
Annual Report 2020



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Executive Director's Letter

2020 has been an unprecedented year. Alongside profound challenges and suffering due to the pandemic, it has also brought hope to the world by unifying people around the world in creating responses to this epic crisis. Thankfully, across the globe many of us are tangibly heeding the warning signs of global warming and water crisis and sustainability has significantly risen up the agendas of policymakers and in the commercial world.

At ZDHC we continue to accelerate collective action with our community to effect positive change. Increasing collaboration powers our work forward in promoting and implementing the Roadmap to Zero Programme with our sustainable chemical management framework throughout the fashion and footwear industry.

In 2020, 15 new Contributors and 3 new Friends of ZDHC joined the ZDHC community supporting us to affirm the positive impact we are making in eliminating hazardous chemicals.

We are also pleased to see the uptake of supply chain efforts between brands and suppliers in terms of accelerating the implementation of ZDHC guidelines, platforms and solutions as this is the engine behind achieving our collective impact.

With the view to the broader industry we believe we are on a good path forward, but our job is far from done and we renew, with increased urgency, our call for collaborative action and commitment to safer chemistry to all supply chain partners.

Why? In the post-pandemic recovery period, the global fashion market is likely to grow again at an impressive rate, and as it does so, so too will its impact on the environment, from which it is not yet decoupled.

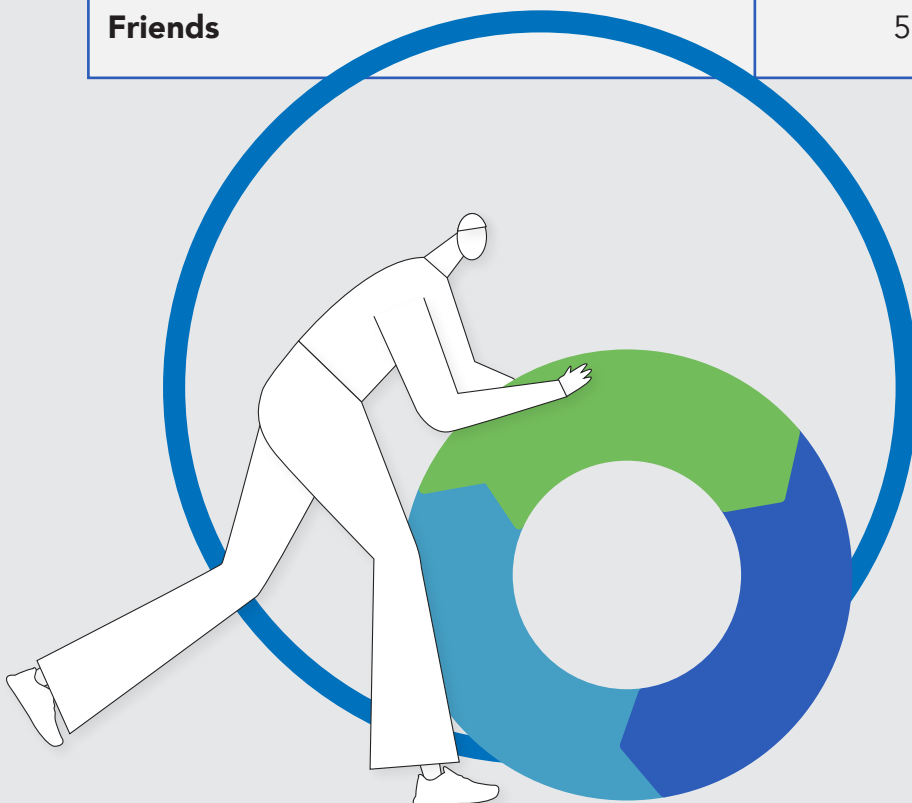


Frank Michel
Executive Director

ZDHC Contributor Growth

Brands <ul style="list-style-type: none"> FAST RETAILING 	VCA - Textile Industry <ul style="list-style-type: none"> PT KEWALRAM Eastman 	Associate <ul style="list-style-type: none"> Transformers
VCA - Chemical <ul style="list-style-type: none"> OHYOUNG Buckman Modern Dyestuff Bozzetto Be Fuwell Eksoy Kimya Setas Kimya BASF East Asia 	VCA - Solution Provider <ul style="list-style-type: none"> SCIVERA NSF Nissenken 	Friends <ul style="list-style-type: none"> Capri LPP Ralph Lauren

	2019	2020
Brands	30	30
VCA Chemical Industry	42	50
VCA Textile Industry	37	36
VCA Solution Provider	27	30
Associates	21	22
Friends	5	7



ZDHC Contributor Growth

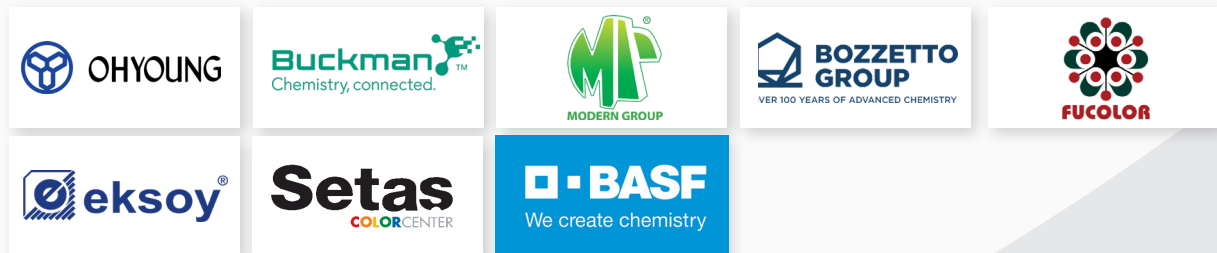
In 2020, ZDHC welcomed the following organisations:

Brands



Value Chain Affiliates

Chemical Industry



Textile Industry



Solution Provider



Associates



Key Highlights from 2020

FEBRUARY

- ZDHC South Asia Conference “Leading Transformation Through Sustainable Chemical Management” in Dhaka
- First ZDHC MRSL V2.0 Accepted Certification
- ZDHC MRSL Submission Platform goes live
- ZDHC Gateway Electronic Data Reporting (EDR) System Guidelines V2.0 released

