platforms, and solutions that aid in the implementation of a sustainable chemical management system at manufacturing facilities. The training is available in English and was also introduced in Turkish in 2022.

- **ZDHC CMS Framework Training for Brands & Suppliers**

The ZDHC CMS Framework Training is an introductory course to the ZDHC Chemical Management System (CMS) Framework. Launched in December 2022, this training replaces the Introduction to Chemical Management Training. It complements the existing "Introduction to ZDHC e-learning" and the more advanced "ZDHC CMS TIG" training. The latter focuses on implementing a sustainable chemical management system in a manufacturing facility after completing the ZDHC CMS Framework training. There are two versions of the ZDHC CMS Framework training available, one for brands and retailers and one for suppliers.

The training for brands and retailers covers how they can support their suppliers in implementing the CMS framework. The supplier-focused training delves deeper into the Framework chapters and shares the minimum CMS requirements according to the ZDHC guidelines.

- **ZDHC Wastewater Sampler & Verified InCheck (Level 1) e-Learning**

To coincide with the launch of the ZDHC Wastewater Guidelines V2.0 and Verified InCheck Level 1, e-Learning courses have been developed to ensure that ZDHC Wastewater Samplers and InCheck Verifiers have a thorough understanding of the guidelines and can provide services consistently.

These e-Learning courses have been designed to provide comprehensive training that cover the key aspects of the wastewater sampling and InCheck Verification processes. This ensures that individuals who complete the courses are equipped with the knowledge and skills necessary to carry out their roles effectively.

Stakeholder Engagement

UNESCO-IHE Institute for Water Education

In June 2022, an MoU was signed with UNESCO-IHE Institute for Water Education to kick off the cooperation on wastewater and effluent treatment education. ZDHC and IHE Institute for Water Education plan to collaborate on training and capacity building, educational funding and innovative technology. With the collaboration, we are creating a strong network of like-minded organisations that together can exchange technical expertise, and scale and support regional developments around the globe.



Mariella Noto (ZDHC - Implementation Senior Manager) signed an MOU with Walter Marlowe (Water Environmental Federation - Executive Director) during IFAT Munich in June 2022.



University engagement & guest lecturing

2022 was the year of the university collaboration. One of the goals of the Academy is to not only train the current employees working in the industry but also educate those that will be taking over from the current generation. Young professionals and students. That led to a series of guest lectures and curriculum implementation globally. We contributed to student and young professional education at:

- Kingston College (UK)
- Saxion School for Applied Science (The Netherlands)
- Cornell University
- ITS Cosmo, Italian Fashion Institute (Italy)
- Bahir Dahr University (Ethiopia)
- Institute of Chemical Technology (ICT), IIT Delhi (India)



Events

ZDHC Stakeholder Engagement Event Africa

In September 2022, the ZDHC Academy hosted the first Virtual ZDHC Stakeholder Engagement Event for the Africa region. Together with UNIDO we welcomed a wide range of attendees. From suppliers, to brands and from associations to laboratories. All came together to learn more about solutions and experiences for sustainable chemical management. The webinar included a presentation about the ZDHC Foundation Roadmap to Zero Programme and the ZDHC guidelines, platforms and solutions, as well as case studies from the SwitchMed programme in relation to ZDHC Implementation. The event was the first high-level engagement and a kick-off for more active work in the region.

Transformers ED activities - Turkish digital event

In May 2022, we participated in the Transformers ED Turkey digital event, where we presented the ZDHC Roadmap to Zero Programme and sustainable chemical management to attendees interested in denim, including Turkish students. The event was highly informative and insightful, and we extend our gratitude to Transformers ED for giving us the opportunity to explain the implementation of sustainable chemical management in the denim supply chain through ZDHC.

ZDHC Stakeholder Engagement Day in Istanbul, Türkiye

In September 2022, we hosted our first ZDHC Stakeholder Engagement Day in Istanbul, Türkiye, which was facilitated by Implementation HUB. This hybrid event provided an opportunity for us to meet with our key stakeholders in Türkiye, including ZDHC Contributors, Friends of ZDHC, ZDHC Approved Solution Providers, Formulators, Suppliers, NGOs, Associations, Governmental Organisations, and the Consul General of The Netherlands in Istanbul. During the event, we shared our vision at ZDHC, introduced our Roadmap to Zero Programme, and facilitated best practices sessions presented by our stakeholders. This event was a great success, as it allowed us to expand our collaborations and strengthen our relationships with stakeholders in Türkiye.

