Quarter 3 Report

October 2012

RØADMAP TO ZERO DISCHARGE OF HAZARDOUS CHEMICALS



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INTRODUCTION

BACKGROUND

In 2011, the founding brands, specifically adidas Group, C&A, H&M, Li Ning, NIKE, Inc., and PUMA SE, made a joint commitment to help lead the industry toward the Zero Discharge of Hazardous Chemicals (ZDHC) . As a part of the commitment and first step on the path to ZDHC, these brands published a Joint Roadmap that would jump start the movement toward zero discharge for all products across all pathways by 2020.

In 2012, G-Star Raw, Levi Strauss & Co, and Jack Wolfskin joined the group of brands and committed to the Joint Roadmap. There are nine current signatory brands and five brands in the on-boarding process.

THE ZDHC PROGRAMME

GOAL

The ZDHC programme is an industry led initiative whose goal is the zero discharge of hazardous chemicals for all products across all pathways in supply chains by 2020.

OWNERSHIP

ZDHC signatory brands proudly own and lead this zero discharge industry initiative which will impact the textile industry, local communities, and the environment.

COMMITTMENT

Every ZDHC signatory brand has signed up to the level of commitment of the Joint Roadmap, which has not changed since its creation in November 2011.

CALL FOR COLLABORATION

JOIN US

To deliver on the challenging commitment to ZDHC by 2020, the participation of a large number of participants is necessary, including brands, retailers, suppliers, and public and private sector stakeholders such as the chemical industry and government authorities.

The current Joint Roadmap brands welcome additional members and support from all stakeholders and constituencies as needed for the Joint Roadmap to be successful. To find out more about this programme, please email us and we will contact you to discuss efforts in detail.

GOVERNANCE POLICIES AND PROCEDURES

The Governance Policies and Procedures document has been developed. The document defines membership criteria, structures, roles, responsibilities, processes, and budget by which the ZDHC programme will abide.

MEMBERSHIP STRUCTURE

There are three categories of membership available for organizations. Interested brands/ retailers may join us as a Signatory Member or an On-Boarding member. For full details, please read here.

1. SIGNATORY MEMBERS

- ✓ *Voting members*
- ✓ *Companies who meet the eligibility criteria set in our Governance document*

2. ON-BOARDING MEMBERS

- ✓ *Interested companies*
- ✓ *Those who have not yet met the requirement of the signatory membership*
- ✓ *Time bound membership status*

3. ASSOCIATE MEMBERS

- ✓ *Open to suppliers, industry organizations, NGOs, or other stakeholders who meet the eligibility criteria outlined in our Governance document*

COORDINATION UNDERPINS PROGRESS

CONFERENCE CALLS

The ZDHC members (Signatory and On-Boarding) hold as a minimum weekly conference calls and meetings to discuss overall programme management aspects and specific projects.

WORKSHOPS

Conference calls provide a platform for consistent information exchange and project planning. In person workshops have been held since late 2011, providing for intense collaboration.

In September 2012, the ZDHC members met in Portland, Oregon, USA, for a week long workshop. The meetings provided for alignment, ensured coordination moving forward, and anchored our roadmap activities and projects, important elements as we will soon be starting the development of the next version of the Joint Roadmap.



PORTLAND WORKSHOP

WORKSHOP ATTENDENCE

ZDHC signatory members, ZDHC on boarding members, chemical industry, and industry associations.

MAIN WORKSTREAMS AT THE WORKSHOP

1. NEXT STEPS OF JOINT ROADMAP AND VISION FOR 2020

Further development of our vision for ZDHC 2020 and mid-term milestones towards 2020, including the brainstorming of the next version of the Joint Roadmap.

2. UPDATE OF JOINT ROADMAP PROJECTS

To aim for a common understanding of the Joint Roadmap projects, key milestones, schedule, and budget requirements; and ensure that we have a plan for meeting all 2012 project commitments.

