SUPPLIER & FACTORY HANDBOOK

CHEMICAL MANAGEMENT & CLIMATE PROGRAM

Tchibo GmbH

Version 2.0 | May 2026

PREAMBLE

This handbook provides our suppliers and their factories with a comprehensive guide to Tchibo's environmental requirements, focusing on the continuous improvement of manufacturing processes within textile, footwear, and leather production. It primarily addresses **chemical management** and **climate protection** topics.

The first part of this handbook focuses on eliminating hazardous chemicals and reducing water pollution in our supply chains. To harmonize our individual requirements with industry standards and simplify implementation for our factories, we continuously adapt guidelines and tools from the **Zero Discharge of Hazardous Chemicals (ZDHC) Foundation**. These chapters are based on the **ZDHC Chemical Management System (CMS) Framework** and the **Supplier Roadmap to Zero Platform**, and include links to relevant ZDHC resources.

The second part of this handbook covers the improvement of energy-efficient production to reduce greenhouse gas (GHG) emissions and contribute to limiting global warming to 1.5°C. To achieve Tchibo's ambitious CO_2 reduction target, we need to work together with supply chain partners at all levels. This climate chapter is based on the **Climate Action Playbook**, published by the United Nations Fashion Industry Charter for Climate Action (UNFCCC). It guides our suppliers in managing their CO_2 emissions and provides recommendations for actions they can take to improve energy efficiency and further reduce CO_2 emissions.

Should you have any questions regarding this handbook, please contact:

For Chemical & Water: detox@tchibo.de

For Climate Protection: environmentalprotection@tchibo.de

DETOX / CHEMICAL MANAGEMENT

TABLE OF CONTENTS

1. INTRODUCTION

Through joint action, we can move toward sustainable chemical management to protect the environment and human health. Be a part of this movement!

1.1 REASON WHY

In 2011, the **Greenpeace Detox campaign** challenged top brands to make amends by working with their suppliers to eliminate all hazardous chemicals across their entire supply chains. This challenge was taken up by the fashion industry including Tchibo. Since then Tchibo started the **Detox Program** that is committed to eliminating hazardous chemicals from its textile supply chains and continuously gaining more transparency over the use, discharge, and disposal of chemicals.

We believe that only collective actions can transform the industry. Tchibo joined the **Zero Discharge of Hazardous Chemicals (ZDHC) Foundation** in 2018. The ZDHC is a multi-stakeholder organization that leads the fashion industry in eliminating hazardous chemicals from its supply chains and building sustainable chemical management practices as part of its 'Roadmap to Zero' Program.

The ZDHC Roadmap to Zero Program is structured around three focus areas: **(1) Input, (2) Process, and (3) Output.** Within each focus area, the ZDHC develops specific guidelines, tools, and solutions to monitor chemical management and facilitate the implementation of the Roadmap to Zero Program. These tools support the Detox Program in achieving our targets for improved chemical and wastewater management within our supply chain.

Suppliers can become a **Signatory Friend of ZDHC - Vendors** to scale and monitor the implementation of the ZDHC tools and guidelines in their supply chain!

- Zero Discharge of Hazardous Chemicals (ZDHC) Foundation
- ZDHC Roadmap to Zero Program
- Learn more about Friends of ZDHC for Vendors

1.2 TCHIBO TARGETS ON CHEMICAL MANAGEMENT

With our Detox program, Tchibo aims to **reduce the use of hazardous chemicals in textile, footwear and leather production.** Improving chemical management practices is an ongoing process which depends on active engagement and collaboration with our suppliers! Transparency regarding our suppliers' factories is crucial for driving changes.

While we have already achieved 100% traceability for our cut-make-trim factories, continuous support from suppliers is essential to extend the traceability to our wet processing units (WPUs). Our 2027 supply chain traceability targets are designed to accurately identify these facilities and enable a thorough assessment of their wastewater and chemical management practices via ZDHC tools.

Supply Chain Traceability Targets	
Target 1	100% transparency of wet processing units (WPUs) in our textile, footwear and leather supply chain
Target 2	100% of our wet processing units (WPUs) are onboarded to ZDHC Gateway and adopt ZDHC Tools (e.g. InCheck, ClearStream, Supplier to Zero, ZDHC Academy)

We have established performance targets for factories to achieve by 2027, Concurrently, we offer factories a comprehensive portfolio of both onsite and offsite qualification programs, designed to address their specific improvement requirements and enhance their chemical management capabilities.

