

# 2015 JOINT ROADMAP UPDATE

## Ø ZDHC

ZERO DISCHARGE  
OF HAZARDOUS  
CHEMICALS PROGRAMME



adidas<sup>®</sup>  
GROUP

BURBERRY



ESPRIT

Gap Inc.

G-STAR RAW



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Lbrands

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## 1.0 Introduction

In 2011, six textile brands joined to form the Zero Discharge of Hazardous Chemicals (ZDHC) Programme with a mission of catalysing positive change in the discharge of hazardous chemicals across the textile and footwear product life cycle. Key fundamental principles underpin the programme work: transparency; preventive, precautionary, and integrated approaches to chemicals management; and fact-based decision making that will deliver lasting solutions. Today, 19 global sports, fashion and outdoor brands continue to collaborate under the ZDHC Programme to lead the industry in environmental responsibility and to establish and implement supply chain improvements through inputs, processes and end-of-pipe controls.

### History of the Joint Roadmap

The ZDHC Programme developed an initial work plan (the Joint Roadmap) to organise and set a path towards addressing the challenge of zero discharge by 2020, and to grow and inspire signatory brand and associate participation and coordination. This plan recognises the imperative nature of collaboration to tackle textile industry challenges. The first Joint Roadmap, published in November 2011, identified the chemicals and initial tasks upon which the brands would focus. In June 2013, after 1.5 years of collaboration and 13 signatory brands, the ZDHC Programme published an updated Joint Roadmap, Version 2, which built upon the lessons learned from the initial implementation period and further refined the focus and programme actions to develop tools that support the zero discharge mission. Now in its fourth year, the ZDHC Programme is 19 signatory brands and 7 associates strong and is poised to apply and implement the tools developed in the Joint Roadmap, Version 2. This Joint Roadmap Update, streamlines efforts and drives momentum towards the programme's zero discharge goal.

### Overview of 2014

Highlighted by the completion of major Joint Roadmap milestones, 2014 marked a banner year for the ZDHC Programme. Engaging with stakeholders in the supply chain and testing tools to field validate their effectiveness is a critical step in tool development. Close collaboration amongst ZDHC Programme and textile industry organisations continue to reinforce the programme's progress, which has firmly transitioned from tool development to implementation. Key foundational milestones delivered under the Joint Roadmap, Version 2, include:

- » Completed Foundational Deliverables
  - Manufacturing Restricted Substances List (MRSL)
  - Framework for the Prioritisation of Hazardous Chemicals
  - Research List
  - Audit Protocol
  - Right-to-Know Chemical Disclosure Methodology Research
- » Chemical Management Systems Manual
- » Chemical Management Training for suppliers in Bangladesh, China, India and Vietnam
- » Completed Benchmarking Pilot Projects
  - 20 supplier site visits to observe chemicals management and inventory practices and to test influent, effluent and sludge discharges in Bangladesh, China, India, Taiwan and Vietnam
  - 25 audits across regions, mills and dye houses in Bangladesh, China, El Salvador, India, Taiwan, Turkey, South Korea and the United States

## Next Stage in Collaborative Evolution

The ZDHC Foundation, a newly established legal entity was established in Amsterdam, The Netherlands, in 2015 to promote, govern and oversee the implementation of the ZDHC Programme. This Joint Roadmap Update will become operational under the foundation with the continued goal around collaborative implementation of foundational and benchmarking efforts. Lessons learned and feedback gained from engaging with thousands of individual stakeholders during the past 4 years inform this clear and focused vision.

The group recognises that a set of core competencies are integral to achieving the ZDHC zero discharge goals. These competencies, now deeply seated in our organisational structure, include the capture of best practices, use of management systems thinking, importance of open and transparent communication and informed consideration of how we engage with stakeholders across regions/continents and cultures. To achieve textile industry impact, the programme continues to build on established collaboration with the following organisations and integrate others into our work.