To also engage with US-based stakeholders focused on the environment and chemistry, to understand how we can partner on the ZDHC Joint Roadmap.

3. UPDATE AND REVIEW of PROGRAMME ORGANIZATION

Refine governance to ensure we are set-up to operate optimally for existing members and to welcome and integrate new signatory and associate members

1. Iteration of Joint Roadmap and Vision for 2020

DISCUSSION

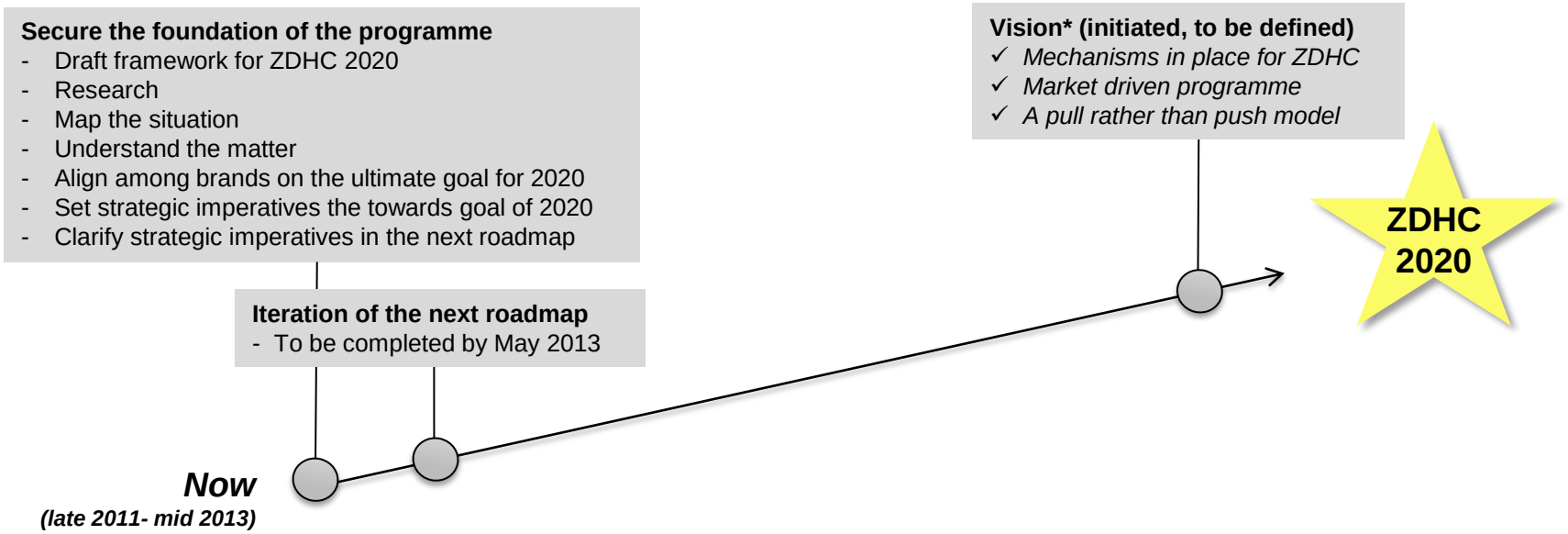
- The ZDHC members discussed possible terms, concepts, and ideas for inclusion in a Long Term Vision Statement for the ZDHC Programme.
- The ZDHC members discussed possible strategic imperatives that would support the Programme's Long Term Vision
- The ZDHC members decided to form a work stream around the task of collecting input and creating a Long Term Vision for the Programme

OUTCOMES

Long Term Vision work will feed into creation of the next iteration of the ZDHC Members' Joint Roadmap

✓ Expected completion of Iteration of Joint Roadmap by April/May 2013

✓ A stakeholder consultation process will be set-up for this next iteration



PROGRAMME STATUS

The Joint Roadmap identifies 17 projects that comprise the ZDHC programme. Updates were provided for each projects in the eight categories, as outlined in this section.