Supply Chain Performance Targets	
Target 1	100% of our top wet processing units (WPUs) achieved over 80% MRSL compliance rate of input chemicals via ZDHC InCheck report by 2027
Target 2	100% of our top wet processing units (WPUs) are compliant with ZDHC wastewater guideline (at least foundational level) via ZDHC ClearStream report by 2027

1.3 OBJECTIVES

With this handbook, we want to create awareness for sustainable chemical management among our suppliers and offer them and their factories an orientation for implementation. The handbook is intended to provide the most necessary information in a brief and concise manner and to link to the ZDHC sources (e.g. ZDHC CMS Framework & Technical Industry Guide, Supplier to Zero Platform) for in-depth reading and implementation guidance. It is primarily aimed at rather inexperienced suppliers and factories in this field. However, we consider it indispensable to deal with it intensively in order to be able to meet Tchibo and industry requirements.

1.4 SCOPE

This handbook is applicable for all suppliers and their factories (manufacturing partners) along Tchibo's textile, footwear and leather supply chain - **mainly in wet processing and tanning levels.** The implementation of requirements focuses on factories that take over at least one of the following process steps:

Different from Tchibo human rights / social monitoring, our detox requirements apply to all countries relevant for Tchibo's sourcing, **including the European Union!**

2. GETTING STARTED

Understanding Tchibo's policies and ZDHC guidelines and tools is an essential starting point for implementing Detox requirements correctly!

2.1 TCHIBO POLICIES

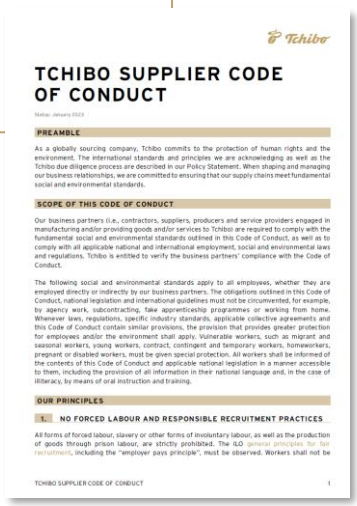
The implementation and monitoring of our Detox Program is anchored in different internal policies and integrated, external guidelines.

Tchibo Supplier Code Of Conduct (SCoC)

Our Supplier Code of Conduct (SCoC) covers requirements on environmental protection and chemical management. It is an integral part of the Non-Food buying contracts and therefore contractually binding for all suppliers and their producing factories.

EXTRACT FROM THE SCoC: ENVIRONMENTAL REQUIREMENTS

- ✓ Compliance with environmental laws and international standards
- ✓ Environmental permits and licences
- ✓ Implementation of an efficient Environmental Management System [EMS]
- ✓ No release of hazardous substances into the environment
- ✓ Increase of energy efficiency
- ✓ Implementation of the ZDHC Chemical Management System [CMS]
- ✓ Compliance against Tchibo RSL and ZDHC MRSL


Tchibo

TCHIBO SUPPLIER CODE OF CONDUCT

Status: January 2023

PREAMBLE

As a globally sourcing company, Tchibo commits to the protection of human rights and the environment. The international standards and principles we are acknowledging as well as the Tchibo due diligence process are described in our Policy Statement. When shaping and managing our business relationships, we are committed to ensuring that our supply chains meet fundamental social and environmental standards.

SCOPE OF THIS CODE OF CONDUCT

Our business partners (i.e., contractors, suppliers, producers and service providers engaged in manufacturing and/or providing goods and/or services to Tchibo) are required to comply with the fundamental social and environmental standards outlined in this Code of Conduct, as well as to comply with all applicable national and international employment, social and environmental laws and regulations. Tchibo is entitled to verify the business partners' compliance with the Code of Conduct.

The following social and environmental standards apply to all employees, whether they are employed directly or indirectly by our business partners. The obligations outlined in this Code of Conduct, national legislation and international guidelines must not be circumvented, for example, by agency work, subcontracting, fake apprenticeship programmes or working from home. Wherever laws, regulations, specific industry standards, applicable collective agreements and this Code of Conduct contain similar provisions, the provision that provides greater protection for employees and/or the environment shall apply. Vulnerable workers, such as migrant and seasonal workers, young workers, contract, contingent and temporary workers, homeworkers, pregnant or disabled workers, must be given special protection. All workers shall be informed of the contents of this Code of Conduct and applicable national legislation in a manner accessible to them, including the provision of all information in their national language and, in the case of illiteracy, by means of oral instruction and training.