MARCH

- ZDHC offices close due to COVID-19 and staff globally move to working from home
- ZDHC MRSL Level 3 Conformance Interim Virtual Audit Guidance introduced
- ZDHC MRSL Standard Industry Implementation Approach - Online in Chinese
- First online training sessions available in the ZDHC Academy

APRIL

- ZDHC Gateway - mobile application release on Apple and Android devices
- ZDHC Man-Made Cellulosic (MMCF) and Implementation Guidelines released

MAY

- Public webinar: Detoxing The Fashion Industry for Dummies
- Chinese ZDHC MRSL V2.0 launched
- ZDHC CMS Framework public release
- ZDHC MMCF Guidelines - Industry Implementation Approach release

JUNE

- Launch of Supplier To Zero Programme
- First ZDHC Roadmap to Zero Programme e-meeting
- Data Cleansing Project completed
- Brand Advisory Group and Supplier Advisory Group launched

AUGUST

- “Wardrobe Crisis” podcast features ZDHC (Episode 124)
- ZDHC co-signs WWF Open Letter to call for sustainability and speed up industrial

SEPTEMBER

- ZDHC holds virtual event on ‘Developments for 2020 in the South Asia Region’
- ZDHC unites forces under the Fashion Conveners
- ZDHC East Asia InConnect sessions kick off to assist the supply chain with the implementation of ZDHC solutions

OCTOBER

- ZDHC Southern Europe Virtual Regional Conference
- Laboratory and Certifier Management Platform launch

NOVEMBER

- ZDHC 2020 Annual Meeting is held virtually
- ZDHC Performance InCheck Guidelines launched
- New training in the ZDHC Academy: Wastewater & Sludge sample collection training

DECEMBER

- Virtual ZDHC East Asia Regional Conference 2020
- ZDHC MRSL V2.0 Update

Roadmap to Zero Programme 2020

Progress

ZDHC's mission is to enable the textile, apparel, and footwear industries value chain to implement sustainable chemical management practices via our guidelines, solutions and platforms. The Roadmap to Zero Programme is the engine which drives this by collaboratively developing guidance and tool sets that are usable, effective, publicly available, and address sustainable chemical management in a holistic way. The ultimate goal of the Programme is to have guidelines, platforms and solutions which are endorsed and used by the majority of the textile, apparel and footwear industries, and their value chains.

The ZDHC Roadmap to Zero Programme addresses the complex issues relating to sustainable chemical management in a holistic way across the three main stages of any value chain:

1. First, by focusing on the stage of Input identifying which chemicals go into the supply chain, eliminating hazardous chemicals and replacing them by safer alternatives,
2. Second, by focusing on how those chemicals are used in the supply chain process
3. Thirdly, focusing on evaluation of the wastewater, wastewater treatment sludge, and air emissions from manufacturing to assess impact and identify areas for improvement.

The year 2020 challenged the world physically, emotionally, and financially. Despite these global challenges, the ZDHC Roadmap to Zero Programme progressed towards our goals. This is a testament to the hard work of ZDHC Staff and our Contributors, many of whom despite uncertainties, continued to contribute their time and talents to move our Programme ahead. We truly appreciate all those involved in accomplishing all that we did.

While the COVID-19 pandemic presents an acute crisis to the world we remained focused on longer-term chronic problems related to the use of hazardous chemicals and discharge by improving and expanding our guidance and toolsets in order to:

- Reduce the use of harmful chemicals and prevent possible injury to workers or consumers through the implementation of the ZDHC MRSL Version 2.0 Update which was released late 2019
- Improve water and air quality in communities near production facilities through the continued implementation of the ZDHC Wastewater Guidelines, development and publishing of the ZDHC Air Emissions Position Paper
- Expand our scope of work into the fibre production supply chain by releasing guidance on best practices for Man-Made Cellulosic Fibres (MMCF) production

Highlights from the Input Focus Area



Overview

Controlling chemical inputs to manufacturing through the ZDHC MRSL remains the cornerstone of the ZDHC Roadmap to Zero Programme. We contribute to controlling and reducing the use of hazardous chemicals in the supply chain by developing guidance and maintaining toolsets. The Input Focus Areas accomplishes this by:

- regularly updating the ZDHC MRSL, to identify harmful chemicals that should not be used in manufacturing;
- highlighting those chemicals that need suitable, safer alternatives on the ZDHC MRSL Candidate List;
- promoting the principles of Green Chemistry to the industry to design of new chemical formulations for the textile and footwear sector in order to replace harmful chemicals on the ZDHC MRSL Candidate List with safer alternatives;

2020 Accomplishments

The Roadmap to Zero Programme supported the implementation of ZDHC MRSL V2.0 by:

- ✓ Releasing the ZDHC MRSL Standard Implementation Approach V1.0 including webinars for over 800 attendees globally growing the know-how and use of it, followed by the release of the updated version 1.2 in December.
- ✓ Translating the ZDHC MRSL V2.0 into Chinese
- ✓ Reviewing the capabilities of 106 laboratories and certifiers to certify according to the requirements ZDHC MRSL V2.0
- ✓ Launching the ZDHC Laboratory and Certifier Management Platform in order to more efficiently conduct due diligence on labs and certifiers
- ✓ Providing free access to the ZDHC Gateway Chemical Module for leather manufacturers holding a valid Leather Working Group (LWG) audit certification
- ✓ Developing the ZDHC Gateway Chemical Module mobile application

The Roadmap to Zero Programme further sped up the phase-out of hazardous chemicals by updating the ZDHC MRSL, highlighting where better chemistry is needed. This was achieved by:

