Chemical Management Initiatives (Why ? When ? What ? How ?)

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

FABRIC Asia

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Agenda

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1	How we got here ?	
2	Global Initiatives	
3	Industry Actions	
4	Introduction > ZDHC (Standards, Tools, Solutions)	

Fashion Industry : Impact

Image Source : Danish Fashion Institute

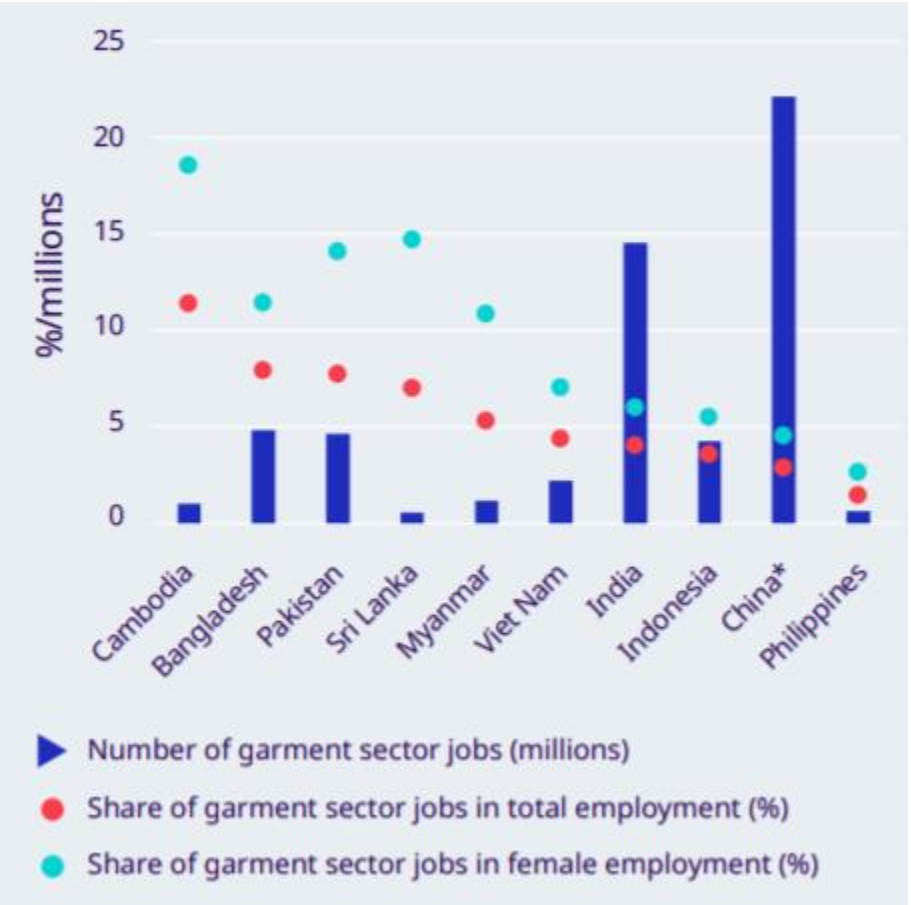

Image Source : ILO, 2019

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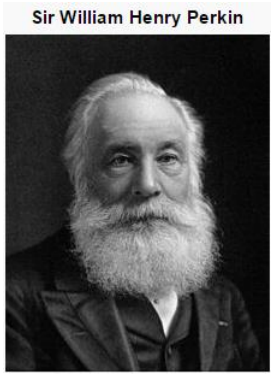
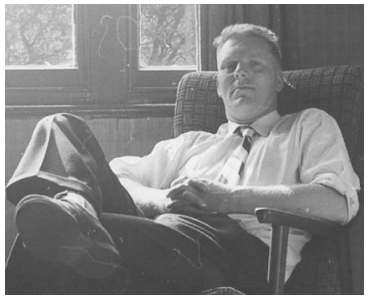
Flashback : How we got here ?





Synthetic Dye
mauveine

1856

Prof Ian Rattee
Reactive Dye

1956

Move to Asia
Growth by 300%

1970/80

MRSL, Upstream
Supply Network
Reporting/Compliance

2010
onwards

1941

Polyester

1960

Finishing

1990/2000

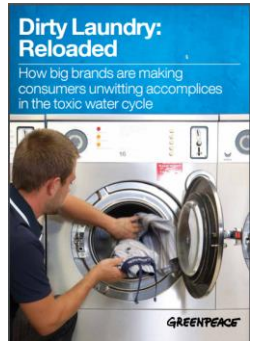
RSLs
Social/Animal Welfare

https://en.wikipedia.org/wiki/Textile_industry
http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_008075/lang--en/index.htm
SDC , *Nimkartek*

Background : Focus of NGO (Greenpeace) Campaigns

Residual Chemicals in Products

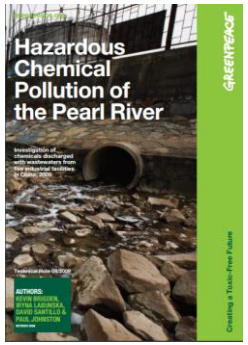
Aug 2011



Mar 2012

DETOX

Residual Chemicals in Discharge

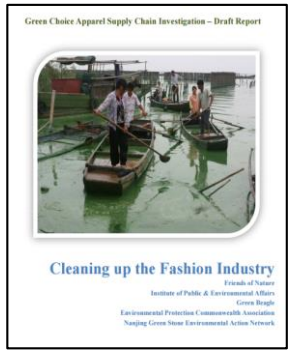


Oct 2009

Jan 2010

Aug 2010

Jul 2011



Apr 2012

Oct 2012

Source : http://wwwen.ipe.org.cn/reports/Reports.aspx?cid=18334&year=0&key=&Page=2
http://www.greenpeace.org/international/en/publications/Campaign-reports/Toxics-reports/#tab=0&gvs=false&page=2

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Background : Focus of NGO (Greenpeace, IPE) Campaigns

Residual Chemicals in Products

Dirty Discount Supermarkets:

Dangerous Chemicals in Supermarket Clothing

Greenpeace tests clothes and shoes for children and young adults sold by supermarkets and leading retailers

1. Summary of the results

Greenpeace tested clothing and shoes for kids and young adults for harmful substances in the summer of 2014. The products were purchased in supermarkets in Germany, Austria and Switzerland. In total, 26 samples were examined in independent laboratories.

More than half of the samples contained harmful substances in concentrations above the reference values and precautionary levels used by Greenpeace for children's clothing.[a]

Jul 2014

Jan 2016

Jul 2016

Feb 2017

Residual Chemicals in Discharge

Dec 2013

Product Quality / RSL

Supplier CoC Wastewater + Air Emissions

Source : http://wwwen.ipe.org.cn/reports/Reports.aspx?cid=18334&year=0&key=&Page=2
http://www.greenpeace.org/international/en/publications/Campaign-reports/Toxics-reports/#tab=0&gvs=false&page=2