OUR PRINCIPLES

1. NO FORCED LABOUR AND RESPONSIBLE RECRUITMENT PRACTICES

All forms of forced labour, slavery or other forms of involuntary labour, as well as the production of goods through prison labour, are strictly prohibited. The ILO general principles for fair recruitment, including the "employer pays principle", must be observed. Workers shall not be

TCHIBO SUPPLIER CODE OF CONDUCT 1

Download: Tchibo Supplier Code of Conduct (January 2023)

- English
- German
- Arabic
- Bengali
- Bulgarian
- Chinese
- Czech
- Italian
- Khmer
- Polish
- Portuguese
- Romanian
- Slovak
- Spanish
- Turkish
- Vietnamese

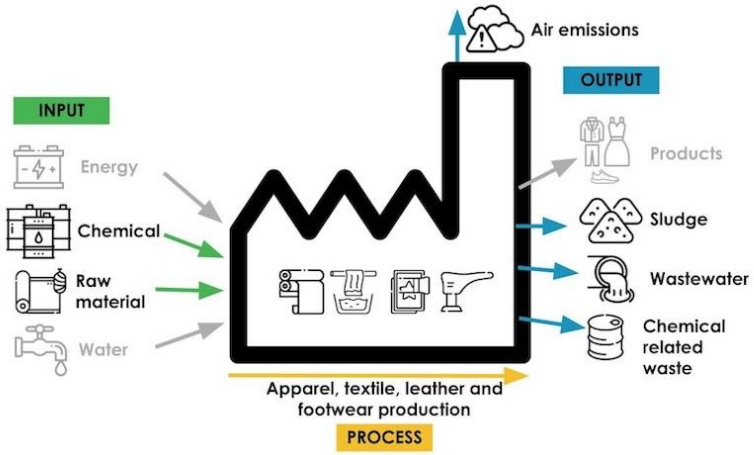
To Do:

Supplier

- ✓ Familiar yourself with Tchibo SCoC.
- ✓ Cascade the requirements of the Tchibo SCoC down to your respective factories (including your sub-suppliers and contractors) and ensure its implementation!

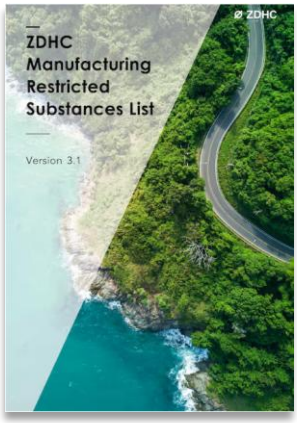
2.2 ZDHC GUIDELINES

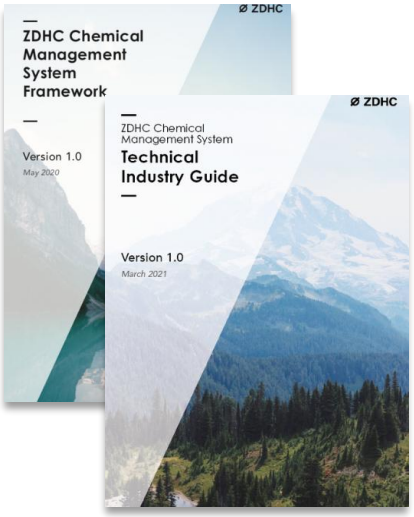
The ZDHC guidelines, which are publicly available, provide a framework for developing and implementing sustainable chemical management systems. Tchibo's Detox requirements are closely aligned with the adoption of these guidelines for Input, Process, and Output management.

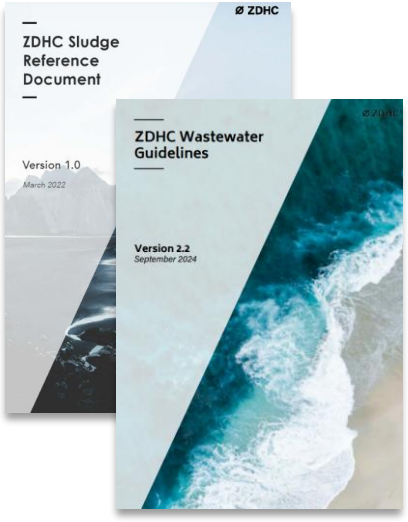


Source: ZDHC Supplier Roadmap to Zero

INPUT	PROCESS	OUTPUT
ZDHC Manufacturing Restricted Substances List (MRSL)	ZDHC CMS Technical Industry Guide (ZDHC CMS TIG)	ZDHC Wastewater Guidelines
	ZDHC Chemical Management System Framework	Sludge Reference Document







Click on the booklet pictures to view or download the guidelines

Source: ZDHC Website

To Do:

Supplier

- ✓ Familiar yourself with ZDHC Guidelines.
- ✓ Cascade the ZDHC Guidelines down to your respective factories (including your sub-suppliers and contractors) and ensure the adoptions of these standards!