- ✓ Publishing the ZDHC MRSL V2.0 Candidate List on 'Marketplace', ChemSec's business-to-business platform,. It was a call to action to find safer alternatives for the chemistry used in textile- and leather manufacturing and make these available globally addressing the lack of availability.
- ✓ Facilitating regular meetings of the independent ZDHC MRSL Council, the decision-making body on chemical substances, and limit values added to the ZDHC MRSL.
- ✓ Launching the ZDHC MRSL Submission Platform in February, which offers the industry and general public the possibility to propose additional substances for the ZDHC MRSL. Submissions made via this platform are considered by the ZDHC MRSL Council for the next ZDHC MRSL update.
- ✓ Releasing the first book to trace the history of chemicals in the fashion industry and point to new solutions; Detoxing the Fashion Industry for Dummies. reely available, the book serves as a manual to empower fashion brands - big and small - to gain insights and information needed to detox their supply chains.
- ✓ Conducting in-depth interviews with brands, certification service providers, and stakeholders from the chemical industry to discover and ideate a suitable approach for the development of a scoring metric on more sustainable chemistry which will become part of the leader programme for chemical suppliers (expected for Q4 2021) .
- ✓ Releasing ZDHC MRSL Level 3 Virtual Audit White Paper

Next Steps Include

- The ZDHC MRSL Council will continue to review proposals for restricted chemicals submitted via the ZDHC MRSL Submission Platform to decide on the ZDHC MRSL update expected for 2022.
- Updating the ZDHC MRSL Principles and Procedures document to further detail the transparent process used to add substances to the ZDHC MRSL.
The platform was beta-tested in 2019.
- Releasing the leader programme for chemical suppliers with the goal to evaluate chemical formulations on their ability to meet ZDHC MRSL requirements, performance and holistic sustainability targets such as (but not limited to) hazard, water use, and energy use. Updating the ZDHC MRSL Conformance Guidance to align it with the leader programme for chemical suppliers
- Developing an efficient approach to evaluate the ability of Commodity Chemical Suppliers to deliver products meeting the requirements of the ZDHC MRSL.
- Developing a holistic approach for the evaluation of solvents used within the supply chain.



Highlights from the Process Focus Area



Overview

The Process Focus Area works on guidance and tools to ensure good business practices are in place, governing how chemicals are used and aligning practices across the supply chain through the use of the ZDHC Chemical Management System (CMS). The ZDHC CMS includes two parts; the first is the ZDHC CMS Framework which lays out the minimum components of a CMS, and the second is the ZDHC CMS Technical Industry Guide (TIG) which covers the implementation of a CMS in the supply chain.

2020 Accomplishments

An update to the current ZDHC Chemical Management System Guidance and its division into two parts:

- ✓ Redesigning the CMS Framework resulted in the release of V1.0 which is easier to understand and implement. The Framework gives a high-level overview of the CMS requirements that can be incorporated in a wider management system, such as an Environmental Management System (EMS).
- ✓ Working collaboratively to complement the ZDHC CMS Framework V1.0 with the Technical Industry Guidance (TIG), the TIG harmonises requirements across brands and suppliers in the implementation of sustainable chemical management.
- ✓ Launching the ZDHC MMCF Responsible Fibre Production Guidelines V1.0 to address the expectations for process chemical recovery during the manufacturing of man-made cellulosic fibres. The guidelines align approaches for the recovery of Sulphur compounds as well as by-products generated during the production process of viscose.
- ✓ Releasing the ZDHC Performance InCheck Guidelines to help suppliers check their chemical inventory against the ZDHC MRSL Accepted Certifications on the ZDHC Gateway.
- ✓ Continuing collaboration with the Sustainable Apparel Coalition (SAC) as custodians of the Higg Facilities Environmental Module (FEM) Chemical Module to ensure alignment with ZDHC guidance and toolsets.



Next Steps Include

- Releasing the ZDHC CMS Technical Industry Guide, to guide suppliers to implement an effective chemical management system.
- Continue working on the addition of viscose filament, modal filament, lyocell, and dissolving pulp to the ZDHC MMCF Responsible Fibre Production Guidelines.

Highlights from the Output Focus Area



Overview

Assessing our impact and progress towards creating a world where water and air are safer for people and the planet, requires us to collect data on the manufacturing system outputs. The Output Focus Area create guidelines and toolsets to accomplish this.

2020 Accomplishments

- ✓ Releasing the ZDHC MMCF Interim Wastewater Guidelines V1.0 and the ZDHC MMCF Interim Air Emission Guidelines V1.0 for viscose and modal in April. These guidance documents represent an important step as they are the first guidance documents issued by ZDHC for the fibre production step in the supply chain.
- ✓ Building on the success of the ZDHC MRSL Council continuously updating the ZDHC MRSL, the ZDHC Wastewater Council was created. The Wastewater Council is a Contributor nominated, independent group of wastewater experts that will make decisions on further updates to the ZDHC Wastewater Guidelines giving greater transparency and standardisation to the methodology applied to future updates.
- ✓ Building on the success of the process used to update the ZDHC MRSL, the Wastewater Guidelines Update Principles and Procedures document was drafted. When completed, it will provide transparency into the process used for updating the ZDHC Wastewater Guidelines in the future.
- ✓ Cross-sector collaborative work teams drafted the ZDHC Wastewater Guidelines V2.0, the ZDHC Leather Wastewater Guidelines Addendum to V1.1 of the ZDHC Wastewater Guidelines, the requirements for wastewater treatment sludge disposal, and requirements for wastewater from polyurethane (PU) production processes.
- ✓ The ZDHC Air Emissions Position Paper was drafted by representatives from relevant stakeholder groups and sent to contributors for review. The goal of the paper is to minimise air pollution, including greenhouse gases such as CO₂, across the textile, apparel,

leather and footwear value chain. In recognition of the impact that air emissions of hazardous chemicals may have in communities and the environment, our paper focused on two types: air emissions generated in a facility related to its operations (combustions or other air emissions sources), and others related to process operations (related to production process, production line equipment and manufacturing processes). The paper provides guidance and is designed to share aligned expectations, understanding the gaps with current air emissions control and tracking efforts. It prepares for the transition of the document into the future ZDHC Air Emissions Guidelines including air emissions requirements set by ZDHC.