Academy 2023 Planned Activities

- Launch of the new updated ZDHC Wastewater Management Training
- First launch of the ETP Operator Training Level 1 & 2
- Launch of the new ZDHC Academy Platform
- Southern Africa Project first project activities
- CMS TIG Denim Training Pilot
- CMS TIG Leather Training Pilot
- Virtual side event on Wastewater Management & Education at the UN Water Conference 2023
- University strategy launch
- Kick off Solidaridad Bangladesh Projects
- First training in The Netherlands in collaboration with MODINT (Dutch Textile Association)
- Introduction to ZDHC E-Learning in Chinese, Italian, Vietnamese, Portuguese and Japanese
- In-person trainer event in Mumbai
- ZDHC Wastewater Webinar for Türkiye-based suppliers
- Launch of GPDP (Graduate Diploma) with IHE Delft focussed on Water, Wastewater and Effluent Treatment and Management.

The Supplier Platform

2022 was a busy year for the Supplier Platform. While rolling out new modules and functionalities, the number of active facilities more than doubled, with more recurring visits than ever. The following highlights provide a more detailed look at the progress made in each of the following areas:

Supplier Platform Accounts & Certificates

The number of Supplier Platform accounts increased significantly in 2022, driven by the success of the Supplier to Zero Webinar and ZDHC Contributor Brand adoption. Over 2600 suppliers used the Supplier Platform and Supplier to Zero in 2022. The total number of valid* Supplier to Zero certificates increased to over 1300.

Language Support

To accommodate suppliers in Turkey, ZDHC added Turkish-language support to the Supplier Platform in 2022. This was a significant step in expanding ZDHC's regional reach and impact. Preparations are made to add language support for other languages in 2023.

Supplier to Zero Campaign and Events

The Supplier to Zero Programme continued to gain momentum with the launch of several successful events and campaigns throughout the year. In January, we started with over 20 webinars with ZDHC Contributor Brands. Throughout the year, webinars and sessions continued steadily. Overall, we reached over 4000 suppliers during all events in 2022. The sessions were mainly designed to educate suppliers about the importance of sustainability chemical management and to encourage them to adopt Supplier to Zero.

* certificates are currently valid for one year only. The total number of certificates is over 2600.

Supplier to Zero Questionnaire Updates

We revised the questionnaires to improve the understanding of the Supplier to Zero content. The new questionnaires are designed to help suppliers understand what is needed to meet the chemical management requirements under the Supplier to Zero Programme. All questions have been improved at the Foundational and Progressive levels with clear answer guidelines and instructions. Additionally, the questions are more specific to specific facility types and allow ZDHC to collect better data. All questionnaires have been available since September 2023.

Supplier to Zero Progressive Level Scale-Up

While the original Progressive Level of Supplier to Zero was piloted and launched in 2021, ZDHC scaled up the programme in 2022 after revising the requirements. Starting from September 2023, this Progressive Level successfully increased adoption rates among suppliers at different stages of chemical management. The Progressive Level is available for all English, Italian, and Chinese-language submissions, with more languages to be added next year.

MMCF Module Development

In 2022, ZDHC developed and launched the first version of the MMCF Module, based on the first version of the ZDHC Man-Made Cellulosic Fibres (MMCF) Guidelines. The module is available to all MMCF Producers. It allows them to monitor their performance against the standards in the Responsible Fibre Production Guidelines, MMCF Wastewater Guidelines and MMCF Air Emissions Guidelines. With the release of the updated ZDHC MMCF Guidelines Version 2.0 and its supporting document, an updated MMCF Module will be launched in the second quarter of 2023.

Resource Efficiency Module

Finally, ZDHC made many improvements to the Resource Efficiency Module (REM), allowing suppliers to assess and improve their water and energy consumption. In 2022, ZDHC updated the REM to support the suppliers with easier consumption recording and GHG calculations. The new version of the REM includes an improved user interface, which makes it easier for suppliers to understand and use the tool. In addition, the REM now supports calculating more emission metrics, providing more meaningful insights into the impact of Supplier to Zero efforts. The total number of suppliers using the new and updated modules on the Supplier Platform increased to a couple of hundred suppliers.

Solution Provider Platform

Solution Provider Platform launch

In September, ZDHC launched the Solution Provider Platform. This platform serves as a centralised portal where industry's solution providers can apply to become ZDHC Approved Solution Providers in one of the following categories:

- ZDHC InCheck Verifiers
- ZDHC Wastewater Laboratories
- ZDHC MRSL Certification Bodies
- ZDHC MRSL Certification Standards
- ZDHC Approved Training Providers

As a first phase of platform launch, ZDHC MRSL Certification Bodies, ZDHC MRSL Certification Standard and InCheck Verifier InCheck applications become available.