2.3 TCHIBO WPU DISCLOSURE FORM

To enable effective monitoring, we must first have visibility of the factories involved in production. This information is collected via the **Wet Processing Unit (WPU) Disclosure Form**, which the Tchibo Purchasing Department provides to all suppliers no later than when an order is placed. Suppliers are required to provide data of **at least one to maximum three WPUs and/or tanneries** that represent main share of production for the respective Tchibo order.

To Do:

Supplier

- ✓ Fill in all information per textile project and forward the Excel sheet to the respective buyer latest with order placement!
- ✓ Fill in minimum 1 and maximum 3 main wet processing unit(s) and/or tannery(s) that represent the main share of production involvement.

2.4 ZDHC GATEWAY

The ZDHC Gateway is a digital data base provided by the ZDHC to increase transparency on and evaluate chemical products that are used in production. Brands, supplier and chemical formulators can access the platform, share data and monitor progress towards improved chemical management and compliance against the ZDHC Guidelines. Registration is **free of charge** for suppliers/factories through Tchibo!

Learn more about the ZDHC Gateway

To Do:

Supplier

- ✓ Ensure your respective factories (including sub-suppliers and contractors) to follow Tchibo's requests to onboard on ZDHC Gateway and connect with Tchibo.

To Do:

Factory

If you are new to ZDHC Gateway:

- ✓ Tchibo will send an invitation link via E-mail for the ZDHC Gateway registration to the factory contact.
- ✓ Factory to open the invitation link and complete your Gateway profile. Click HERE for a step-by-step guide!
- ✓ ZDHC customer support will then approve your registration.
- ✓ After approval, connect with Tchibo on the Gateway.

If you are already on ZDHC Gateway:

- ✓ Tchibo will receive a connection request from Tchibo on ZDHC Gateway.
- ✓ Factory to login to their Gateway account to accept the connection request from Tchibo. Click HERE for a step-by-step guide!

3. INPUT MANAGEMENT

To effectively manage and improve chemical inputs in production, it is essential to create chemical inventory lists and evaluate them against the ZDHC MRSL.

This chapter highlights some key elements in chemical input management for factories, referencing to the ZDHC CMS TIG and Supplier Roadmap to Zero (RtZ) Platform.

3.1 CHEMICAL POLICY AND INVENTORY

Beyond complying with brand-specific Restricted Substances Lists (RSLs), factories must identify all purchased chemicals to ensure safer chemical inputs. This involves taking the following actions:

- **Chemical Policy :** Develop a chemical management policy which includes chemical purchasing policy to make sure the chemicals you purchased are meeting your requirement.

  ZDHC CMS Technical Industry Guide, p.9-21 and ZDHC Supplier RtZ – Input - Policy

- **Chemical Inventory List (CIL):** Maintaining a CIL that records all purchased chemicals and chemical mixtures is an integral part of implementing a robust chemical management system. While a ZDHC CIL Template is available, ZDHC-approved service providers offer digital platforms. These platforms simplify CIL creation, facilitate data upload, and enable compliance assessment against the ZDHC MRSL (via Performance InCheck Report) and other industry standards.

  List of ZDHC approved service provider for CIL/Performance InCheck can be found HERE

  ZDHC CMS Technical Industry Guide, p.68-78 and ZDHC Supplier RtZ – Input - CIL

What is the difference between RSL and MRSL?

RSL = Restricted Substances List

contains chemicals which are either completely prohibited or restricted above certain threshold levels in final products e.g. T-Shirt

MRSL = Manufacturing Restricted Substances List

contains chemicals which are either completely prohibited or restricted above certain threshold levels in production processes

3.2 ZDHC INCHECK REPORTING

The ZDHC InCheck Report is an easy-to-read chemical inventory report generated by ZDHC Solution Providers (e.g. CleanChain®, Bhive®, BVE3®, 4sChem+,Smart Cares by SGS, Toxclear). It is based on a supplier's CIL and provides an overall summary of ZDHC MRSL conformance for all products listed in inventory. There are two versions of InCheck report:

Performance InCheck : a report summarizes the MRSL conformance based on supplier's self-reported CIL.

Verified InCheck Level 1/Level 2: a verified version of the performance InCheck report through on-site verification by a ZDHC Approved (second or third-party) InCheck Reviewer.