- ✓ 28 laboratories capable of testing the ZDHC MMCF Wastewater Guidelines were added to the ZDHC Accepted Laboratories Programme. There are now 89 laboratories in 31 countries that are accepted by ZDHC for wastewater analysis.
- ✓ Version 1.2 of the Sampling and Analysis Plan (SAP) for wastewater was released in April providing additional information to guide laboratories as they sample and test to determine the concentration of parameters in wastewater and sludge. It helps to achieve the integrity and comparability of wastewater and sludge test data.
- ✓ Collaborated with The Microfibres Consortium to identify areas where guidance by ZDHC can be included during the manufacturing stage to monitor the release of fibre fragments into the environment.
- ✓ Created the Wastewater Treatment System Operator Minimum Qualifications Guidelines and sent to contributors for review, these guidelines provide a framework on water treatment operator qualifications to ensure wastewater is consistently and effectively treated before discharge. We found that unless appropriate training is in place for wastewater system operators, some manufacturing facilities will struggle to meet the ZDHC Wastewater Guidelines, and in some cases, maintain regulatory compliance. As such, this tool-set is of importance for ZDHC to create.

Next Steps Include

- Releasing the ZDHC Wastewater Guidelines V2.0 which will include the additional parameters from the ZDHC MRSL V2.0 update, and Sludge Disposal Guidelines that will be expanded to include wastewater from polyurethane (PU) textile materials. The Wastewater Council will be responsible for final decisions on updates to the Guidelines.
- Updating the ZDHC Sampling and Analysis Plan (SAP), Electronic Data Reporting (EDR) System, ClearStream Report and ZDHC Gateway to reflect any changes in the Wastewater Guidelines.
- Releasing the ZDHC Air Emissions Position Paper. There will be no immediate action needed for Suppliers but to stay informed on the developments of the air emissions project and take the opportunity to self-assess operations against the expectations outlined in the paper. During this year, ZDHC will work on developing a streamlined reporting mechanism, monitoring requirements, and testing that will allow this paper to transition into the ZDHC Air Emissions Guidelines.
- Continuing collaborative work to develop guidance specific to lycocell, viscose filament, modal filament, and dissolving pulp to the ZDHC MMCF Wastewater and Air Emissions Guidelines.
- Releasing the Leather Wastewater Guidelines Addendum. Laboratories capable of testing against these Guidelines will be added to the ZDHC Accepted Laboratories Programme.
- Releasing the ZDHC Wastewater System Operator Minimum Qualifications Guidelines to standardise the minimum qualifications for education, training and experience required of operators and technicians operating wastewater treatment systems at all facilities operating effluent treatment plants (ETP). The Guidelines help facilities to identify skill gaps and prepare for focused training solutions.

ZDHC Gateway Highlights



Overview Numbers

Over the course of 2020, the ZDHC Gateway grew tremendously.

37%

increase in the
number of
Chemical
Formulators on the
platform

30%

increase in the
number of
Suppliers on the
platform

88%

increase in
registered chemi-
cal products on the
platform

55%

increase in the
number of
published
wastewater test
reports

Chemical Module

Achievements in 2020

ZDHC MRSL V2.0 - Updates on the Gateway (January 2020)

In the first month of 2020, the Platform was updated to accommodate new requirements arising from the introduction of the ZDHC MRSL V2.0. Updates were made to several areas, including the ZDHC MRSL transition period, chemical product visibility, Level 0 chemical products phase-out and the expansion of the Use Cases.

ZDHC Gateway mobile App - Chemical Module (May 2020)

The Gateway Mobile app was launched in May 2020 to extend access to the Gateway infrastructure by smartphone or tablet and allow users to browse and validate chemical product information on the go. The application is available on the Apple Store and the Google Play Store.

Transition of Performance InCheck to third party Solution Provider (June 2020)

In June 2020 the Performance InCheck report transitioned to third party Solution Providers to accelerate the roll-out and offer our services at a competitive price and greater accessibility.

Next Steps Include

ZDHC InCheck Guidelines - Implementation

The launch of the ZDHC InCheck Guidelines changes various elements of the ZDHC Gateway and the InCheck in particular. As part of generating the Performance InCheck report, next to bringing a structural change to the concept of self-assessment, an on-site verification of the chemical inventory will be included. This addition will demonstrate the credible implementation of the ZDHC MRSL conformant chemical products.

Structural updates on Formulator profiles and the process to upload chemical products onto the ZDHC Gateway

A new upload process will allow Chemical Formulators to connect their uploaded chemical products to multiple production or distribution sites. They will also be able to indicate the regional availability of a chemical product. This will make it easier for supplier facilities to find chemical products on the Gateway, thereby increasing the MRSL Conformance of the chemical inventory captured in their Performance InCheck reports.

ChemCheck Summary Report

ZDHC will introduce a ChemCheck Summary Report to enable Chemical Formulators to share an overview of selected ZDHC MRSL conformant published products with their customers (suppliers or brands).

Wastewater Module

Achievements in 2019

Data Integrity Project and ZDHC Gateway Electronic Data Reporting (EDR) Guidelines Version 2.0 (April 2020)

To maximise the quality of our wastewater performance data and maintain the overall quality of our data, ZDHC has been intensively working on a data integrity project.

Close to 100% of the data on the ZDHC Gateway now meets the data validation requirements for proper alphanumeric, correct formatting, and correct measurement units. This shows that the integration of an electronic data reporting template will help to facilitate the upload of data and eliminate false data entries in the future.

Enhancing the Gateway Supplier Profile (April 2020)

We have redesigned the supplier profile on the ZDHC Gateway and included new options to enable suppliers to indicate their industry sector, materials, processes and wastewater details in their organisation profile. With this system update, we have implemented a logic to avoid incorrect selections by suppliers and thus reduce the possibility of wrong selections that can affect our data quality.

Facilitation of Modular Approach of all ZDHC Wastewater Guidelines (May 2020)

To facilitate the different ZDHC Wastewater Guidelines e.g. MMCF Wastewater Guidelines or Leather Wastewater Guidelines, and the applicability of the various parameters and limit values, we have configured the ZDHC Gateway. The platform assigns automatically, which Wastewater Guideline and respective parameters and limit values are applicable based on the Supplier's selection in the supplier profile.

Soft Launch DETOX.Live - The public disclosure map (June 2020)

ZDHC has soft-launched DETOX.Live, a map that integrates the global facility monitoring of wastewater testing completed in accordance with the ZDHC Wastewater Guidelines, including performance evaluation of facilities' sustainable chemical management.