8. Summary of Roadmap Projects

The table below summarizes the major actions to be taken based on this roadmap and their relative impact on the issues of inventory, disclosure, elimination, and verification.

Roadmap Element	Categorization of Roadmap Element: Inventory	Disclosure	Elimination	Verification	Supply Chain Coverage
Benchmark study whether 9 classes of chemicals not in discharge to water or sludge using on-site visits and audits, inventories, and analytics where appropriate.	○	○	●	●	Pilot
Develop action plan to address phase-out of any 9 chemical classes found in benchmark study.	○	○	●	●	100%
Communication to suppliers to source APEO/NPE free preparations, initiate project to identify 'positive list' of APEO/NPE free detergents.	○	○	●	○	100%
Conduct follow-up study at selection of facilities that have converted to APEO/NPE free detergents to identify remaining sources.	○	○	●	●	Pilot
Confirm, or set timelines for the elimination of products that are associated with PFOA and PFOS by replacing C8 fluorinated water repellent chemistry with alternative technologies including short-chain fluorochemical water repellents approved by global regulators.	○	○	●	○	100%
Develop a comprehensive, generic inventory of chemicals used in textile manufacturing.	●	●	●	○	100%
Identify and agree to a cross-industry screening tool for chemical hazards.	●	●	●	○	100%
Establish a plan to evaluate the chemical inventory by intrinsic hazard and establish a sector wide list of hazardous chemicals.	●	●	●	○	100%
Expand our current efforts of prescribing alternative (greener) chemistries to be used on our products.	○	○	●	○	100%
Develop a joint generic audit approach for environmental performance (including chemicals management).	○	○	●	●	100%
Develop a shared dye house and printer audit protocol with a competent third party.	○	○	●	●	100%
Within legal confines, develop a program to incentivize suppliers to fulfill the dye house and printer audit protocol.	○	○	●	●	100%
Continue expansion of individual/collective RSLs and MRSLs.	○	○	●	●	100%
Develop shared approach with 3rd party for dye house and printer audit	○	○	●	●	100%
Collaborate on joint training efforts and knowledge transfer and deliver a joint training program in one or more countries.	●	●	●	●	100%
Convene cross sector group to explore the best ways to encourage sector wide supplier chemical disclosure and deliver a study based on data collection from a select group of facilities.	●	●	●	○	Pilot
Explore platform options for suppliers to disclose their chemical inventory under the assumption that disclosing their inventory will have a positive effect.	●	●	●	○	Pilot

Page 10, Joint Roadmap

http://www.roadmaptozero.com/pdf/Joint_Roadmap_November_2011.pdf

- *A. Benchmarking and Phase Out*
- *B. Water Repellent*
- *C. Chemical Identification and Hazardous Evaluation*
- *D. Green Chemistry*
- *E. Audit Protocol Development and Use*
- *F. Joint Training*
- *G. Disclosure*
- *H. Stakeholder Engagement*

A: Benchmarking and Phase Out

PROJECTS

P01 - Benchmark:
Benchmark study on whether 9 classes of chemicals are not in discharge to water or sludge using on-site visits and audits, inventories and analytics where appropriate

P02 – Phase Out Plan:
Develop an action plan to address the phase out of any 9 chemical classes found in the benchmark study

P03 – APEO/NPE Positive List:
Communication to suppliers to source APEO/NPE free preparations, initiate project to identify 'positive list' of APEO/NPE free detergents

P04 – APEO/NPE Follow-up study:
Conduct follow up study at selection of facilities that have converted to APEO/NPE free detergents to identify remaining sources

RESULTS/STATUS TO DATE

BENCHMARKING

- ✓ The signatory members created two benchmarking teams (sports and fashion) to reflect differences in manufacturing processes
- ✓ We completed pilot projects in Bangladesh and China
- ✓ We discussed the results from all pilot studies completed so far
- • We are currently planning for more pilot projects in China, Vietnam, Taiwan, and India
- • Additional benchmarking is planned for the 4th quarter 2012
- • We plan to publish a report of our 2012 results