List of ZDHC approved InCheck reviewer for Verified InCheck can be found HERE

ZDHC Supplier RtZ – Input – InCheck Reporting

The ZDHC CMS TIG and Supplier Roadmap to Zero (RtZ) Platform provide further guidance for a comprehensive Chemical Input Management. Suppliers and factories could refer to the following links to learn more:

ZDHC CMS Technical Industry Guide

ZDHC Supplier RtZ – Input – Chemical Traceability

ZDHC Supplier RtZ – Input – Input Material Purchasing

ZDHC Supplier RtZ – Input – Materials Traceability

To Do:

Factory

- ✓ Commit to ZDHC MRSL and CMS, to use only ZDHC MRSL compliant chemicals.
- ✓ Choose a ZDHC approved solution provider to build and maintain a Chemical Inventory List (CIL) and generate monthly **ZDHC Performance InCheck Report** on the ZDHC Gateway (minimum once per year).
- ✓ In addition to the monthly CIL, use the Chemical Module of the ZDHC Gateway to search for ZDHC MRSL compliant chemicals (at least level 1 conformance) and to replace non-conformant substances from your inventory.
- ✓ If ZDHC InCheck report shows a compliance rate **below 80%,** apply improvement measures aligned with Tchibo.
- ✓ Request your chemical formulators to publish their products to the ZDHC Gateway for verification against the ZDHC MRSL V3.1 conformance levels. If they are not yet registered on the ZDHC Gateway, please invite them to join the platform.
- ✓ You are recommended to verify your Performance InCheck report through ZDHC Verified InCheck Level 1. Additionally, Tchibo may commission service providers to conduct verification for designated factories.

4. PROCESS MANAGEMENT: CMS

Implement a Chemical Management System (CMS) for safe chemical handling and use, guided by the ZDHC CMS Framework.

4.1 CHEMICAL MANAGEMENT SYSTEMS (CMS)

The basis for establishing and monitoring sustainable chemical management practices is the development of a chemical management system (CMS). Therefore, factories need to implement an effective CMS that considers the entire life cycle of chemicals, including purchasing, storage, transportation, use and the safe disposal/discharge of chemicals.

Factories should set up at least a CMS with the following key elements:

Chemical Management Strategy	Safe Chemical Storage
Waste Management	Chemical Handling & Worker Safety
Document and Process Control	Continuous Improvement Actions

→ ZDHC CMS Technical Industry Guide and ZDHC Supplier RtZ – Process

4.2 ZDHC SUPPLIER TO ZERO (StZ) ASSESSMENT

The Supplier to Zero Assessment is a self-assessment to support the facility to benchmark their chemical management performance against the ZDHC Chemical Management System (CMS) Framework and gives practical recommendations for the implementation of the ZDHC guidelines, platforms and further solutions in the respective factory context.

Factories could showcase their achievement on chemical management efforts through three levels of assessment and certificate – Level 1, Level 2, Level 3.

→ Learn more about ZDHC Supplier to Zero

Supplier to Zero
By ZDHC

To Do:

Factory

- ✓ Implement chemical management according to ZDHC CMS framework in factory.
- ✓ Parallel to the ZDHC Gateway, register on the Supplier to Zero (StZ) platform
- ✓ Carry out the StZ self-assessment to benchmark chemical management practices against the ZDHC CMS and obtain at least StZ Level 1 certificate. And progress to Level 2 / Level 3 step-by-step.

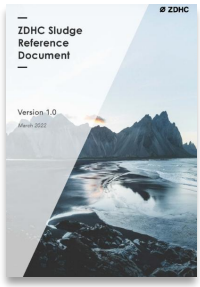
5. OUTPUT MANAGEMENT

Measuring and monitoring output streams, such as through wastewater and sludge testing, validates the effectiveness of chemical inputs and processes.

Factories generate outputs (e.g. waste, wastewater, sludge and air) during manufacturing process, if poorly treated, pollutes the environment and endangers community health. Factories must therefore establish robust systems for the proper management, treatment, and discharge of all outputs (waste, wastewater, sludge, and air emissions). This chapter outlines the key elements of effective output management.

5.1 WASTEWATER & SLUDGE TESTING

To assess wastewater quality, factories can perform wastewater test and sludge analysis. The **ZDHC Wastewater Guideline** serves as a multi-brand standard for testing requirements, providing guidance on testing methods, tailored to discharge type, and outlines the restrictions and specific limit values for chemicals listed in the ZDHC MRSL. The ZDHC collaborates with several **international testing institutes** with local offices to carry out regular onsite wastewater and sludge analysis.



Download the Wastewater Guidelines V2.2 and Sludge Reference Document

ZDHC CMS Technical Industry Guide, p.93 - 106 and ZDHC Supplier RtZ – Output

List of ZDHC Approved Wastewater Laboratories can be found HERE

5.2 ZDHC CLEARSTREAM REPORTING

The ZDHC ClearStream Report provides a clear summary of wastewater test results, enabling factories, suppliers, and brands to assess the facility's wastewater performance against the ZDHC Wastewater Guideline. This report can be generated when a ZDHC Approved Wastewater Laboratory conducts the required wastewater test.