Wastewater APIs - for Brands (November 2020)

Brands may now automate the process of downloading their supplier's wastewater performance through the developed wastewater APIs. Through these APIs, brands can directly pull wastewater summary reports along with test report details, parameter lists and limits into their internal brand reporting tool.

Next Steps Include

Integration of ZDHC Leather Wastewater Guidelines Addendum

ZDHC Gateway facilitates the implementation of the Leather Wastewater Guidelines Addendum: to do this the ZDHC Gateway platform will be updated to incorporate the leather specific parameter and limit values and assess leather suppliers wastewater performance data against the ZDHC Leather Wastewater Guidelines Addendum.

Updates on the Gateway to reflect Wastewater Guidelines V2.0 release

Whilst introducing the expansion of scope on the Output Focus Area and the release of the Wastewater Guidelines V2.0, ZDHC is working to update the ZDHC Gateway - Wastewater Module. The changes will reflect updated reporting parameters and limits values, the Electronic Data Reporting (EDR) System Guidelines and revamped ClearStream report.



ZDHC Gateway Joint Modules

Achievements 2020

New Connection Functionality to facilitate data accessibility for Brands (August 2020)

To support our Brands to better access and download performance data of suppliers, we released the connection functionality on the Gateway. A connection is a virtual handshake between a supplier and a brand that can be initiated from either side but needs to be mutually concluded to be active. With the connection's completion, the supplier agrees to make Performance InCheck and ClearStream Performance data accessible to brands via the Gateway.

Next Steps Include

Helpdesk updates

We are accelerating the customer support programme to support the daily usage of the Gateway Platform. The Knowledge Base was launched in 2020, providing over 60 articles related to the ZDHC Gateway. Following this, an onboarding programme will be dedicated to helping new users discover all its features and best practices. Furthermore, our ticketing system will be streamlined to speed up the response time and maintain high satisfaction rates.

Open Apparel Registry (OAR) Integration on the Gateway

New functionality in the supplier profile will be introduced to enable them to link it to the Open Apparel Registry (OAR). The vision for this integration on the ZDHC Gateway is continuous supplier profile data sharing, providing accurate context to metrics developed through the ZDHC Roadmap to Zero Programme.

Public Disclosure Map - DETOX.Live Enhancements

We continue to look into enhancement of the DETOX.Live map. Planned updates include enhancements of the supplier profile and new filtering options. The latter are aimed at showcasing additional sustainability efforts undertaken by the industry frontrunners. Viewers will be able to search on supplier specifications, availability of InCheck Report data or participation in the Supplier to Zero Programme.

ZDHC Academy Highlights



Overview

The [ZDHC Academy](#) was established in late 2016. In the past four years the Academy developed from a platform facilitating chemical management training for brands and suppliers to a globally recognised platform for multiple topics related to sustainable chemical management. In addition, it offers an environment for our international implementation projects to host ZDHC accredited and certified training based on project objectives.

Within the ZDHC Academy, Accredited Training Providers (ATPs) organise and deliver ZDHC certified training to key industry stakeholders throughout the value chain, including brands, retailers, manufacturers and chemical formulators. The aim is to help everyone understand and implement sustainable chemical management. The ZDHC Academy is available industry-wide for ZDHC Contributors and non-ZDHC affiliated organisations. It offers online, in person and hybrid forms of training, as well as private training sessions and webinars on ZDHC guidelines, platforms and Solutions.

As at the end of 2020, 4 different training topics have been available:

- ZDHC Chemical Management Training
- Top 10 Issues of Chemical Management Training
- ZDHC Chemical Management Training for Leather Tanneries
- ZDHC Wastewater Management Training



2020 Accomplishments

✓ Transition from In-Person to Online Training

In light of the lockdown and travel restrictions resulting from the global COVID-19 pandemic, ZDHC Academy pivoted quickly to host online training events, guidance and break-out sessions with the help of its Accredited Training Provider network. As a result, the industry remained engaged and interacted with the modules.

✓ In April 2020, the majority of the training transitioned to online. With this new model, the ZDHC Academy observed a range of benefits:

- cross-border learning facilitates learning for participants from different countries enhancing the exchange of experiences across regions.
- allowing participants located in remote manufacturing areas to access the ZDHC training.
- increased flexibility in terms of time management helps session be spread over a week, helping to digest and process training modules

✓ SwitchMed Project:

In spring 2020 the ZDHC Academy kicked off a project improving the circularity and sustainability of the textile production value chain in Morocco, Tunisia and Egypt via online training courses from the EU-funded SwitchMed Programme (MED TEST III). The first sessions were offered in Morocco and Tunisia by Accredited Training Provider, UL, covering 24 facilities and 120 facility employees. Training in Egypt is due to start in March 2021.

The training sessions will be followed by an implementation phase in each of the target countries where sustainable chemical management must be integrated into daily manufacturing processes across several facilities.

✓ Transformers Foundation

In 2020, the ZDHC Academy organised sessions to raise awareness for the exhibitors of the Kingpins Denim Fair. During the first quarter of the year, sessions were hosted for suppliers in Europe, America, South East Asia and Africa to inform Kingpin's exhibitors about the ZDHC Foundation, the Roadmap to Zero Programme and its guidelines, platforms and solutions. Also expectations of the Kingpins towards collaborating with ZDHC were discussed. In Q2, a session specifically for China was hosted in the local

language. The ZDHC Academy and Transformers Foundation are monitoring the exhibitor engagement and will take next steps towards the implementation via the Implementation HUB in 2021.



New Accredited Training Providers

In 2020, we accredited five new organisations.

- C-UTS: located in China, focussing on the South East Asian market.
- Fashion Consulting Solution: located in The Netherlands, focussing on the European market.
- GCL International: located in the UK, focussing on the Turkish and South Asian market.
- Leadership & Sustainability: located in Germany, acting worldwide.
- Water Regime: located in Pakistan, focussing primarily on the Pakistani market.