American Data Exchange Corporation (ADEC) • Archroma Management GmbH • BASF SE • Bayer Material Science AG • bluesign® • BLC Leather Technology Centre's Leather Working Group • Bureau Veritas (BV) • Business for Social Responsibility (BSR) • CEFIC • China Dyestuff Industry Association (CDIA) • China Institute of Public and Environmental Affairs (IPE) • China Ministry of Environmental Protection (MEP) • China National Textile and Apparel Council (CNTAC) • CHT • Clean Production Action • Colour Connections • Daikin Chemical • Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) • Dow Corning Coordination Center S.A. • DuPont • DyStar • Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD) • European Chemicals Agency (ECHA) • European Environmental Bureau (EEB) • Forum for the Future • German Federal Environment Agency (UBA) • Global Social Compliance Program (GSCP) • Green Chemistry and Commerce Council (GCCC) • Hohenstein Institute • Huntsman • Institute for Sustainable Communities' EHS Academy • International Chemical Secretariat (ChemSec) • International Finance Corporation (IFC) • International PRTR Coordinating Group • LongJohn Taichung • MADE-BY • NimkarTek Technical Services PVT LTD • Ningbo Shenzhou Knitting Co. Ltd. • OEKO-TEX® • Outdoor Industry Association (OIA) • Society of Dyers and Colourists • Solidaridad • Sustainable Apparel Coalition (SAC) • Swedish Chemicals Agency (KEMI) • Taiwan Chemical Industry Association • Taiwan Textile Federation • Verband TEGEWA e.V. • United Nations Environment Programme (UNEP)

## 2.0 Strategic Framework

In the Joint Roadmap, Version 2, ZDHC laid down the foundation for the programme's long-term strategy and roadmap towards 2020. The programme has learned a great deal during implementation of this roadmap and has used this knowledge to focus the strategy and to provide new insight into this strategic plan.

Underpinning this strategic plan are the vision, mission and goals of the ZDHC Programme. We continue to sharpen the focus of our work and remain committed to both an aspirational and real commitment to improving chemicals management across the apparel and footwear industry.

### Vision

Widespread implementation of sustainable chemistry and best practices in the textile industry to protect consumers, workers and the natural environment

### Mission

Advance towards zero discharge of hazardous chemicals in our supply chain and act to improve the environment and people's well being

### Goals

1. Eliminate or substitute priority hazardous chemicals in products and their manufacture
2. Implement a transparent screening process to promote safer chemistry
3. Implement common tools, best practices and training that advance chemical stewardship

4. Partner with stakeholders to promote transparency of chemical use and discharge
5. Promote scaling of best practices through engagement with key stakeholders

### 3.0 Focus Areas and Cross-Cutting Topics

To achieve these goals, ZDHC identified key focus areas that will inform the programme's operational plan. The ZDHC Programme chose the focus areas based on areas in which it can have the greatest impact and to complement and amplify the work of other industry associations and non-governmental organisations.

#### Four Key Focus Areas

- MRSL and Conformity Guidance
- Research
- Audit Protocol
- Wastewater Quality

#### Cross-Cutting Topics

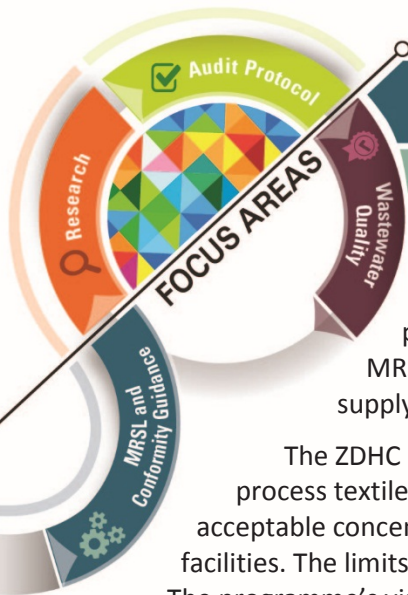
We also identified work that cuts across the four focus areas. Integrating these topics through each focus area allows us to create holistic strategies.