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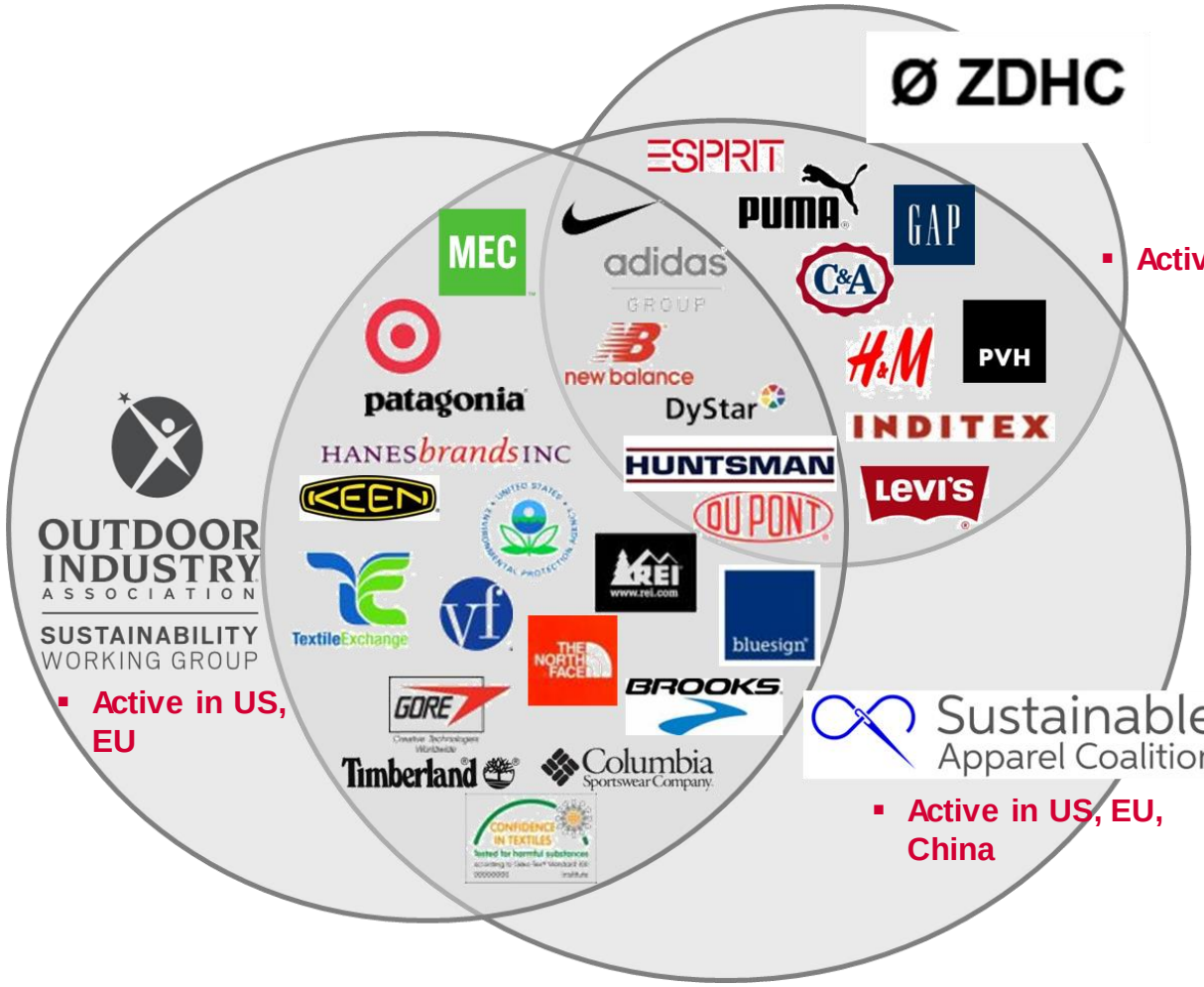
Industry Initiatives (~ 40% of world's fashion industry)



- Active in US, EU, China

- Active in US, EU

- Active in US, EU, China

Partial List

ZDHC Contributors : http://www.roadmaptozero.com/contributors/
Source : Outdoor Industry Association

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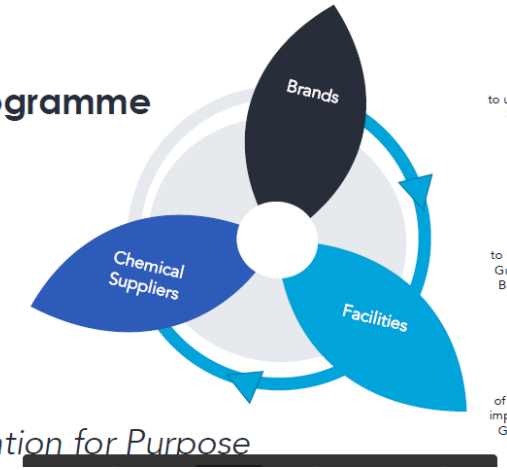
Recent Catalysts : 2019

ZDHC
Leader Programme



Driving Implementation for Purpose

100 %
Committment
to use the ZDHC MRSL by the Signatory Brand Leader Programme.

100 %
Commitment
to use the ZDHC Wastewater Guidelines by the Signatory Brand Leader Programme.

76 %
Implementation
of ZDHC's Signatory Brands implemented the Wastewater Guidlines according to the Leader Programme Assessment

FASHION PACT

G7 FRANCE BIARRITZ 2019

GRÜNER KNOPF
SOZIAL. ÖKOLOGISCH.
STAATLICH. ZERTIFIZIERT.

Green Button! Germany's new textile standard

by Apparel Resources News-Desk
24-July-2019 | 1 min read

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Recent Catalysts : 2020

OPEN LETTER

The COVID-19 recovery: time to speed up sustainability of the fashion, apparel and textile sector

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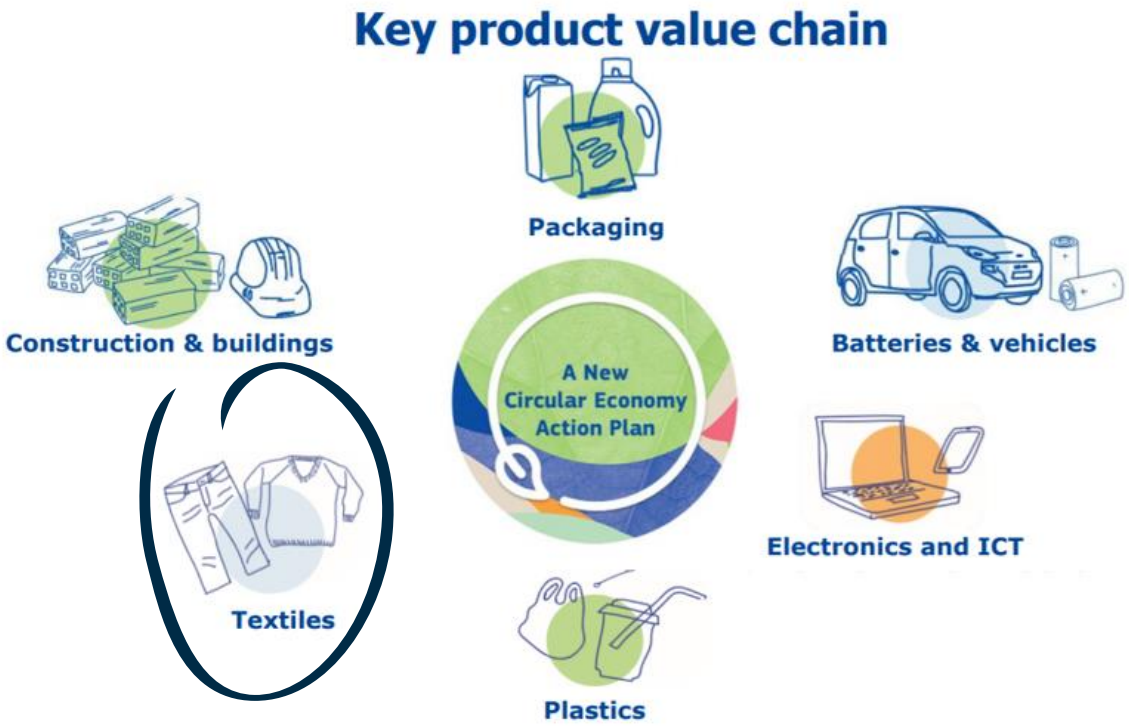
Policy Linkages for the Circular Economy Action Plan (CEAP)



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Pressure on Brands to engage upstream

CITI Evaluation Criteria		Respon-siveness	Compliance & Corrections			Extend Green Supply Chain		Data Disclosure & Transparency		Recycling	Total Score	Ranking +/-
		Respond to Enquiries	Establish Screening Mechanism	Push for Corrections	Centralized Wastewater Treatment	High-Impact Suppliers	Push for Upstream Manage-ment	Energy and Climate Data	PRTR	Recycling Used Products		
No.	Brand	12	12	14	10	14	8	10	12	8	100	+/-
1	Adidas	12	12	14	2.5	7	2	7.5	9	0	66	+6
2	H&M	12	12	7	2.5	7	4	5	6	4	59.5	-1
3	Levi's	12	12	10.5	2.5	7	2	5	6	2	59	+12
4	M&S	9	9	7	2.5	7	2	5	9	2	52.5	+2
5	Wal-Mart	9	12	14	0	7	4	2.5	3	0	51.5	+4
6	Esquel	9	12	14	0	7	2	2.5	3	0	49.5	-4
6	Nike	12	9	10.5	0	7	4	5	0	2	49.5	+3
8	Uniqlo	9	12	14	0	7	0	0	0	2	44	+4
9	Puma	12	9	7	0	7	0	2.5	6	0	43.5	-4
10	Target	9	12	7	0	7	2	2.5	3	0	42.5	+1
11	ZARA	9	12	7	0	7	2	0	3	0	40	+3
12	Burberry	9	9	7	0	3.5	2	2.5	6	0	39	New
13	Gap	9	9	7	0	7	4	0	0	0	36	-10
13	C&A	9	9	7	0	7	4	0	0	0	36	-10
13	IKEA	9	12	7	0	3.5	0	2.5	0	2	36	+4
16	Esprit	9	6	7	0	7	0	0	0	0	29	-4
16	Li-Ning	9	6	7	0	7	0	0	0	0	29	-1
18	Mizuno	9	6	7	0	3.5	0	2.5	0	0	28	+5