Next Steps Include

- ZDHC CMS Technical Industry Guide (TIG) training: the ZDHC Academy will prepare for the roll-out of ZDHC CMS Technical Industry Guide (TIG) training based on the Guidelines that will be launched in 2021.
- Sampler training: Launching the ZDHC Wastewater & Sludge Sampler Collection training for samplers that are part of a ZDHC Accepted Laboratory in Q1 2021.
- Platform development for online training: improving the ZDHC Academy Platform to be better equipped for online learning and implementation projects.
- Webinars: ZDHC Academy will be supporting and hosting topic-specific webinars in 2021 in relation to programme deliverables.
- Med test III: Next training phase of Med test III kicks off in Q1 2021 in Egypt
IDH: Aligning project approaches with IDH in Vietnam and extending them to a world-wide approach.
- Developing Denim Training in collaboration with Transformers Foundation.
Arranging refresher training as first learner certificates will start to expire in 2021.

The ZDHC Academy in Numbers

112	9*	754**	20
Training sessions held	Different countries where trainings were held	Total training participants	ZDHC Accredited Training Providers

*as several training sessions were given online in English we might have reached additional countries that we are not yet aware of. Reporting of the ZDHC Academy will be improved to gain this knowledge for the years to come.

** In addition to the current number of participants, the Academy hosted one workshop for high school students and one workshop for University students in Italy. Both workshops were followed by 100+ students.

Regional Highlights

East Asia Region Update

2020 Accomplishments

- ZDHC implementation in the East Asia region rolled out smoothly and steadily. In 2020, ZDHC Gateway formulator accounts increased by 59%; published chemical products in the Gateway increased by 165%, and suppliers accounts increased by about 25%.
 - » To populate the ZDHC Gateway, the ZDHC Implementation Project 2020 was launched, where 83 key global and domestic chemical manufacturers were invited to join. After launching this project, the published chemical products in the Gateway, from these 83 key chemical manufacturers, increased by 64%.
- ZDHC Guidelines, Platforms and Solutions were adopted by the CNTAC* Group Standard and together with the group standard, we co-authored the Restricted Substances List for Textile Colorants, Chemicals & Auxiliaries. This standard was published in December 2020.

*(China National Textile and Apparel Council)

- In December 2020, the annual ZDHC East Asia Regional Conference was hosted successfully - for the first time in a virtual format. More than 1,500 registrations and about 1,000 unique attendees attended the conference.
- The ZDHC innovation project DMF, a phase-out pilot, continued throughout 2020. After the initial set-up, we gained more awareness and participation in the region.

South Asia Region Update

2020 Accomplishments

- In February 2020, we hosted the Regional Conference in Dhaka for over 500 participants. This conference topic was "Leading transformation through Sustainable Chemical Management". The conference was aimed at accelerating the adoption of the ZDHC Roadmap to Zero Programme, with specific focus on the textile and leather industries in Bangladesh.
- Later in the year, and due to the COVID-19 pandemic, the region also conducted webinars, Zoom sessions and a Virtual Event through the ZDHC Virtual Environment with various stakeholders in the region. During these events, ZDHC continued to engage and update participants about ZDHC developments.
- In January 2020, ZDHC completed the CMS implementation pilot project, with one facility and one ZDHC Brand Contributor, identifying concrete improvement strategies.
- Meetings and discussions with Indian domestic apparel brands were initiated to engage them with the ZDHC Programme. The goal was to reach out to the domestic textile industry. However, due to the COVID-19 pandemic, the final actions were suspended and will be resumed in 2021.

Southern Europe Region Update

2020 Accomplishments

- ZDHC implementation in the Southern European region has been deeply affected by the COVID-19 pandemic. Planned in-person events for the leather and textile districts were replaced by webinars and organised with local brands and Accredited Solution Providers. We had the following successful virtual events, amongst others, during 2020:
 - » Supply chain webinars on CMS Framework and Supplier to Zero adoption together with Burberry and H&M
 - » A ZDHC MRSL V2.0 webinar to engage the Italian chemical companies and suppliers, together with Process Factory
 - » Public webinars on the ZDHC MRSL V2.0 implementation
- We hosted an in-person seminar in Porto for H&M's supply chain to increase awareness of the Roadmap to Zero Programme.
- The Southern Europe Virtual Conference was hosted for the first time. Main topics of the conference were:
 - » The Roadmap to Zero Programme priorities and deliverables.
 - » New functionalities of the ZDHC Gateway.
 - » The COVID-19 impact on the fashion industry in the region.
 - » ZDHC innovations and circular approach.
 - » How to achieve sustainable best practices in the leather sector through common actions by brands, tanneries and chemical companies.
- Virtual meetings with several Italian Brands have been conducted for their engagement with the Supplier to Zero Programme.
- Our Southern Europe Regional Director participated in an expert's round table to talk about the development of test methods of leather chemicals on the ZDHC MRSL with the aim to be submitted as an ISO standard.

Partnerships and Collaborations

German Partnership for Sustainable Textiles

In 2020, ZDHC strengthened its collaboration with the German Partnership for Sustainable Textiles, a multi-stakeholder initiative with approximately 135 members. Together, both parties focused on the development and implementation of ZDHC's Guidelines, Platforms and Solutions. It is mandatory for the members of the partnership to adopt the ZDHC MRSL and the Foundational Level of the ZDHC Wastewater Guidelines as the minimum wastewater quality criteria. In 2020, ZDHC contributed its expertise and insights to the partnership's circular economy expert group, climate protection expert group and Man-Made Cellulosic Fibres (MMCF) expert group. Further, both parties collaborated on the partnership's initiative

French Development Agency

ZDHC and the AFD (Agence Française de Développement) explored throughout 2020 the possibility of jointly working with public or private financial institutions. The goal has been to develop a financing vehicle to support production facilities to implement the ZDHC Roadmap to Zero Programme as one of the loan criteria. This would help to reduce the chemical footprint in emerging and developing countries and positively impact water resources and biodiversity.