Implementation Projects Worldwide

Sustainable Chemical Management Implementation Project in Ethiopia

This three-year project, funded by DOW Europe GmbH and GIZ (German Development Agency), was successfully concluded this year. This project was intended to elevate the knowledge and know-how of chemical management systems within the textile industry of Ethiopia.

The scope of the project was twofold, involving academia and industry stakeholders. First, the project team worked with the Ethiopian Institute of Textile and Fashion Technology (EiTEX), part of the Bahir Dar University, to implement a technical training programme for lecturers and develop a new Chemical Management curriculum for undergraduate students. The Ministry of Education in Ethiopia approved the curriculum and adopted it as a national programme of studies.

The second project pillar focused on building awareness and capabilities of factory management and workers across the textile supply chain to implement and maintain an effective, sustainable chemical management system based on industry best-practice guidelines from ZDHC. To enable a continued and cost-effective support to local businesses and industry professionals, sustainable chemical management consultancy capabilities were set up through a network of trained local consultants. These companies are now listed as ZDHC Approved Training Providers and can provide the official ZDHC training programmes to the Ethiopian markets.

The project established sustainable structures for training in the environmentally and ecologically responsible disposal of chemicals and waste. The first 100 university students had already completed the e-learning curriculum, and managers and operators from 20 textile factories were trained and kick-started the implementation of improved chemical management system processes. As the project ends, the network of seven qualified chemical management consultants will continue to support businesses and industry professionals with ongoing training and on-site consultancy.

UNIDO North Africa Project

Together with ZDHC, the United Nations Industrial Development Organization (UNIDO) undertook six pilot projects in 2022 in Egypt, Morocco and Tunisia to demonstrate the way forward for phasing out hazardous chemicals in the textile industry's value chain. This project, also called MED TEST III, is part of the regional EU-funded SwitchMed programme that supports industries in the Southern Mediterranean to improve their environmental performance and competitive advantage.

This project aimed to demonstrate and document the business case of implementing a sustainable Chemical Management System (CMS) in the textile finishing sector, following the ZDHC guidelines. An initial training on ZDHC Sustainable Chemical Management and ZDHC Wastewater Management for company staff in 2020 and 2021 was followed by the pilot projects in 2022. These projects provided technical assistance to the participating facilities to improve their Chemical Management Systems. The pilot projects in Morocco and Tunisia were successfully implemented in 2022, and the two projects in Egypt will be finalised in 2023. Main drivers for the six production facilities for joining the SwitchMed pilot project were improving brand relations and better responding to rising regulatory agendas in main export markets.

Southern Africa Project

In 2022, ZDHC kicked off its next project with UNIDO. The project's goal is to promote the circular economy in the textile and garment sector by sustainably managing chemicals and waste in Lesotho, Madagascar, South Africa, and Ethiopia. ZDHC is one of the key partner organisations supporting the project from a sustainable chemical management perspective. The work plan was finalised in 2022, and ZDHC and UNIDO are currently scoping requirements for service providers and setting up the next steps of the project.

IPEV Project in Vietnam & Ethiopia

In 2022, we continued the ZDHC Chemical Management System Capacity Building in Industrial Parks in Ethiopia and Vietnam (IPEV) Project with Sustainable Trade Initiative (IdH), which is a joint capacity building project aiming to build up sustainable chemical and wastewater management capacities for the nominated Industrial Parks in Ethiopia and Vietnam, and the individual factories located in these parks. With the co-sponsorship of IdH, we kicked off the IPEV project by conducting the Baseline Assessments on each target group (Industrial Park staff and Suppliers). These Baseline Assessments aim to understand the current chemical and wastewater management setup of both Industrial Parks and their centralised effluent treatment plants (CETPs) and the textile, leather and footwear factories. Capacity-building activities were also planned based on the results of the Baseline Assessments.

As we complete and analyse the Baseline Assessments in Ethiopia for both target groups, we will start the capacity-building activities in Q1 2023. In Vietnam, we almost finalised the Baseline Assessments and capacity-building activities planned to start in Q1 2023.

Highlights from the Customer Support Team

ZDHC's Customer Support Team supports ZDHC Contributors and Friends of ZDHC and all our customers on their implementation journey across ZDHC platforms. In 2022, the Customer Support Team supported on 7,864 tickets and the ZDHC Knowledge Base was consulted 125,737 times. The [ZDHC Knowledge Base](#) is a self-service hub where frequently asked questions and user guides about the Roadmap to Zero Programme and ZDHC services and platforms can easily be found. In 2022, we launched the ZDHC Knowledge Base also in Chinese and Turkish.