Textile Industry Rankings 2015

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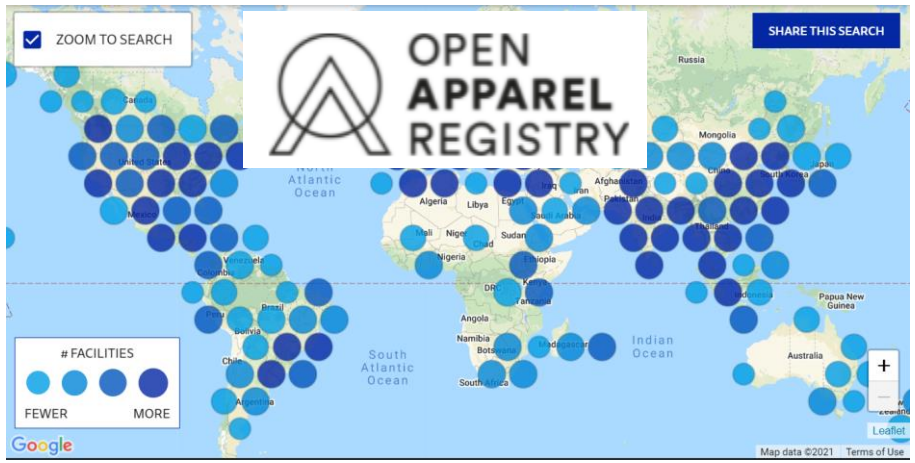
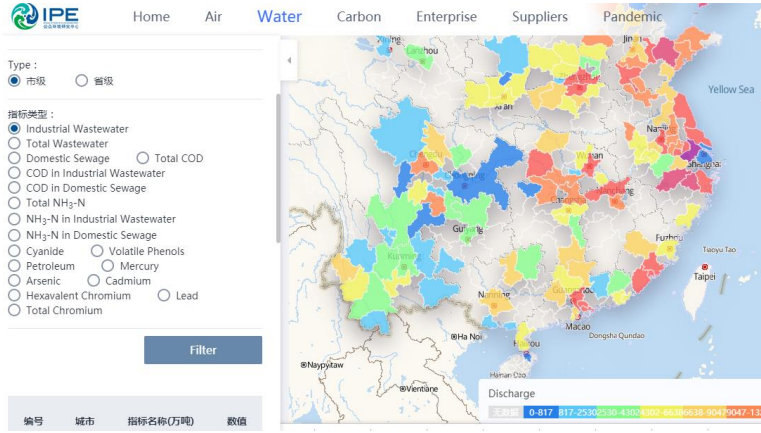
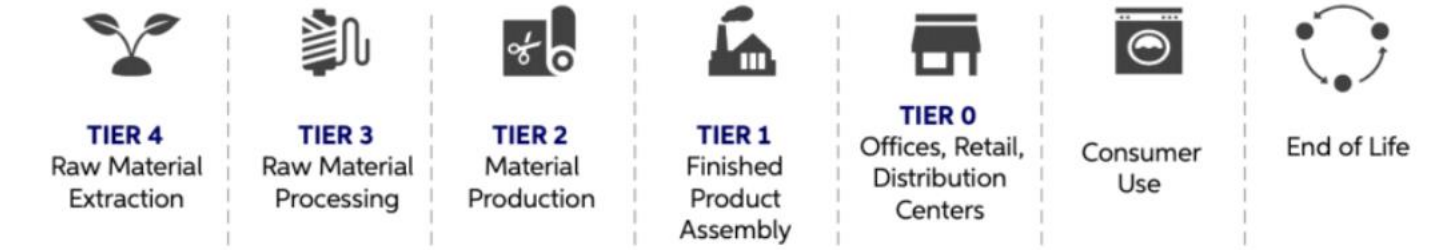
Transparency boost







Sustainable Apparel Coalition

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Market Demand > Brand/Retailer Commitments

fashion. We have now achieved 80% ZDHC compliance of input chemicals. Our H&M Group goal is to reach 100% ZDHC compliance in 2020 — we call it Roadmap to Zero.

Requirements for input chemicals

The input chemicals policy was implemented in 2016 and comprises two essential components: Firstly, production facilities are required to maintain a chemical inventory and valid safety data sheet (SDS) for all chemicals used, which need to fulfil the ZDHC MRSL requirements, used. Compliance is proven based on

Achieving 100% sustainable input chemistry by adopting the ZDHC MRSL

Communication of requirements for the use of hazardous substances (MRSL list) to suppliers:

41 companies already achieved this target | **19** companies continue working on the target

Since 2015, we have focused on implementing the program with suppliers and aligning the RSSP with the ZDHC MRSL. We also have focused on utilizing other tools and trainings developed within the ZDHC

Partnership for Sustainable Textiles

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Validation via Assessments & Audits

7. Does your facility select and purchase chemicals based on their hazards and MRSL / RSL requirements?

If yes, do all chemicals purchased and used in production meet the facility's chemical purchasing policy?

If no, do you have a process or plan for eliminating chemicals that do not meet the facility's chemical purchasing policy?

Higg Index
Powered by Higg Co

COMMON TOOLS AND STANDARDS
Common tools to be used industry-wide, delivered through active collaboration.
2016-2017: In collaboration with ZDHC members on the delivery of work such as the ZDHC Audit Protocol, Effluent Guidelines and ZDHC MRSL for the textile and footwear industry.

amfori BEPI
Trade with purpose

its usage. GOTS has been following the system of MRSL for chemical inputs since inception.

GLOBAL ORGANIC TEXTILE STANDARD · GOTS ·

BLUE ANGEL THE GERMAN ECOLABEL

GRÜNER KNOPF
SOZIAL. ÖKOLOGISCH. STAATLICH. UNABHÄNGIG ZERTIFIZIERT.

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Opportunities to support SDGs