- Data and Disclosure
- Training

#### How We Work

The operational plans for each focus area cover three types of work. We have found that these three categories are key for effecting industry change – not only for creating aligned guidance and tools, but for aligning on how we effectively implement on the ground. Engaging a network of stakeholders also is important in mutually supporting and amplifying this change throughout the industry supply chain.

1. Standard Setting – Creating and maintaining ZDHC MRSL, Research, Audit Protocol, Wastewater Quality, Training and Data and Disclosure guidance to achieve acceptance and use of these ZDHC tools and processes as industry standard
2. Collaborative Implementation – Creating action plans to ensure implementation, adoption and widespread industry acceptance of ZDHC guidance and processes
3. Engagement – Identifying who and how we engage with key stakeholders to maintain the credibility of ZDHC guidance and ensure adoption, implementation and widespread use of this guidance



## MRSL AND CONFORMITY GUIDANCE

### Objectives

The ZDHC Programme will provide information, tools, trainings and conformity process guidance to assist brands and their suppliers in implementation of the ZDHC MRSL, with the aim of restricting the use of harmful substances in the textile industry supply chain to protect communities and the environment.

The ZDHC MRSL is a list of chemical substances banned from intentional use in facilities that process textile materials and trim parts in apparel and footwear. The ZDHC MRSL establishes acceptable concentration limits for substances in chemical formulations used within manufacturing facilities. The limits are designed to eliminate the possibility of intentional use of listed substances.

The programme's vision is to have the ZDHC MRSL and conformity process guidance serve as the adopted textile and apparel industry standard.

The ZDHC MRSL, Version 1, was published in 2014. Updates to the ZDHC MRSL will be published as additional products become available that serve as substitutions for chemical substances currently listed on the Research List, for which there are no currently available alternatives.

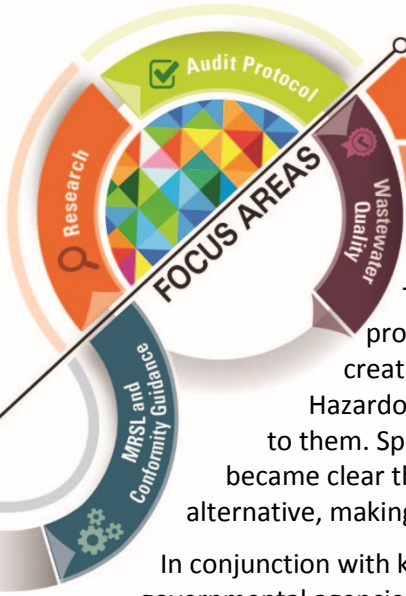
### Action Plan

There are two primary tracks of work related to this focus area, specifically updates to the ZDHC MRSL and the effective engagement for adherence to ZDHC MRSL chemical use restrictions.

## MRSL AND CONFORMITY GUIDANCE

	2015	2016-17	2018-19	2020
<b>Standard Setting</b>	Develop MRSL Leather, Version 1.1	Develop MRSL, Version 2 (2016)	Update MRSL as needed	ZDHC MRSL is the recognised industry standard
<b>Collaborative Implementation</b>	Develop and align on conformance process			Widespread industry adoption of ZDHC MRSL
<b>Engagement</b>	Identify and engage stakeholders	Continue to identify and engage with key industry stakeholders		Third-party stakeholders support MRSL and industry considers it standard business practice.
	Engage Chinese leather industry associations	Continue to engage Chinese leather industry associations		
	Educate other industry associations			

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# RESEARCH

## Objectives

The development of the ZDHC Research List was a direct outcome of the programme’s collaborative work with the Outdoor Industry Association (OIA) when creating a hazard assessment approach and the Framework for the Prioritisation of Hazardous Chemicals, which serves to identify high priority chemicals and apply actions to them. Specifically, as concentration limits in formulations were being decided upon, it became clear that there were some substances for which there was no clear feasible alternative, making phase out difficult if not impossible.