NPE: nonylphenol ethoxylates **APEO:** Alkylphenol ethoxylates

B: Water Repellent

PROJECT

P05 – Water Repellent Chemistry:
Confirm or set timelines for the elimination of products that are associated with PFOA and PFOS by replacing long chain (C8) fluorinated water repellent chemistry with alternative technologies

RESULTS/STATUS TO DATE

ALTERNATIVES TO C8 CHEMISTRY AND TECHNOLOGIES THAT ARE ASSOCIATED WITH PFOA AND PFOS
Tackling and achieving this goal is a complex challenge – one that our brand collaboration cannot solve alone. In light of this challenge, we are collaborating with the outdoor industry and have reached out to chemical suppliers, academics, textile experts, and others to gather information. The purpose is to evaluate the commercially available repellent technologies not associated with PFOA and PFOS that meet the widely different performance requirements demanded by consumers for multiple product types.

During the 3rd quarter, in collaboration with the outdoor Industry, chemical suppliers, and textile experts, the Signatory Members have:

- ✓ Conducted extensive research into understanding the problems with long chain chemistry and understanding what alternatives are available and how these impact on performance (water and stain repellency) of the textile.
- ✓ Reached out to chemical companies asking for information on alternative chemistries.
- ✓ Produced a research report to provide the ZDHC Group with information to make informed decisions.
- ✓ Develop tools to help the brands search for solutions.
- ✓ Scheduled a workshop to be held end of October in Munich, Germany, together with the outdoor industry, with the purpose of aligning the industry.
- By the end of the 4th quarter 2012, we will confirm or set a timeline for the phase-out of C8 Chemistry.
- We will be conducting additional research into PFC-free solutions to understand what is realistic.

With this information we are now looking to set timelines for moving away from long chain chemistry and products associated with PFOA and PFOS.

C: Chemical Identification and Hazardous Evaluation

PROJECTS

P06 – Generic inventory of chemicals:
Develop a comprehensive, generic inventory of chemicals used in textile manufacturing

P07 – Chemical Hazard Screening Tool
Identify and agree to a cross-industry screening tool for chemical hazards

P08 – Chemical Hazard Evaluation Plan
Establish a plan to evaluate the chemical inventory by intrinsic hazard and establish a sector wide list of hazardous chemicals

P13 – RSLs and MRSLs
Continue expansion of individual/collective RSLs and MRSLs

RESULTS/STATUS TO DATE

CHEMICAL INVENTORY

- ✓ We have researched a number of existing chemical inventories (Oekopro database, BAT REF document, KEMI commodity guide) and we are currently analyzing if they provide the required information to support meeting our goals.
- The Group is working in collaboration with the chemical industry in developing a list of chemical substances as well as chemical “commercial” products.
- The group is also exploring potential interest for collaboration with other organizations.
- Finding existing information is proving to be a challenge and one we hope to achieve working together with the chemical industry.

CHEMICAL HAZARD SCREENING TOOL

A chemical hazard assessment process can be used to identify and prioritize chemical substances for action based on associated hazards.

- ✓ A draft chemical hazard screening tool approach guidance has been developed in conjunction with input from industry, government and NGO technical representatives.
- This guidance was in turn used to create a request for proposal (RFP) which will be used to secure services to rank approximately 50 chemicals in a pilot scale test of the guidance.