The ZDHC ClearStream report summarized the wastewater test results into below categories:

- Conventional Parameters & Anions
- Heavy Metals
- MRSL

Source: ZDHC Website – ClearStream

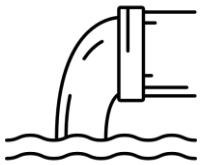
To learn how to manage wastewater test results, click HERE

To learn more about ClearStream Report, click HERE

5.3 ROOT CAUSE ANALYSIS (RCA) & CORRECTIVE ACTION PLAN (CAP)

When a ClearStream report identifies non-conformities against the ZDHC Wastewater Guideline, suppliers must initiate a Root Cause Analysis. This analysis should examine chemical inventory or effluent treatment operations to identify the underlying cause. Following the RCA, suppliers must develop and implement a Corrective Action Plan (CAP). A CAP template is available for download on the ZDHC website. The completed CAP can then be submitted to Tchibo via email or by uploading it to the ZDHC Gateway with access granted to Tchibo.

Factories that directly discharge wastewater (with an in-house effluent treatment plant) would benefit from an **Effluent Treatment Plant (ETP) Assessment** conducted by a ZDHC Approved ETP Reviewer to identify the root cause of any wastewater non-compliance.



- Download wastewater & sludge RCA/CAP template HERE
- Instruction on sharing CAP with brands on ZDHC Gateway can be found HERE
- ZDHC CMS Technical Industry Guide, p.98-99 and ZDHC Supplier RtZ – Output - RCA/CAP
- ZDHC Supplier RtZ – Output – ETP Assessment and ZHDC Knowledge Base – ETP Assessment

Additional chapters within the ZDHC CMS TIG and Supplier RtZ Platform cover comprehensive guidance on air emissions and waste disposal. Suppliers and factories should refer to the following links to learn more and implement below guidance in their operations.

- ZDHC CMS Technical Industry Guide, p.101-106
- ZDHC Supplier RtZ – Output – Air Emission Guideline
- ZDHC Supplier RtZ – Output – Chemical-Related Waste Disposal

To Do:

Factory

- ✓ Carry out **annual wastewater test** according to the **ZDHC Wastewater Guidelines V2.2** with a ZDHC approved laboratory and generate **ZDHC ClearStream Report** on the ZDHC Gateway.
- ✓ The wastewater results presented in ClearStream Reports must comply with at least the ZDHC foundational level for conventional parameters, anions, and heavy metals. Crucially, no MRSL chemicals should be detected.
- ✓ If a ClearStream report shows that the wastewater parameters do not meet ZDHC wastewater requirements, the factory must conduct an **RCA & CAP** (with ETP Assessment if applicable) and implement the improvement measures.
- ✓ Share the CAP with Tchibo via email or the ZDHC Gateway within the requested deadline.

6. CONTINUOUS IMPROVEMENT & QUALIFICATION

Knowledge is power! Capacity building and regular trainings help to evaluate and improve your chemical management and develop best practices.

Factories should be eager to continuosly improve chemical management practices and set a good example in the industry by regularly evaluating non-compliances and gaps in their CMS, understanding the root causes, defining improvement measures and setting targets to build a sustainable chemical management. As regulations, requirements and processes change, factories need to apply mechanisms that ensure a consistent review and update of their CMS.

6.1 TCHIBO ENVIRONMENTAL PROTECTION ENGAGEMENT PROGRAM (EP_2)

The Tchibo Environmental Protection Engagement Program (EP_2) is an environmental program for tier 1 and tier 2 factories to reduce their environmental footprint regarding climate change, pollution, and water use. The program focuses specifically on **chemical and wastewater management** to support factories to increase MRSL compliance of chemicals and wastewater quality.

Key steps of this program involve:

1. Online data collection
2. 2-day on-site data assessment
3. Factory-specific list of detox measures
4. Prioritization of measures and target setting
5. Continuous expert support for implementation
6. Access to a digital monitoring platform

The program also covers aspects of energy efficiency and energy transition.

Feel free to reach out to us if you have questions about the program or are interested in joining:

environmentalprotection@tchibo.de

6.2 ZDHC ACADEMY

The ZDHC Academy is a training platform to raise awareness and develop skills on sustainable chemical management – especially in terms of ZDHC guidelines, solutions and platforms. Suppliers and factories can use the ZDHC Academy to build their knowledge on improved CMS. The platform offers:

- In-person, online courses and self paced E-Learning delivered by ZDHC Approved Trainers
- ZDHC introduction and implementation webinars provided by ZDHC Team

Learn more about the ZDHC Academy

Source: ZDHC Academy website

To Do:

Factory

- ✓ Participate in Tchibo's program or training programs nominated by Tchibo and implement according measures
- ✓ Register and participate in ZDHC Academy trainings to build knowledge and capacity around sustainable chemical management.