In conjunction with key collaborators from the chemical industry, academic researchers and governmental agencies, this focus area seeks to encourage research into the development of safer alternatives for substances on the ZDHC Research List so that brands and their supply chains can make informed substitutions and conduct research on priority chemicals for which safer alternatives do not currently exist.

## Action Plan RESEARCH

	2015	2016–17	2018–19	2020
<b>Standard Setting</b>	Definition of a process for finding safer alternatives for substances on the Research List	Revision and improvement of process to find safer alternatives and way of engaging with stakeholders <i>(researching parties)</i>		Standardised process for continuous research and evaluation of safer alternatives
		Revision of Research List and definition of process for adding new chemicals		Defined and assessed process for adding and removing substances to/from the Research List
<b>Collaborative Implementation</b>	Define research process and start pilot project with one prioritised substance	Continue pilot project: research, collection and evaluation of alternatives		
		Review research process and kick-off further research for other substances or functional uses on the current Research List	Continue research for substances on the Research List	
<b>Engagement</b>		Review current process of adding chemicals to the Research List considering the MRSL work and Prioritisation Framework	Apply process for revision of the Research List <i>(adding and deleting substances)</i>	
	Engage chemical industry, research institutes, governments and other interested stakeholders	Enhance engagement with stakeholders that are specialised in particular fields of research		Continuous engagement of chemical industry, research institutes, governments and other interested stakeholders

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# AUDIT PROTOCOL

## Objectives

To maximise industry transparency and collaboration, the ZDHC Programme worked with the Sustainable Apparel Coalition (SAC), OIA and the Global Social Compliance Programme (GSCP) to develop the audit protocol and a number of tools and processes to support it. The audit protocol was developed to ensure consistency in environmental auditing across the supply chain and sharing of audit findings (whilst ensuring compliance with antitrust regulations). The protocol sets out the complete audit process for use by brands/retailers, facilities and their auditors when planning and carrying out a self-assessment or an environmental audit.

Success in this focus area will be measured by widespread industry adoption of the ZDHC Audit Protocol as the apparel and footwear industry standard and widespread use of the audit tool by all tiers of the supply chain.

## Action Plan

### AUDIT PROTOCOL

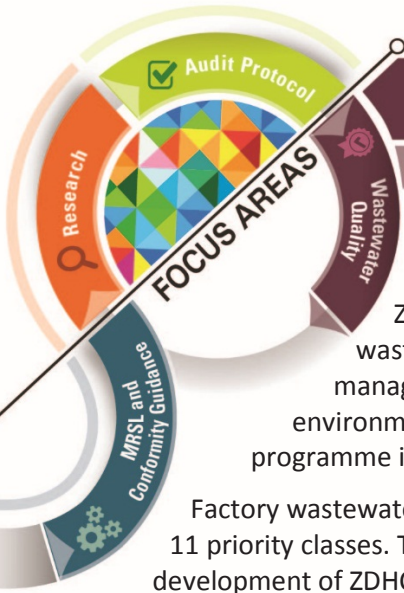
	2015	2016-17	2018-19	2020
<b>Standard Setting</b>		Update Audit Tool	Update Audit Tool as needed	
	Work with SAC to converge assessment tool framework		Establish industry audit standard such as ANSI <sup>1</sup> /OECD <sup>2</sup>	ZDHC audit is the recognised industry standard
<b>Collaborative Implementation</b>	ZDHC approval of updated Audit Tool	ZDHC approval of updated Audit Tool, as needed		
	ZDHC approval of training and implementation plan	ZDHC approval of training and implementation plan with key stakeholders for updated Audit Tool	ZDHC approval of training and implementation plan such as an ANSI/OECD standard	
	Internal maintenance of audits spreadsheet			
	ZDHC approval of data schema for audits			
	Develop and align on audit conformance process	Finalise audit conformance alignment		
	ZDHC brand utilisation of Audit Protocol	ZDHC, SAC and OIA utilisation of Audit Protocol	ZDHC, SAC, OIA and LWG <sup>3</sup> utilisation of Audit Protocol	Widespread industry adoption of audit to all tiers of supply chain
<b>Engagement</b>	Work with industry groups (OEKO-TEX, bluesign, etc.) to align approach and audit framework			
	Non-disclosure Agreement and Memorandum of Understanding rollout with key stakeholders			
	Identify and engage 2-3 key stakeholders for audit	Key stakeholder endorsement/public announcement		Key stakeholders advocate for use of the audit protocol within the apparel supply chain