In a jointly prepared concept note, AFD invites the financial management institutions (public and private banks) to collaborate with ZDHC, to structure and manage credits and grants allowing them to finance facilities (manufacturers) that reduce their water pollution by implementing the ZDHC Roadmap to Zero Programme. In this collaboration, ZDHC plans to play a technical role, whilst the finance management institutions (banks) will be playing a financial management role. The finance sources will be either low interest credits or a mix of credit cum grants from AFD and eventually from other financial Institutions (such as EU/ EIB funds). The idea is to pilot this concept in some Asian countries and later to replicate it globally.

WWF

ZDHC and WWF have defined areas of cooperation on ZDHC Roadmap to Zero Programme within WWF's Water Stewardship community of practice and through WWF's projects in the textile, leather and chemical industry. The cooperation initially focused on five countries: India, Pakistan, Vietnam, Turkey and China, but we intend on expanding in the future. The agreed actions are expected to raise the manufacturing and environmental standards of the textile, leather and chemical industry to clean production and water stewardship missions.

Solidaridad

ZDHC and Solidaridad have entered into a collaboration with the purpose of advancing environmental improvements in the textile, footwear and leather value chain. Each of the Solidaridad and ZDHC entities will work independently on specific project/s in different regions under the umbrella of global collaboration.

The purpose of this mutual engagement is to advance towards zero discharge of hazardous chemicals in the textile, footwear and leather value chain to increase positive environmental impact and improve human health. The parties collectively have the intention to support the implementation of cleaner textile, apparel, footwear and leather production. This will be done through increased uptake of best practices around the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) and Conformance Guidance, Chemical Management System Framework, Wastewater Guidelines, and several others.

Dutch Ministry of Infrastructure and Water Management

The Dutch Ministry of Infrastructure and Water Management (I en W) is working on a policy & guidance paper on the "Role of chemicals in the policy programme on circular textiles". ZDHC Foundation has been invited by the ministry to provide technical consultation and guidance to support the ministry in drafting their policy paper.

The paper focuses on clarifying the challenges of their policy programme on circular textiles as part of the Dutch Transition agenda of The Netherlands to become fully circular by 2050. The paper will cover the main challenges within the TULAC (textiles, upholstery, leather, apparel and carpets) sectors; the gap in knowledge and needs to meet the necessary changes within the value chain of these sectors, and the contributions that need to be made by all parties to reduce the chemical footprints while boosting circularity.

Amfori

In 2020, Amfori and the ZDHC Foundation collaborated on facilitating joint implementation of relevant tools and standards. The overall project has been set up to facilitate joint implementation of solutions and standards, and to increase collaboration on capacity-building activities and impact measurement. This includes wastewater/sludge testing and chemical management training within a global context of strengthening sustainable chemical and environmental management systems within the textile and footwear supply chains. This cooperation aims to improve the chemical and environmental performance of AMFORI and ZDHC facilities by supporting various environmental performance indicators linked to sustainable chemical management. ZDHC will support Amfori facilities through the ZDHC Supplier to Zero Programme and other ZDHC Solutions and Guidelines in establishing sound chemical and environmental management systems.

IDH

ZDHC Foundation and IDH started collaborating in 2018 via the 'Race to the Top' programme, a collaborative effort between the Vietnamese government (including the Ministry of Natural Resources and Environment (MONRE)), the Vietnamese Apparel and Footwear Industry, global consumer brands (Gap Inc., NIKE, Inc., M&S and Levi Strauss & Co.), international organisations, and civil society organisations.

In 2020, IDH and ZDHC took their collaboration a step further with the purpose of accelerating sustainability within the value chains of various programme sectors under the IDH strategy 2021-2025 (Innovating Impact at scale through the development of impact coalitions of companies, NGOs, governments, trade unions, financial institutions, and universities that strive for impact on public good).

IDH and ZDHC support the development of cleaner production of textile, apparel, footwear and leather products. This is collaboratively achieved through increasing the uptake of best practices around the ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) & Conformance Guidance and Wastewater Guidelines, and by creating a common language for the industry regarding standards, research, data management, disclosure, training and capacity building for facilities. In addition to this, IDH has decided to become a ZDHC Contributor, which will strengthen and escalate further collaboration.

SAICM (Strategic Approach of International Chemicals Management)

SAICM is a global policy framework that fosters the sound management of chemicals and waste beyond 2020. The SAICM Secretariat is hosted by the United Nations Environment Programme (UNEP). Within its SAICM policy, the institutional arrangement & governance framework are the key elements of the policy agenda. In this context, SAICM has organised a stakeholder workshop on strengthening governance for the sound management of chemicals and waste beyond 2020 in Frankfurt, Germany, at the DECHEMA (German Society for Chemical Engineering and Biotechnology).

This workshop was hosted in support of UNITAR, the German Federal Ministry of Environment, the Norwegian Ministry of Climate & Environment and the Swiss Ministry of Environment.

The overall purpose of the workshop was to provide an opportunity to discuss options for strengthening and enhancing the effectiveness and coordination of institutions supporting the sound management of chemicals and waste at the global and national levels. The workshop also focused on opportunities for strengthening and enhancing private sector governance and engagement in advancing standard setting and sustainable supply chain management "Beyond 2020".

ZDHC Foundation was invited by SAICM to present a showcase "What can we learn from the textiles sector: ZDHC Experience" as part of private sector governance and engagement.

UNEP Textile Project in Asia on Chemicals of Concern

UNEP has launched a 5-year project on significant and documented reductions in use, releases and exposure of Chemicals of Concern (CoCs) in the textiles sector in selected countries (Bangladesh, Indonesia, Pakistan, and Vietnam). The project is currently in the design phase of execution. ZDHC, among other stakeholders, is nominated and assigned as Lead consultant by UNEP to support the execution of several activities in this project.

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The Dutch Textile Agreement and the SER

ZDHC has been a supporting organisation of the Dutch Textile Agreement since 2019. In this role, ZDHC has worked with the Dutch Textile Agreement and its brands on how to start using the ZDHC MRSL and engage the supply chains to implement the ZDHC guidelines, platforms and solutions. In 2020, ZDHC conducted several presentations to explain the concept to the Dutch Brands and retailers, and worked on a roll-out plan for capacity building via the ZDHC Academy for both brands and their suppliers. For 2021, the organisations have the intention of rolling out a training plan and strengthening their collaboration further to tackle the fundamental challenges of wet processing facilities in relation to the brands of the Dutch Textile Agreement.