D: Green Chemistry

PROJECT

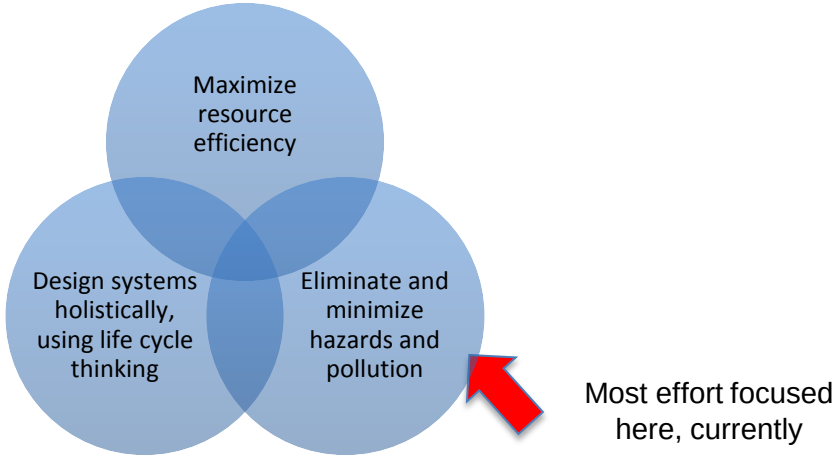
P09 – Green Chemistry
Expand our current efforts of prescribing alternative (greener) chemistries to be used on our products

RESULTS/STATUS TO DATE

GREEN CHEMISTRY

- Group discussion on a definition of “green” chemistry that could be supported by a wide range of stakeholders from various geographical locations
- One goal is to provide a positive list of safer (greener) chemistries.
- Group agreement that collaboration with chemical industry will be critical.
- The Green Chemistry project will be further developed, based on P06, P07 and P08 in combination with management approaches, and folded in to the next version of the Joint Roadmap.

The Green Chemistry Puzzle



E: Audit Protocol Development and Use

PROJECTS

P10 – Generic Audit Approach
Develop a joint generic audit approach for environmental performance

P11 – Dye House and Printer Audit Protocol
Develop a shared dye house and printer audit protocol with a competent third party

P12 – Incentivize Suppliers to Fulfil Audit Protocols
Within legal confines, develop a program to incentivize suppliers to fulfil the dye house and printer audit protocol.

RESULTS/STATUS TO DATE

GENERIC AUDIT APPROACH

Progress has been made to develop a joint generic audit approach for environmental performance. The aim is to develop a generic audit approach so that an audit can be carried out on any kind of facility from Tier 1 and beyond. In developing this auditing approach we are reaching out to owners of existing auditing protocols and aligning with existing industry initiatives.

- ✓ We have conducted an extensive mapping of Brands existing tools and other environment auditing tools.
- ✓ Looked at collaboration options and reached out to a selected group of organizations active in this area.
- ✓ Started to research different ways of sharing auditing information electronically.
- ✓ Aligned on the process steps required in the audit process .
- • Currently, we are drafting our specification for the tool.

F: Joint Training

PROJECT

P14 – Joint Training
Collaborate on joint training efforts and knowledge transfer

RESULTS/STATUS TO DATE

JOINT TRAINING

- ✓ ZDHC Members agreed on a structured training approach for suppliers
- ✓ ZDHC Members agreed to map training needs against currently available training, and prioritize
- ✓ As first steps, training materials to develop awareness on ZDHC will be available from December 2012
- • A modular approach may be most effective, given the variety of processes and groups entities involved in the supply chain

G: Supplier Disclosure Options and Platforms

PROJECTS

P15 – Supplier Disclosure Options
Convene cross sector group to explore the best ways to encourage sector wide supplier chemical disclosure and deliver a study based on data collection from a select group of facilities

P16 – Supplier Disclosure Platform
Explore platform options for suppliers to disclose their chemical inventory

RESULTS/STATUS TO DATE

DISCLOSURE

- ✓ ZDHC Members have evaluated several possibilities on this complex issue, such as the disclosure of used chemicals, discharged chemicals, potential stakeholders and their feasibility.
- ✓ The research performed on incentives and barriers for disclosure will be revised to reflect the above discussions.
- ✓ A revised project plan will be generated.
- ✓ We are currently mapping China regulatory requirements for disclosure. China has been selected as a Pilot geographical area.
- • We are also looking forward to be part of any discussions related to disclosure, to better understand the benefits/drawbacks and give the ZDHC Members' views on the subject.