6.3 LWG Certification (for tanneries only!)

The Leather Working Group (LWG) is a not-for-profit membership organization, working to creating meaningful change across the global leather supply chain. Since its foundation in 2005, LWG has evolved to become the world's largest leather industry-specific membership organization, representing over 1,800 businesses in over 60 countries. At Tchibo, all tanneries are required to be LWG certified with valid an audit report.

Learn more about the Leather Working Group

Source: LWG Website

To Do:

Factory

- ✓ Besides complying with ZDHC guidelines and tools, all tanneries producing for Tchibo should obtain a LWG audit report and certificate
- ✓ The full LWG audit report and certificate should be shared with Tchibo
- ✓ No application of chromium tanning!

Tchibo prohibits leather sourcing from Bangladesh!

CLIMATE PROTECTION

TABLE OF CONTENT

1. INTRODUCTION

Protecting the climate is one of the most urgent tasks of our time. All of us need to act. The textile industry has therefore set out the way together.

1.1 REASON WHY

Man-made carbon emissions - from burning fuel, gas & coal - cause global warming. This leads to an increase in extreme weather events such as floods and droughts, threatening the livelihoods of millions of people. We do not have much time to prevent the worst, by limiting global warming to 1.5° Celsius: **We must act now!**

Reducing greenhouse gases is a challenge that also brings opportunities:

- Cost savings from reducing energy consumption
- Eliminate fuels and use renewable, low-cost energy sources.
- Drive innovations in low-carbon materials, processes and products
- Reputational benefits with stakeholders including investors, employees, customers, policy makers, NGOs, and more

- United Nations: Sustainable Development Goal 13 Climate Action
- Remaining Carbon Budget

1.2 TCHIBO'S CLIMATE GOALS

Tchibo is committed to ambitious climate goals, with emission reduction targets validated by the Science Based Target Initiative (SBTi). The following table outlines the key aspects of Tchibo's climate target relevant to our non-food supply chain partners. For a comprehensive overview, the full climate target is available via the Tchibo Climate Protection Strategy link below.

BUSINESS AMBITION FOR 1.5°C

SCIENCE BASED TARGETS

Tchibo's Climate Targets on Scope 3 Non-Agricultural Supply Chain	
Near Term	Reduce absolute scope 3 (upstream & downstream value chain) GHG emissions **25%** by 2030 from a 2022 base year
Net Zero	Reduce absolute scope 3 (upstream & downstream value chain) GHG emissions **90%** by 2045 from a 2022 base year

- Tchibo Climate Protection Strategy
- Tchibo Sustainability Reporting
- Science Based Targets – Companies Taking Action

1.3 OBJECTIVES

With this handbook, we want to create awareness for climate protection among our suppliers and offer an initial orientation for implementation. The handbook is intended to provide the most necessary information in a brief and concise manner and to offer further sources for more in-depth reading. It is primarily aimed at rather inexperienced suppliers in this field.

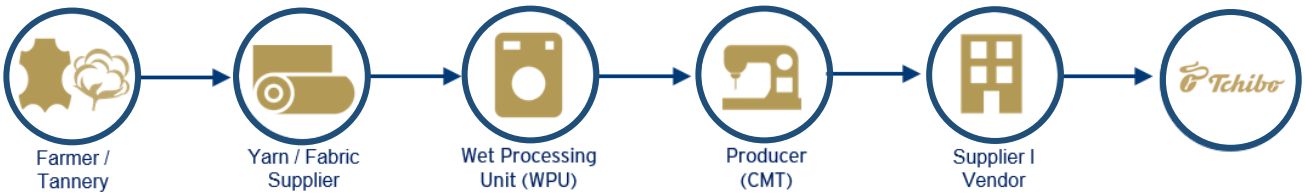
However, we consider it essential to address this topic thoroughly in order to meet future requirements. Many of the necessary changes, such as transitioning energy supply take time. It is therefore all the more important to act now and take concrete steps toward a climate-neutral future in order to reduce risks and seize opportunities.

What to do at a glance:

- ✓ Set up a corporate carbon footprint
- ✓ Set a target and reduce emissions
- ✓ Cooperate with up- and downstream value chain partners to decarbonise
- ✓ Report on challenges and success

1.4 SCOPE

This handbook is applicable for our manufacturing partners along Tchibo's textile supply chain in all levels, but not addressed to customers, logistics service providers or disposal and recycling companies.



In this handbook, we are referencing to the 'Climate Action Playbook', which you can download under the following link. Below each chapter you will find the page in the playbook which we are referring to and further links with more information.