Highlights from the Implementation HUB



Launch of Implementation HUB Webpage

In May 2020, the Implementation HUB website was launched. The website hosts information on the Implementation HUB's activities, use cases from implementation projects, introductions of Implementation HUB platforms like the ZDHC Academy and Supplier to Zero, as well as the partner page for introducing Accredited Training Providers and Approved Experts and Solution Providers.

Supplier to Zero - Foundational Level

The Implementation HUB launched the Supplier to Zero Programme (Foundational Level) on the Supplier Platform. The Supplier to Zero - Foundational Level is a free tool that is available to all suppliers who have a ZDHC Gateway account. It serves as a doorway for suppliers to take ownership of implementing the ZDHC Chemical Management System.

The Foundational Level is a self-evaluation that is consistent with the ZDHC Chemical Management System (CMS) Framework. Through this, a Supplier is supported in the implementation of the ZDHC CMS Framework in a practical manner. Those who complete the Foundational Level will be eligible to receive a certificate upon payment and start evaluating their performance on the Progressive Level (to be launched in 2021).

Currently, Supplier to Zero is available in English and Simplified Chinese. It provides more than 150 recommendations and guidance sheets in both languages.

Approved Expert Concept

In order to support the implementation goals and efforts of brands and suppliers in implementing the ZDHC Chemical Management System, the Implementation HUB sets up a support environment of Approved Experts. Similar to the Accredited Training Providers of the ZDHC Academy, the Approved Experts are trusted partners of approved expertise in ZDHC Platforms and Solutions. They support supplier facilities in their respective implementation challenges on the factory floor. The Implementation HUB defines and markets expert roles ranging from technical expertise in ETP management to chemical substitution, requiring respective subject matter expertise and practical experience.

An Implementation HUB Platform for approving experts and connecting experts with suppliers and brands in need of expertise will be launched in 2021.

Furthermore, the Approved Expert Concept plays a key role in delivering ZDHC solutions, like the Performance InCheck or the Verified InCheck. As a first expert role, the Performance InCheck Solution Provider was launched in 2020. Upon the announcement of transitioning the Performance InCheck (see ZDHC Gateway update), further potential providers were contacted. Based on the experience from piloting the third-party delivery concept, criteria have been defined and applied to approve three providers for the second step of technical trials. They have also signed the data sharing agreement with the ZDHC Foundation. In November 2020, GoBlu's solution The BHIVE went online as third solution provider (in addition to ADEC CleanChain and Bureau Veritas' BVE3), whereas another provider is expected to go online in 2021.

Brands to Zero - Brand Leader Programme

In 2020, the Implementation HUB supported the second run of the leader programme for ZDHC Contributor Brands, renamed Brands to Zero. While the launch of Brands to Zero was prepared in the first month of 2020, the eventual launch was put on hold due to the COVID-19 pandemic. Brands were heavily impacted by the challenges of the industry and consequently furlough and other reasons for availability. Consequently, the 2020 Brands to Zero Platform invited brands to start the assessment in August 2020. Roadmap Development meetings, in which the Implementation HUB provided consultancy to brands to facilitate future improvements and further assessments, took place throughout autumn. The final results were provided to the brands in November 2020.

Ethiopia Public-Private Partnership Project

Funded by the Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and DOW Chemicals, the Implementation HUB has been put in charge of the project management of the Ethiopia Public-Private Partnership Project on behalf of the ZDHC Foundation. The Implementation HUB has been working with project partners to develop an on-the-ground implementation plan through the adoption of various ZDHC solutions, guidelines and platforms.

The project is divided into two main parts:

WORK PACKAGE 1

This part of the project focuses on developing an educational curriculum and training materials for the lecturers of the Bahir Dar University to support the launch of an undergraduate chemical management module in the B.Sc. programme for textile engineering. Lecturers are empowered to understand and teach the key concepts of sustainable chemical management. Due to COVID-19 and local unrest, the roll-out of the semester has been postponed to 2021. In the future, it is expected that the university lecturers will further develop lectures based on this curriculum.

WORK PACKAGE 2

The aim of this work package is to develop the local chemical management capacity in the Ethiopian textile industry. This includes primarily capacities of local experts and trainers and secondarily the management and workers of wet processing suppliers.

During 2020, due to COVID-19, the roll-out of activities was heavily delayed. Nonetheless, the following was achieved:

- We gained the trust and support of 4 brands, and 20 Ethiopian suppliers joined the project.
- We identified and selected local consultants as trainees and potential future ZDHC Accredited Trainers and/or Approved Experts. A training curriculum was developed collaboratively with ZDHC Accredited Training Providers who participated in the project as lead trainers.

- We mapped and charted the roll-out plan of the project, which included training of trainers and experts, the use of Supplier to Zero Platform and potential factory on-site visits.
- We hosted a project kick-off meeting in December 2020 with all stakeholders to explain the scope and roadmap of the project.

The full launch of the project is expected to begin in 2021 and the plan is subject to potential

Support of Partner Organisations

Water2Fresh Turkey: ZDHC will take part in the advisory board of the Water2Fresh project funded by the European Commission, focussing on the innovation in the denim industry to reduce environmental impact and to support the use of safer chemistry. <https://cordis.europa.eu/project/id/958491>.

Switch Med: After finalising phase 1 together with the ZDHC Academy in Morocco and Tunisia, UNIDO and ZDHC will start phase 2 of the project in 2021. ZDHC will implement the ZDHC Solutions and Guidelines together with a selected group of suppliers in the region.

ZDHC's Implementation HUB is engaged with the Leather Working Group (LWG) to help strengthen their implementation of the ZDHC MRSL and CMS in the leather industry via the LWG audit protocol (P7). LWG is an important stakeholder connected to more than 600 leather manufacturers worldwide, aiming to ensure application of best practices and environmental protection in the leather industry. Further collaboration on e.g., wastewater testing, joint capacity building activities, events and integrative use of ZDHC solutions are continuously discussed. As a first step into a collaborative approach, leather manufacturers participating in the LWG will have access to the ZDHC Gateway.