H: Stakeholder Engagement

PROJECTS

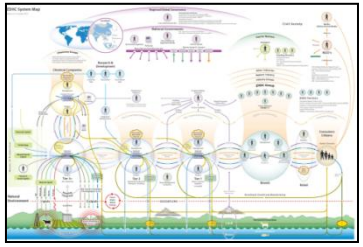
P17 – Stakeholder engagement (Global and China/Asia)
- Global Working Group to develop Global Stakeholder Engagement Plan
- Asia Working Group to develop Stakeholder Engagement Plan

OUTCOMES/STATUS TO DATE

Stakeholder were invited to attend a forum to receive an update on the ZDHC Programme's progress on projects and to provide input. Attendees included the following organizations:

1. *Ted Howes and Eric Olson, BSR (Business for Social Responsibility)*
2. *Mohandas Seneviratne, International Finance Corporation*
3. *Sanjeev Kagram, Iscale*
4. *Beth Jensen, Outdoor Industry Association*
5. *Jason Kibbey, Sustainable Apparel Coalition*
6. *Siet Meijer, World Bank*

- ✓ Stakeholders and ZDHC members reviewed the updated systems map (thumbnail on the right hand side; refer to Appendix A for a larger version)
- ✓ Key leverage points are further described for a clear understanding by ZDHC members and all potential stakeholders
- • Stakeholders presented their projects/activities that may support the ZDHC by 2020 goal.
- ✓ The Signatory members agreed to provide more details on individual projects so stakeholders can take more time to consider where they might assist.



STAKEHOLDERS IN ASIA

- ✓ The ZDHC Asia stakeholder team visited MEP (China Ministry of Environmental Protection) in August.
- • This visit was to build the group's connection with MEP, to familiarize MEP with the joint road map and seek feedback, and to discuss future regulatory trends with MEP.

PROPOSAL FOR ZDHC TECHNICAL COMMITTEE

The ZDHC members recognize the importance of engaging the chemical industry in order to truly shift the system towards preferable solutions. We believe that the chemical industry should be deeply involved and would welcome their involvement as an active member of the ZDHC Joint Roadmap.

- ✓ Several options for working with the chemical industry in the ZDHC Programme were presented and input was compiled.
- Structure and role of the technical committee is still under discussion.
- Immediate next step is to invite a chemical industry representative to regularly attend ZDHC weekly calls.

REFLECTION

The ZDHC members are well underway in achieving the firm foundational steps required to reach the ambitious goal of Zero Discharge of Hazardous Chemicals by year 2020. In Quarter 2, programme members worked strategically on structuring and clarifying the programme. The benefit of this strategy is clearly shown in this quarter's progress report, through our delivery of clear achievements in each key area and in the underlying structure built to support the programme purposefully as we move forward.

Beyond our extensive research and pilot project efforts this quarter, we are also already planning next steps for the iteration of the Joint Roadmap, scheduled with a firm publishing deadline of no later than May 2013.

Whilst time is emerging, the ZDHC team is growing stronger in knowledge, collaboration as well as workforce. This is shown not only through our progress reports, but also through our growing members and engagement with stakeholders and associates. Expansion of ZDHC participation is crucial in order to tackle the complex issues involved and to lift these challenges from a few industry leaders to the entire industry. Towards that effort, we reemphasize our warm welcome for any interested brands, retailers, suppliers, chemical industries, and stakeholders who would like to be involved in our ZDHC programme.