Responsible Social/Labor Practice

Sustainable Raw materials

Sound Management of Chemicals

Industry + Stakeholder engagement

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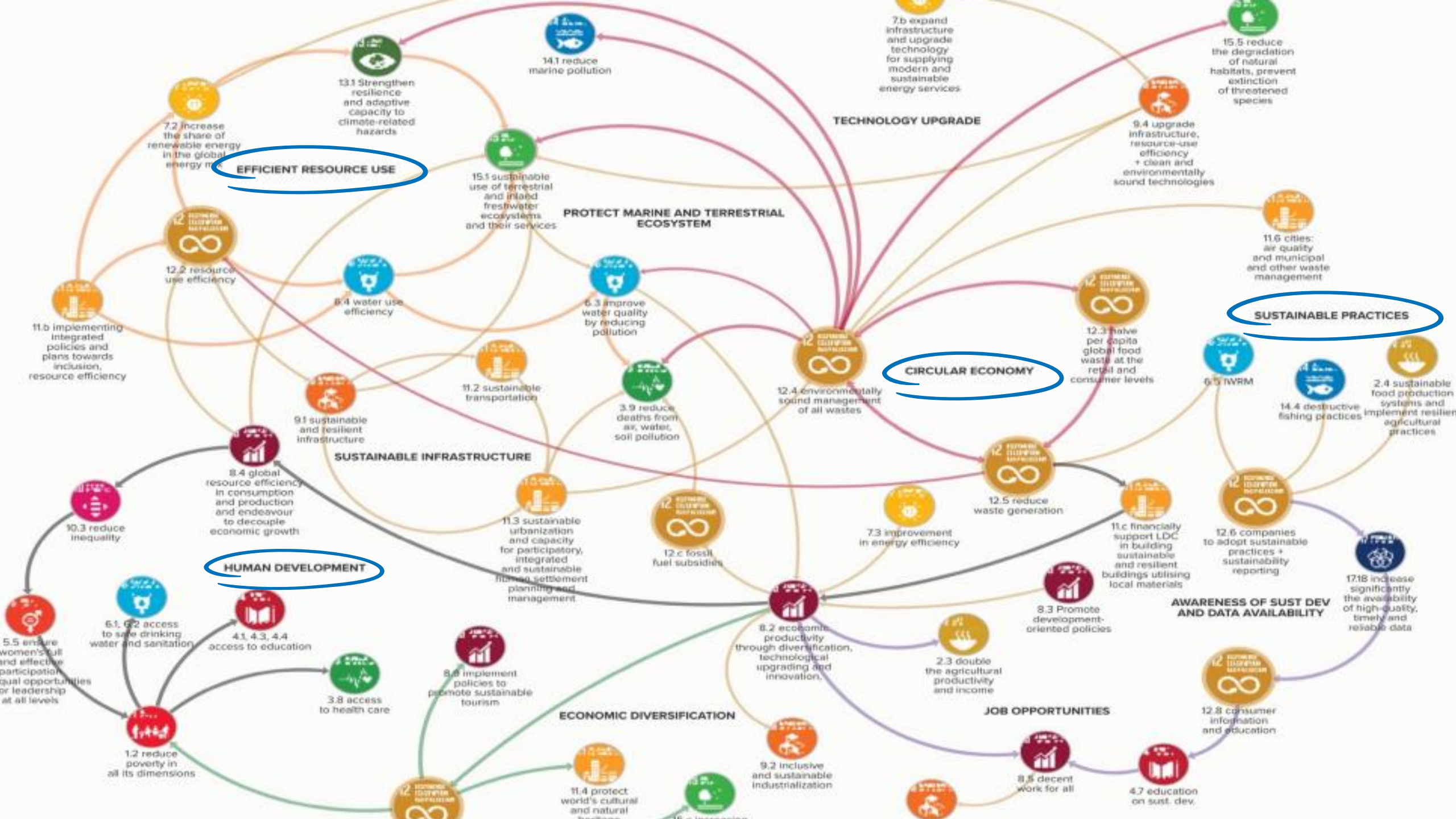
14.1 reduce marine pollution
13.1 Strengthen resilience and adaptive capacity to climate-related hazards
7.b expand infrastructure and upgrade technology for supplying modern and sustainable energy services
15.5 reduce the degradation of natural habitats, prevent extinction of threatened species
7.2 increase the share of renewable energy in the global energy m
EFFICIENT RESOURCE USE
15.1 sustainable use of terrestrial and inland freshwater ecosystems and their services
TECHNOLOGY UPGRADE
9.4 upgrade infrastructure, resource-use efficiency + clean and environmentally sound technologies
PROTECT MARINE AND TERRESTRIAL ECOSYSTEM
11.6 cities: air quality and municipal and other waste management
12.2 resource use efficiency
6.4 water use efficiency
6.3 improve water quality by reducing pollution
11.b implementing integrated policies and plans towards inclusion, resource efficiency
12.3 halve per capita global food waste at the retail and consumer levels
SUSTAINABLE PRACTICES
6.5 IWRM
14.4 destructive fishing practices
2.4 sustainable food production systems and implement resilien agricultural practices
11.2 sustainable transportation
CIRCULAR ECONOMY
12.4 environmentally sound management of all wastes
9.1 sustainable and resilient infrastructure
3.9 reduce deaths from air, water, soil pollution
SUSTAINABLE INFRASTRUCTURE
8.4 global resource efficiency in consumption and production and endeavour to decouple economic growth
12.5 reduce waste generation
10.3 reduce inequality
11.3 sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management
12.c fossil fuel subsidies
7.3 improvement in energy efficiency
11.c financially support LDC in building sustainable and resilient buildings utilising local materials
12.6 companies to adopt sustainable practices + sustainability reporting
17.18 increase significantly the availability of high-quality, timely and reliable data
HUMAN DEVELOPMENT
8.3 Promote development-oriented policies
AWARENESS OF SUST DEV AND DATA AVAILABILITY
6.1, 6.2 access to safe drinking water and sanitation
4.1, 4.3, 4.4 access to education
8.2 economic productivity through diversification, technological upgrading and innovation
2.3 double the agricultural productivity and income
5.5 ensure women's full and effective participation qual opportunities or leadership at all levels
3.8 access to health care
8.9 implement policies to promote sustainable tourism
ECONOMIC DIVERSIFICATION
JOB OPPORTUNITIES
12.8 consumer information and education
1.2 reduce poverty in all its dimensions
9.2 inclusive and sustainable industrialization
11.4 protect world's cultural and natural
8.5 decent work for all
4.7 education on sust. dev.

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From Detox to Roadmap to Zero

GREENPEACE DETOX CAMPAIGN

July 2011

- Sampled wastewater discharge at textile facilities in several countries in Global South
- Tested clothing purchased in brands' flagship stores
- Identified 11 Priority Chemicals that are discharged in wastewater & residual on end products
- Multiple brands committed to Detox commitment with "Zero Discharge by 2020" in mind

ZDHC INITATIVE FORMED

Q1 2012 Onwards

- "Zero Discharge of Hazardous Chemicals was formed by 6 brands in response to address this challenge collaboratively
- Multiple brands began to join this initiative

ZDHC FOUNDATION FORMED

2015

- ZDHC was registered in Amsterdam in 2015 to deepen the programme & its engagement
- Developed a range of tools and guidelines to support an unified implementation approach
- Become a multi-stakeholder organization in which brands, retailers, suppliers, solution providers and chemical formulators are engaged

FROM FINITE TO INFINITE GOAL

2020 Onwards

- Continue to converge the textile, footwear and leather approach on implementation to reduce duplication in the market
- Widen scope of development & deepen implementation in various geographical region

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OUR VISION is **widespread implementation of sustainable chemistry, driving innovations and best practices** in the textile, apparel, leather and footwear industries to protect consumers, workers and the environment.

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From Multiple Requirements to One Aligned Global Framework