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<sup>1</sup>American National Standards Institute (ANSI)

<sup>2</sup>Organisation for Economic Co-operation and Development (OECD)

<sup>3</sup>Leather Working Group (LWG)



# WASTEWATER QUALITY

## Objectives

Working towards zero discharge of hazardous chemicals in wastewater, the ZDHC Programme recognises that well designed, properly functioning wastewater treatment plants, good process controls and effective chemicals management are key tools to minimising chemical pollutants discharged into the environment. To support suitable benchmarking wastewater treatment guidance, the programme is adding this as a new area of focus.

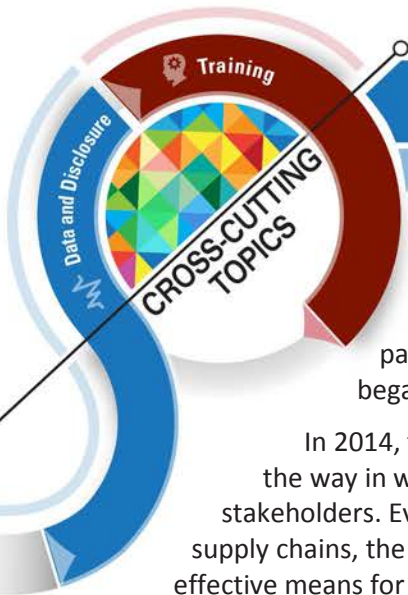
Factory wastewater discharge may contain chemicals, including chemicals found in the 11 priority classes. The risk of releasing these chemicals will be reduced or eliminated by the development of ZDHC wastewater quality guidance with key collaborators and adoption of this guidance as the apparel and footwear industry standard. Work in this focus area seeks to assess effluent discharge improvements. Having process guidance allows sharing of consistent data and avoids duplication and confusion in the supply chain. Initial tasks are identified in this action plan and may further develop during implementation of this guidance.

## Action Plan

### WASTEWATER QUALITY

	2015	2016-17	2018-19	2020
<b>Standard Setting</b>	Benchmark existing standards and existing data at facilities	Align on parameters and define scope <i>(including target facilities)</i>		
		Establish and publish wastewater quality guidance (mid-2016)	Review and maintain ZDHC wastewater quality process guidance	ZDHC wastewater quality guidance is the recognised industry standard
<b>Collaborative Implementation</b>	Secure engineering expertise	Draft and roll out training to suppliers on wastewater quality process guidance Determine approach and industry implementation partners <i>(e.g., SAC, third-parties)</i>		Widespread adoption of ZDHC wastewater quality guidance
		Convene working group on transparency strategy – explore funding options and models for local community access to data supporting Right to Know	Pilot transparency strategy in key region	Roadmap and list of activities to scale transparency strategy in key regions
		Deploy best practices pilot and build the business case		80 percent of suppliers sign onto the ZDHC wastewater quality process guidance
		Provide guidance to mills on best practice implementation		
<b>Engagement</b>	Identify and engage stakeholders			Third-party stakeholders support process guidance and consider it business practice
	Convene a supplier group to advise, include representatives to be on the initial committee			





## DATA AND DISCLOSURE

### Objectives

While implementing the Joint Roadmap, the need for integrated data management became apparent. The ZDHC Programme and its supply chain participants including mills, chemical companies and third-party service providers began exploring the challenges in data capture and reporting.

In 2014, the ZDHC Programme began developing a universal set of standards to organise the way in which key chemical data should be collected and shared for the benefit of all stakeholders. Even as individual brands begin to work towards using the data standards in their supply chains, the ZDHC Programme will work with other organisations (like SAC and OIA) to develop effective means for sharing standardised chemistry management data in each of our key focus areas.