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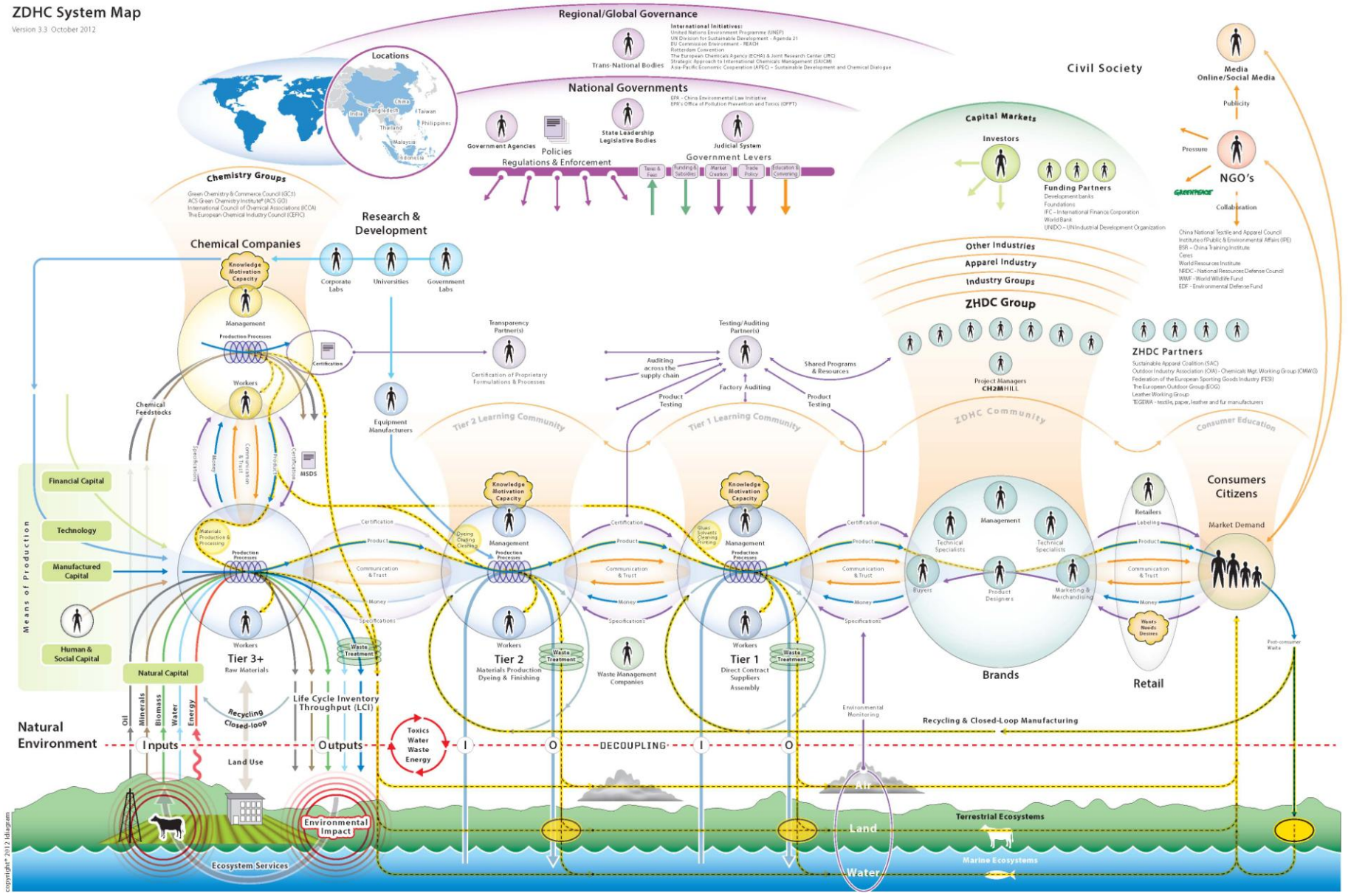
APPENDIX A