Environmental protection focus

Setting the standard for the industry

Adoption and industry convergence

Accelerated implementation and positive impact

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From product compliance

to proactive supply chain management & innovation leadership

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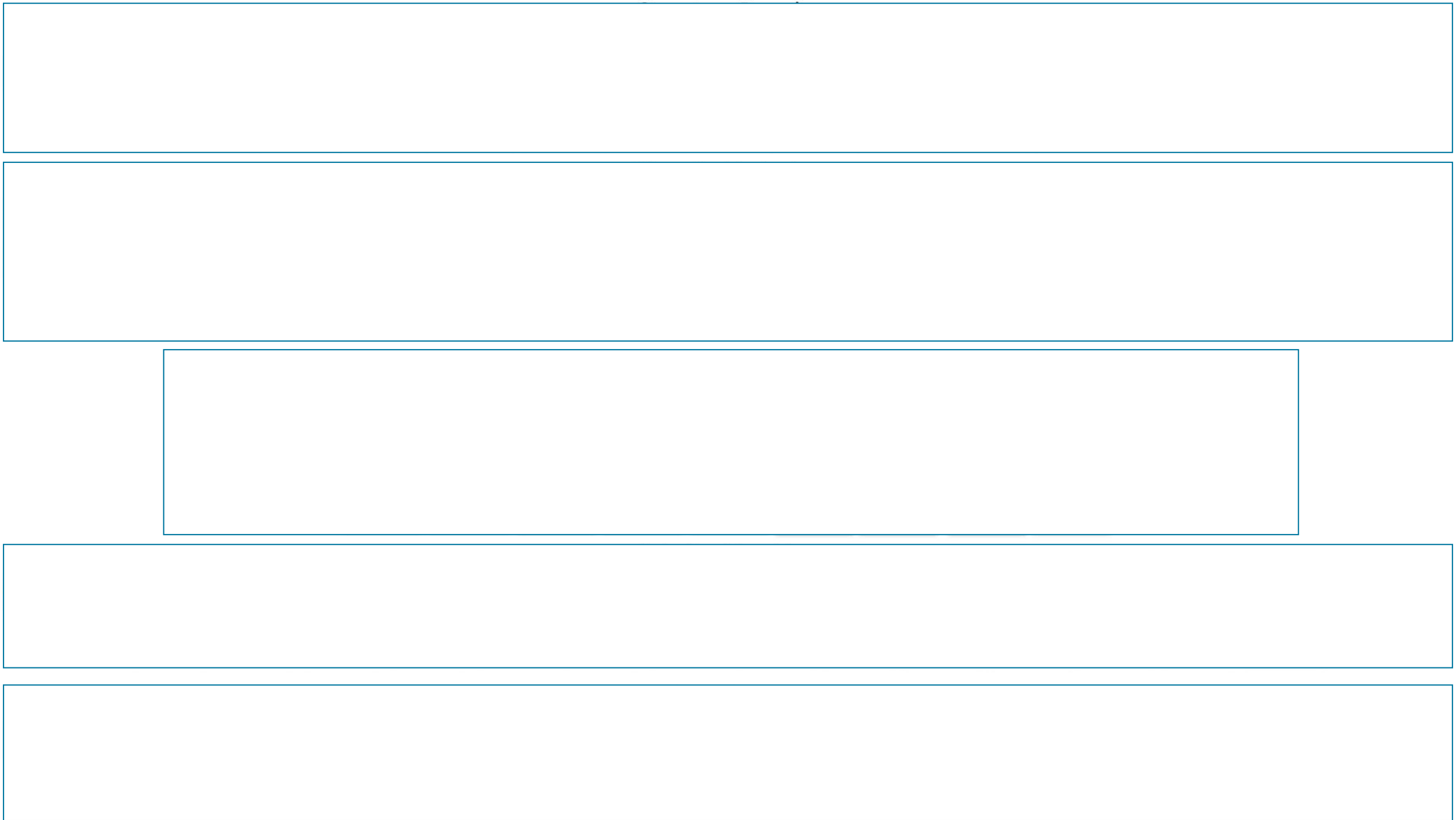
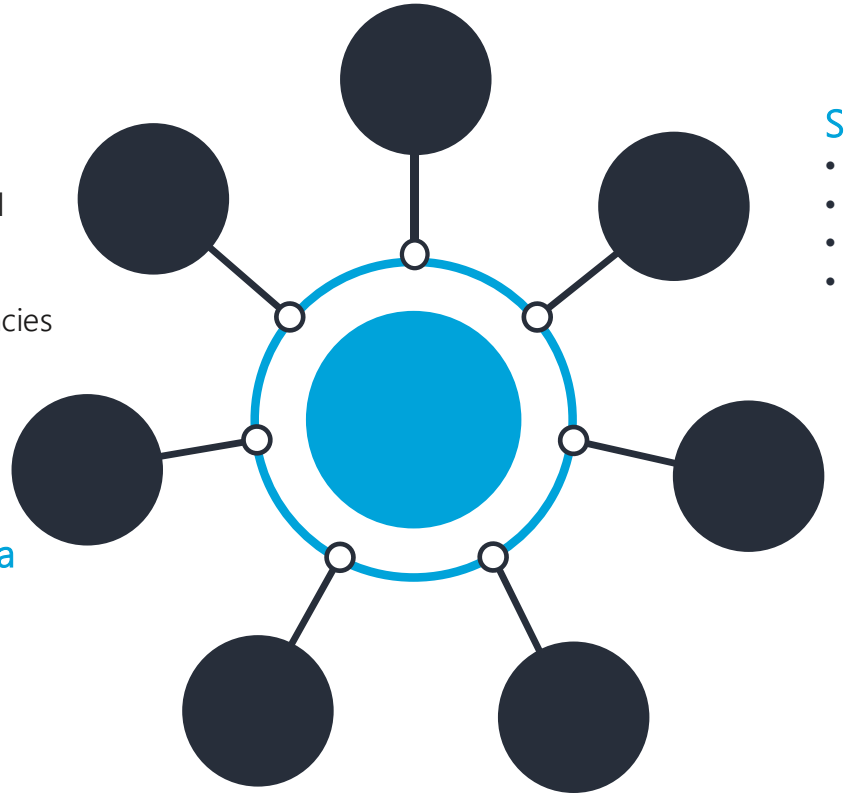


Linking & Engaging Key Stakeholders In Textile, Footwear & Leather Value Chain



Brands & Retailers
- International, regional and domestic brands of different sectors

Public Sectors
- Governments
- Inter-governmental Agencies
- International Development Agencies

Suppliers
- Wet processors
- Final Assemblers
- Tanneries
- Material suppliers

Chemical Formulators

Academia

Industry Associations
- Trade Associations
- NGOs
- Interest Group

Solution Providers
- Testing labs
- Certifiers
- Chemical & Environmental Management Consultants
- Wastewater Operators

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STRUCTURE OF ZDHC

02

An Integral Setup to Environmental Improvements

The Roadmap to Zero Programme

Developing guidelines and solutions for the industry

The ZDHC Academy

Building capacity of the value chains

The Implementation HUB

Scaling adoption and innovation

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Holistic Systems Approach to Sustainable Chemical Management

Input

Process

Output

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A Holistic Approach

GUIDELINES & SOLUTIONS

INPUT

ZDHC MRSL &
Conformance Guidance

GATEWAY
By ZDHC

Chemical Module

ChemCheck
By ZDHC

InCheck
By ZDHC

PROCESS

"How to ZDHC"
Chemical Management
System Guidance

Harmonisation with assessment
and audit schemes

- SAC - Higg FEM
- amfori BEPI
- Leather Working Group

ZDHC Leader Programme for
Signatory Brands & Facilities

OUTPUT

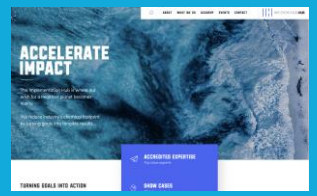
ZDHC Wastewater
Guidelines & Wastewater
Treatment Technologies

GATEWAY
By ZDHC

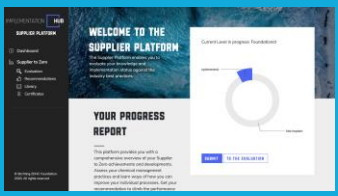
Wastewater Module

ClearStream
By ZDHC

ACADEMY, IMPLEMENTATION HUB, StZ



IMPLEMENTATION HUB



SUPPLIER
to Zero
By ZDHC

ACADEMY
By ZDHC

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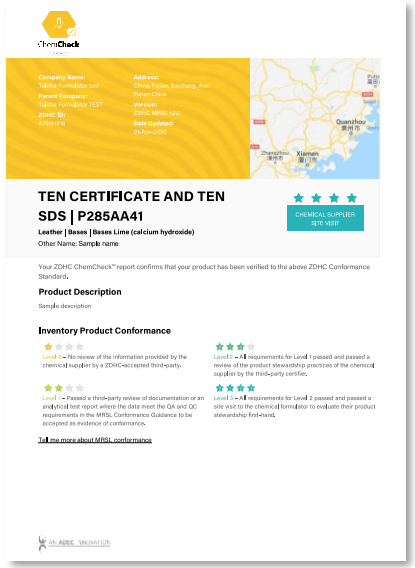
A Holistic Approach

INPUT Management
Platforms, Guidelines & Solutions

ZDHC MRSL &
Conformance Guidance

GATEWAY
By Ø ZDHC

Chemical Module



ChemCheck
By Ø ZDHC

InCheck
By Ø ZDHC

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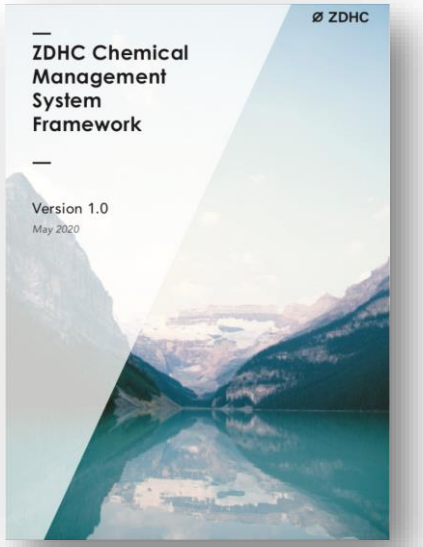
A Holistic Approach

Process Management



"How to ZDHC"
Chemical Management
System Guidance

SAC - Higg FEM
amfori BEPI
Leather Working Group

Harmonisation with assessment
and
audit schemes

Supplier and Brand to Zero
Programme

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A Holistic Approach

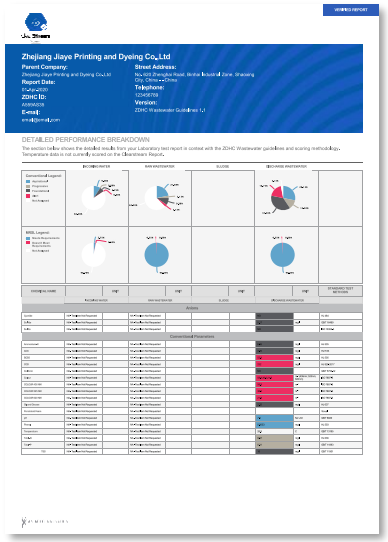
OUTPUT Management

ZDHC Wastewater Guidelines & Wastewater Treatment Technologies

GATEWAY

By Ø ZDHC

Wastewater Module



ClearStream

By Ø ZDHC

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How does (ZDHC) Platforms, Guidelines & Solutions Relate to Your Supply Chain?