### Action Plan

## DATA AND DISCLOSURE

	2015	2016-17	2018-19	2020
<b>Standard Setting</b>	Complete MRSL data standards	Publish annual updates to schema; add schema from other focus areas		
	Complete data standards for chemical companies to publish their MRSL compliant formulations	Incorporate Audit, Wastewater Quality and Training lead data standard additions	Publish annual updates to MRSL, Audit Protocol, Wastewater Quality and Training schemas	
	Work with service providers to formally publish data standards and engage with key stakeholders			
		Use data insights to inform Research focus area		
		Liaise with Focus Area teams to develop/harmonise training to an e-learning kit		
	Commence development of the MRSL into XML format			
<b>Collaborative Implementation</b>	Complete pilot; review and document pilot learnings	Pilot additional elements to schema	Align ZDHC data schema with other chemicals management industry standards	Proliferate data standards beyond ZDHC
	Explore ZDHC role in information sharing platform (registry)	Formally publish best practices in data management	Drive strategies with insights gained from data management efforts	
	Continue collaboration with chemical companies to simplify data inputs	Pilot additional elements to schema		
<b>Engagement</b>	Explore harmonisation opportunities with SAC	Continue to align schema and encourage adoption with support of key stakeholders (e.g., IPE <sup>4</sup> , CNTAC <sup>5</sup> , OIA, SAC)	Explore additional partnerships to align confidential versus public disclosure key performance indicators	Seek broader adoption through cross-industry collaboration (e.g., automotive, electronics)
	Begin formal data schema collaboration with CNTAC	Continue to engage with CNTAC		
	Engage service providers to test interoperability of data schema	Continue to work with service providers		

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<sup>4</sup>China Institute of Public and Environmental Affairs (China IPE)

<sup>5</sup>China National Textile and Apparel Council (CNTAC)



## TRAINING

### Objectives

A well informed and educated supply chain is a precondition for implementing future ZDHC activities to reach the programme’s zero discharge goal. The objective for this cross-cutting area is to plan, develop, time and launch training to support both the understanding, acceptance and use of ZDHC focus area process guidance and expedient supply chain scale-up.

Working closely with each focus area, this cross-cutting team will develop a long-term training plan and comprehensive curriculum packages that align training modules with other ZDHC tools, updating as necessary to maintain harmonisation, offer training in web-based and hands-on training formats and incorporate country/regional training needs.

### Action Plan

## TRAINING

	2015	2016–17	2018–19	2020
<b>Standard Setting</b>	Develop procedures for trainer selection, approval and evaluation			
	Develop strategic plan to support focus areas	Support focus areas on topic specific training	Develop/update and extend topic training as needed	
		Review training KPIs and alignment with data schema	Update training strategy	Update training strategy beyond 2020 Curriculum recognised as industry standard
<b>Collaborative Implementation</b>	Scale-up basic/foundational training in 5 prioritised countries; Develop and pilot progressive trainings			
	Initiate tender process and conduct trainings	Scale-up progressive training to the supply chain		
		Measure training success through KPIs	Update training as recommended by KPIs	Measure training success through KPIs ZDHC trainings well attended and are the recognised industry standard
<b>Engagement</b>				Stakeholders scale up trainings throughout industry and suppliers seek training and build capacity for business innovation in chemicals management
	Training providers Align with other industry organisations (SAC, EOG, GIZ <sup>6</sup> , CNTAC, BGMEA <sup>7</sup> )	Align with SAC, GIZ, CNTAC, BGMEA, OIA in the UNEP Training Project (China)	Continue to engage with these organisations	
	Local chemical industry associations (MRSL training) Mills/dyehouses	Collaborate with IPE to educate suppliers with non-conformities	Continue collaboration with IPE to extend supplier education	

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<sup>6</sup>Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

<sup>7</sup>Bangladesh Garment Manufacturers and Exporters Association (BGMEA)