ZDHC System Map
Version 3.3 October 2012
Regional/Global Governance
Trans-National Bodies
International Initiatives:
United Nations Environment Programme (UNEP)
UN Division for Sustainable Development - Agenda 21
EU Commission Environment - REACH
Rotterdam Convention
The European Chemicals Agency (ECHA) & Joint Research Center (JRC)
Strategic Approach to International Chemicals Management (SAICM)
Asia-Pacific Economic Cooperation (APEC) – Sustainable Development and Chemical Dialogue
Locations
China
India
Bangladesh
Taiwan
Philippines
Thailand
Malaysia
Indonesia
National Governments
EPA - China Environmental Law Initiative
EPA's Office of Pollution Prevention and Toxics (OPPT)
Government Agencies
Policies
State Leadership
Legislative Bodies
Judicial System
Regulations & Enforcement
Government Levers
Taxes & Fees
Funding & Subsidies
Market Creation
Trade Policy
Education & Convening
Civil Society
Media
Online/Social Media
Publicity
Pressure
NGO's
Collaboration
Capital Markets
Investors
Funding Partners
Development banks
Foundations
IFC – International Finance Corporation
World Bank
UNIDO – UN Industrial Development Organization
China National Textile and Apparel Council
Institute of Public & Environmental Affairs (IPE)
BSR – China Training Institute
Ceres
World Resources Institute
NRDC - National Resources Defense Council
WWF - World Wildlife Fund
EDF - Environmental Defense Fund
Chemistry Groups
Green Chemistry & Commerce Council (GC3)
ACS Green Chemistry Institute® (ACS GCI)
International Council of Chemical Associations (ICCA)
The European Chemical Industry Council (CEFIC)
Research & Development
Chemical Companies
Corporate Labs
Universities
Government Labs
Knowledge Motivation Capacity
Management
Production Processes
Workers
Certification
Chemical Feedstocks
Transparency Partner(s)
Certification of Proprietary Formulations & Processes
Equipment Manufacturers
Testing/Auditing Partner(s)
Auditing across the supply chain
Factory Auditing
Product Testing
Shared Programs & Resources
Other Industries
Apparel Industry
Industry Groups
ZHDC Group
Project Managers
CH2MHILL
ZHDC Partners
Sustainable Apparel Coalition (SAC)
Outdoor Industry Association (OIA) - Chemicals Mgt. Working Group (CMWG)
Federation of the European Sporting Goods Industry (FESI)
The European Outdoor Group (EOG)
Leather Working Group
TEGEWA - textile, paper, leather and fur manufacturers
Tier 2 Learning Community
Tier 1 Learning Community
ZDHC Community
Consumer Education
Financial Capital
Technology
Manufactured Capital
Human & Social Capital
Natural Capital
Means of Production
Specifications
Money
Communication & Trust
Product
Certification
MSDS
Materials Production & Processing
Production Processes
Workers
Tier 3+
Raw Materials
Waste Treatment
Life Cycle Inventory Throughput (LCI)
Recycling
Closed-loop
Oil
Minerals
Biomass
Water
Energy
Natural Environment
Inputs
Outputs
Land Use
Toxics
Water
Waste
Energy
Knowledge Motivation Capacity
Management
Production Processes
Workers
Tier 2
Materials Production Dyeing & Finishing
Waste Treatment
Waste Management Companies
Knowledge Motivation Capacity
Management
Production Processes
Workers
Tier 1
Direct Contract Suppliers Assembly
Waste Treatment
Environmental Monitoring
Recycling & Closed-Loop Manufacturing
Technical Specialists
Management
Technical Specialists
Buyers
Product Designers
Marketing & Merchandising
Brands
Retailers
Retail
Labeling
Product
Communication & Trust
Money
Waste Needs Desires
Consumers
Citizens
Market Demand
Post-consumer Waste
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DECOUPLING
I
O
Air
Land
Water
Terrestrial Ecosystems
Marine Ecosystems
Environmental Impact
Ecosystem Services
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