PRODUCT DESIGN

Consider water & energy consumption and potential impact for your choice of material

INPUT

Chemical Formulations

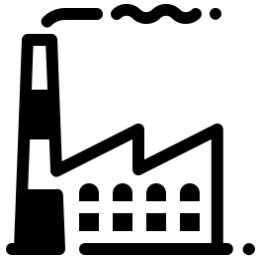
- ZDHC MRSL & Conformance Guidance
- ZDHC Gateway Chemical Module
- InCheck & ChemCheck Reports

Raw Materials

Material testing requirements for your brands

PROCESS

All Wet Processes



- SAC Higg Index FEM
- Amfori BEPI

OUTPUT

End Products

Brand's RSL

Wastewater

- ZDHC Wastewater Guidelines
- ZDHC Gateway Wastewater Module
- ClearStream Reports

ZDHC CMS
ZDHC Academy
Implementation Hub
Supplier to Zero
Brand to Zero

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Supplier to Zero

HOW TO ZDHC

IMPLEMENTATION HUB

Evaluation

Journey

Start improving today!

Suppliers learn how they do in benchmarking to the industry expectations set by the ZDHC Chemical Management System Framework and Technical Industry Guide

Guidance

150+

Templates, Documents and Recommendations

Based on the ZDHC Chemical Management System Framework, Technical Industry Guide and Best Available Technology (BAT)

Peer Learning

Use Cases

Be encouraged by Suppliers leading in implementation

The platform offers use cases prepared by experts and offers Suppliers to submit their own for review

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SUPPLIER to Zero

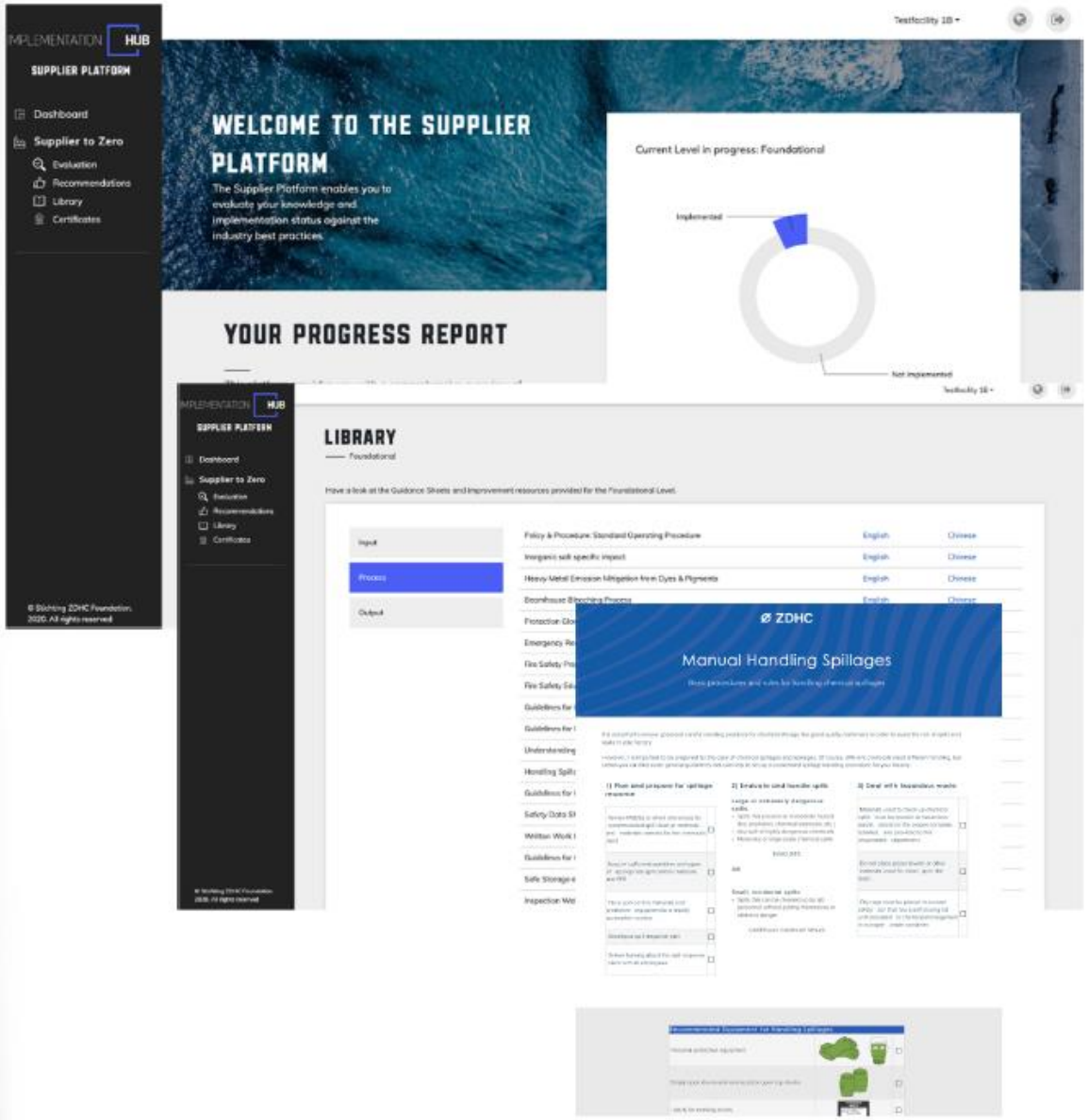
By Ø ZDHC

The entry point to sustainable chemical management for suppliers of all types

Self-evaluation based on the ZDHC CMS Framework

The **Foundational Level** provides more than 150 hands-on *industry standard and best-practice guidance based on ZDHC CMS TIG.*

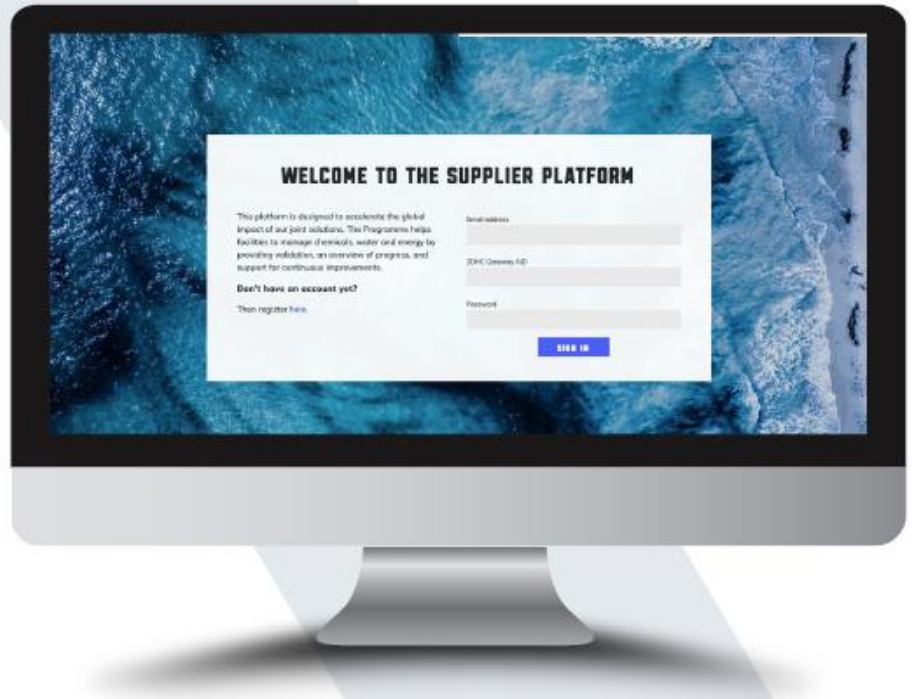
Get a Foundational Level certificate after completion of the implementation



Accessing the Supplier to Zero platform

Synchronised with ZDHC Gateway (e.g. single-sign on)

1. **Get access to ZDHC Gateway!**
   Fill in the ZDHC Gateway application form.
   (https://bit.ly/GetGatewayAccess)
2. Register to ZDHC Gateway
3. Set the Gateway Supplier Profile first!
4. Go to Supplier to Zero
   (http://supplier.roadmaptozero.com/)
   Login with your ZDHC Gateway ID



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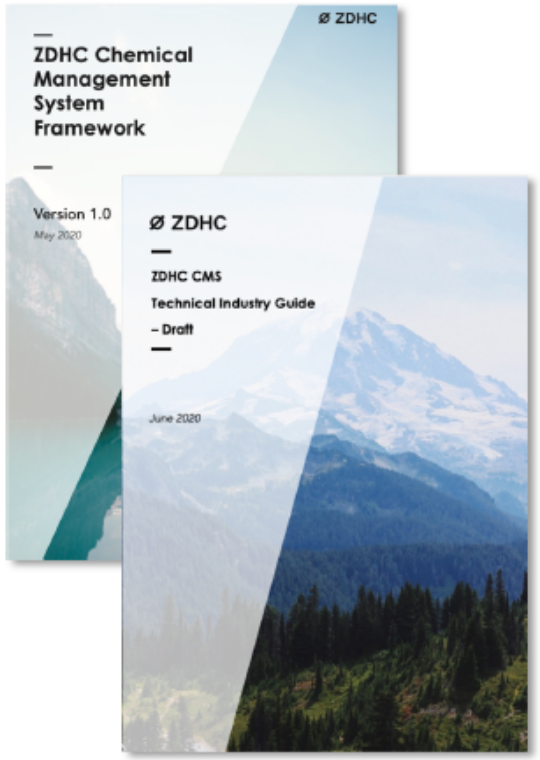
Implementation Approach

ZDHC CMS FRAMEWORK & Technical Industry Guide



ZDHC CMS Framework
and
ZDHC CMS Technical
Industry Guide

SUPPLIER
to Zero
By Ø ZDHC

Provides same structure as CMS Framework
EXCEPT:

- **Assessments**
  Diversified into 3 sub-chapters
- **Output Management**
  Diversified into wastewater and sludge, air emissions and waste management
- **Training**
  As stand-alone chapter
- **Resource Efficiency**
  Addressing measures for general improvements

EVALUATION

Supplier to Zero - Foundational

- CMS POLICY
- CMS STRATEGY
- GENERAL ASSESSMENTS
- SUPPLY CHAIN ASSESSMENT
- ALTERNATIVE ASSESSMENT
- HEALTH & SAFETY
- CHEMICAL INVENTORY
- STORAGE & HANDLING
- WASTEWATER & SLUDGE
- AIR EMISSIONS
- WASTE MANAGEMENT
- PROCESS CONTROL
- CONTINUOUS IMPROVEMENT
- TRAINING
- RESOURCE EFFICIENCY

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3 Levels to Leadership

SUPPLIER to Zero By ZDHC

FOUNDATIONAL

HOW TO ZDHC

- Self-evaluation
- Guidance and Learning
- Self Declaration

June 2020

PROGRESSIVE

Implementation Performance

InCheck By ZDHC

ClearStream By ZDHC

Q2 2021

ASPIRATIONAL

Leaders

- Leadership
- Implementation excellence
- Upstream implementation

Q3/Q4 2021

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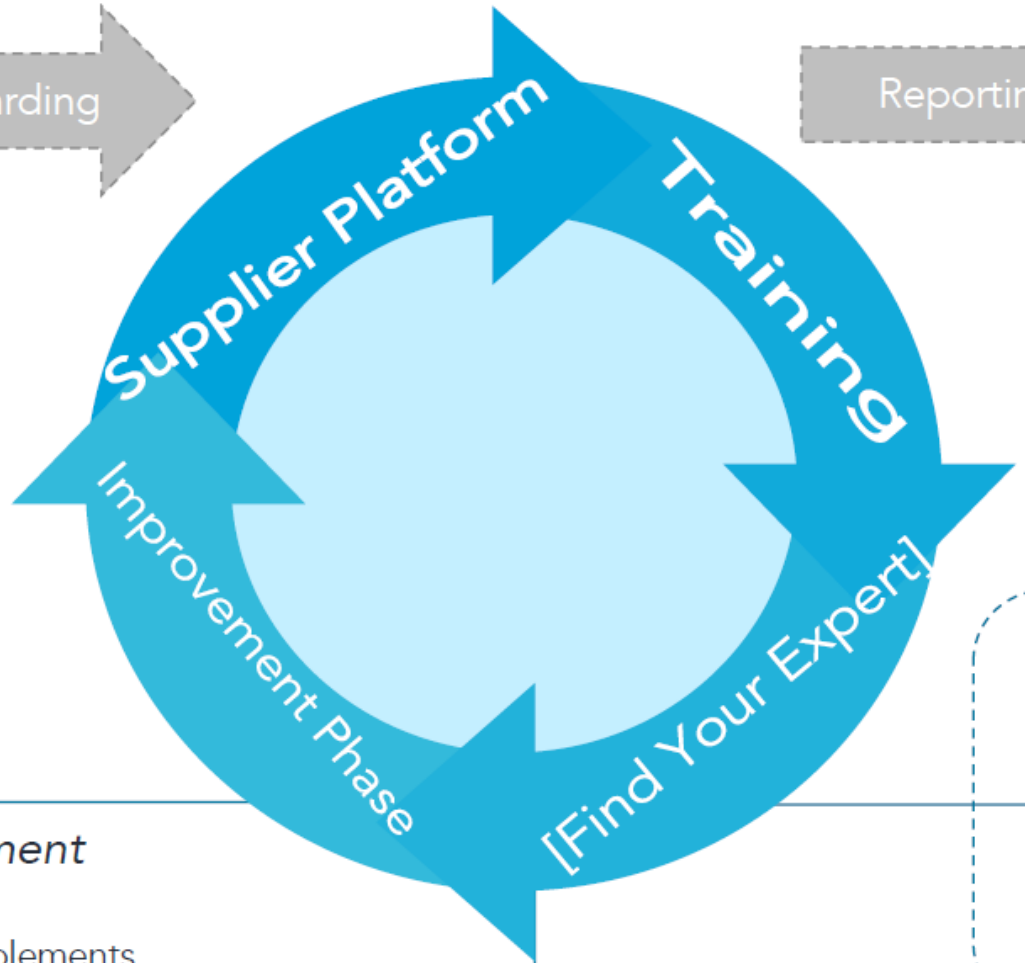
THE IMPROVEMENT CYCLE

IMPLEMENTATION HUB

On-boarding



Reporting

Depending on the brands' demands, suppliers might report directly to them, to the SAC HIGG or other systems

Supplier Platform
Self-evaluation, access to guidance material, progress benchmarking, preparation for reporting

SUPPLIER to Zero By ZDHC

Training
Supplier realised training need, is provided general or specific training

ACADEMY By ZDHC

[Find Your Expert]
- optional- Supplier realises need for implementation support and hires expert consultant

Expert Platform – Coming soon

Improvement Phase
Supplier implements improvement measures

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In-development
Platform Features

Further Supplier Platform Solutions / Modules

Use Cases
(already online)

Suppliers can not only read best-practice and practical implementation use cases, they can also submit their own. The S2Z team performs a quality review before the Use Cases get published to other users on the platform.

RCA / CAP
(coming soon)

This solution/ module will support suppliers in working on fails in WW with an optimized guidance and related recommendations. A standardized methodology ensures Brands' trust in resulting RCA/CAP documentation.

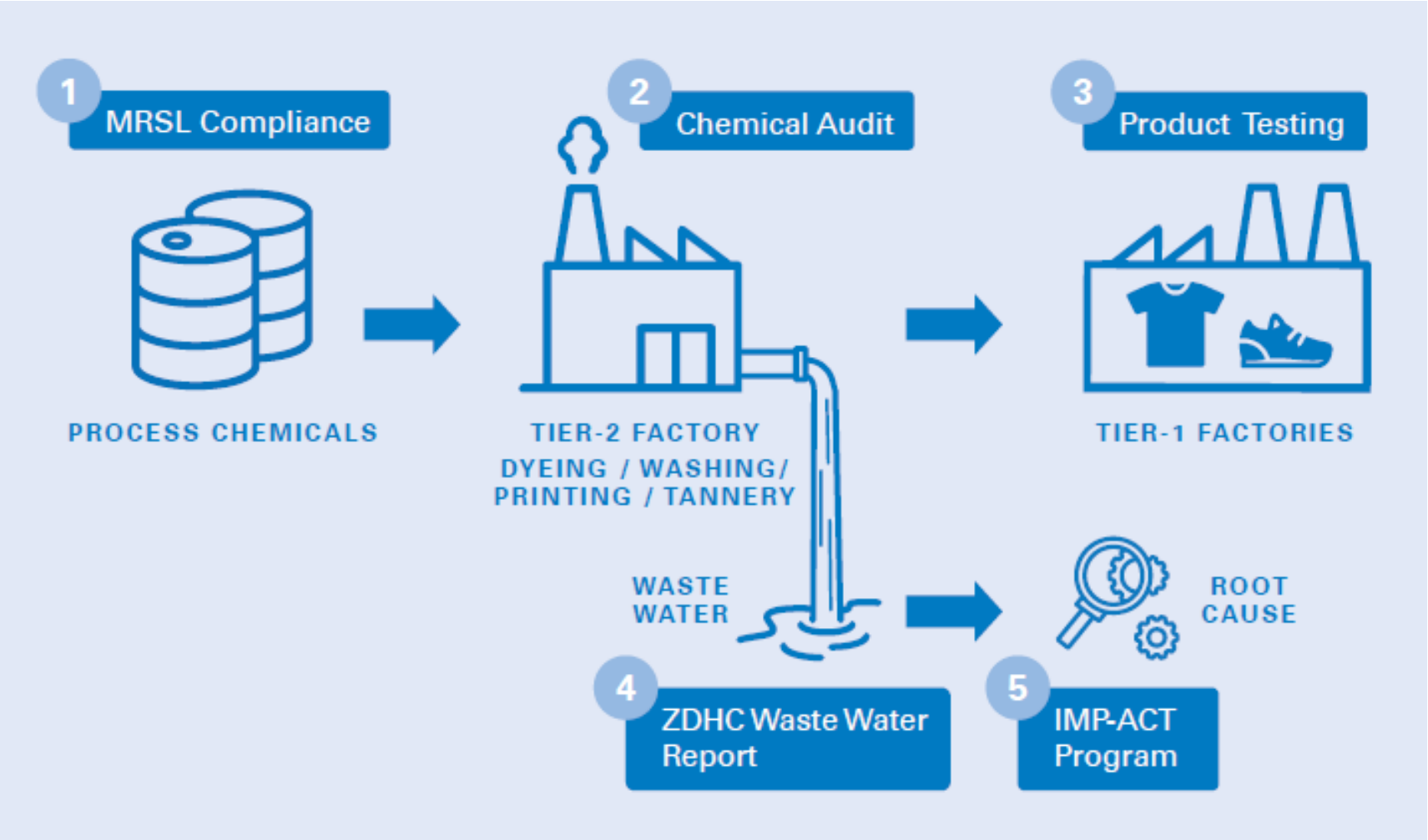
Resource Efficiency
(coming soon)

It will address the ZDHC commitment to the goals set by UNFCCC. Based on the former CPI2 platform, brand contribution and own development, the IHUB will provide a module that supports tier 2 suppliers n achieving climate goals.

MMCF
(coming soon)

The MMCF solution/ module will enable suppliers to report on their ZDHC MMCF Guidelines implementation goals.

Engagement across supply chain



Higg Index CHEMICAL SPECIALIST
Ø ZDHC VERIFIER
Higg Facility Environmental Module

ACCREDITED By Ø ZDHC
Training Provider

ACCEPTED By Ø ZDHC
Laboratory

ACCEPTED By Ø ZDHC
Certification Standard

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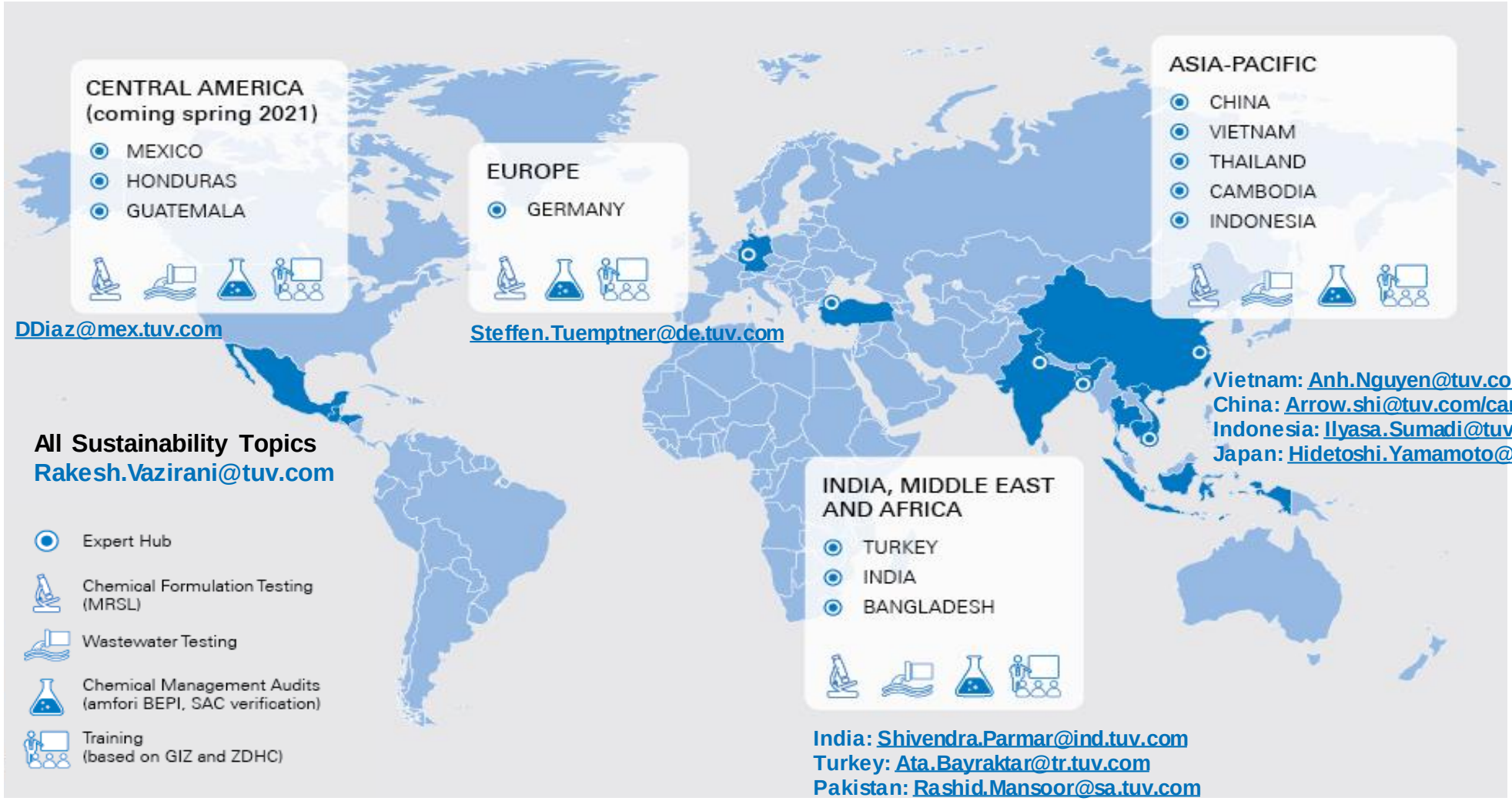
Questions ? Feedback ?



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