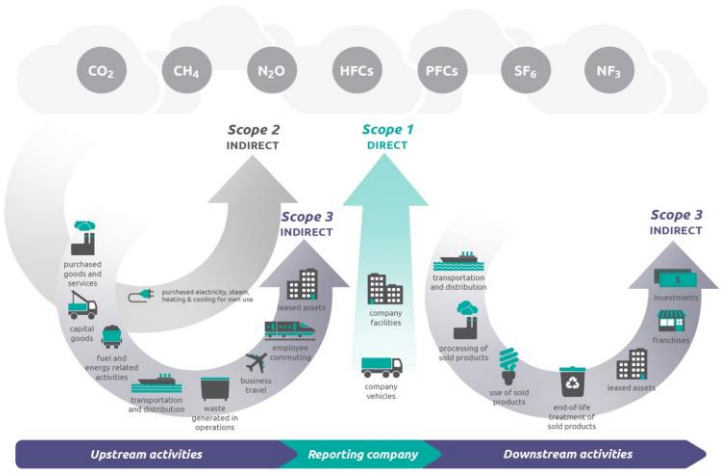
Climate Action Playbook

2. GETTING STARTED

First step: You need to determine carbon footprint, because you can't manage what you can't measure.

2.1 UNDERSTANDING GHG EMISSIONS

Greenhouse gases (GHGs) are natural or human-made atmospheric gases that absorb and emit infrared radiation, creating the greenhouse effect that warms the planet. In the fashion industry, key GHGs include carbon dioxide (CO_2) from burning fossil fuels and methane (CH_4) from natural gas use and livestock in leather production. Other climate-relevant gases are measured in CO_2-equivalents (CO_2e) to standardize their impact. Corporate carbon footprints classify emissions into three "scopes" based on the Greenhouse Gas Protocol.



Please refer to the appendix at the end of this book for a detailed look of scope 1 – 3 activities .

2.2 SET UP YOUR CARBON FOOTPRINT

When setting up your corporate carbon footprint, you should follow the guidance of the Greenhouse Gas (GHG) Protocol, as this is the most accepted reporting standard. The following steps need to be followed to compile a corporate carbon footprint:

1. **Set organizational boundaries :** Define a clear scope of your inventory by using the equity share or the financial control methodology. Practically speaking, this answers the question of which parts of the company are covered; often this is not so obvious because there are subsidiaries, for example.
2. **Identify emission sources by categories:** Identify all business activities that consume energy or materials by asking colleagues, external experts and consult industry guidelines.
3. **Gather data on emissions:** After you have identified all relevant business activities, you need to gather data to quantify the GHG emissions. Usually, you will do this by multiplying activity data with emission factors:

Activity data		**Emission factor**		**GHG Emissions for this activity**
e.g. total litre of diesel consumed	✖	e.g. CO_2 for one liter of diesel	=	in tonnes of CO_2e

4. **Roll-up GHG emissions to a corporate level:** sum-up calculations from all departments, country units, branches within the defined organizational boundaries.

Climate Action Playbook , p. 11 -25

3. REPORTING EMISSIONS

The best practice is to show transparency about your emissions to your customers and the public.

In addition to the internal use of emission data, publication is common. Business partners, but also other stakeholders, have an interest in this climate-relevant data. In this way, the company's impact on climate and optimally also the CO_2 intensity of individual products can be estimated. Brands should include this supplier-specific data in their Scope 3 calculations. This is the only way to create a realistic picture of the emissions across their entire value chain.

Climate Action Playbook, p.27-29

Where and how should emissions be reported? Many brands ask their suppliers to report emissions through the Higg FEM on the Worldly platform by Cascale (formerly SAC). The advantage of this approach is that suppliers can report their emissions once and share the data with multiple brands. Tchibo encourages you to use this tool to report your emissions and share the assessment with us.

However, suppliers can also report their factories' emissions via a separate annual data form in the CBX/TradeBeyond platform, which is currently under development.

- Cascale Higg Index Tools
- Higg Index Learning Center

4. TARGET SETTING

Without a goal, no targeted action!

We know from climate research that limiting global warming to 1.5°C would prevent the worst consequences for our planet. This results in a residual budget of CO_2 emissions that must not be exceeded. To meet this target, CO_2 emissions must be reduced by about 50% by 2030 and by 2050 no CO_2 emissions at all.

This level of ambition should also be reflected in the objectives of companies and could be used as a rough but sufficient orientation. Those who want to be very precise, can use the methods of the Science Based Targets initiative (SBTi), which are available for download (click on the picture). Due to the complexity, we recommend working with an expert when applying them.

- Climate Action Playbook, p.31-35
- Ambitious Corporate Climate Action - Science Based Targets

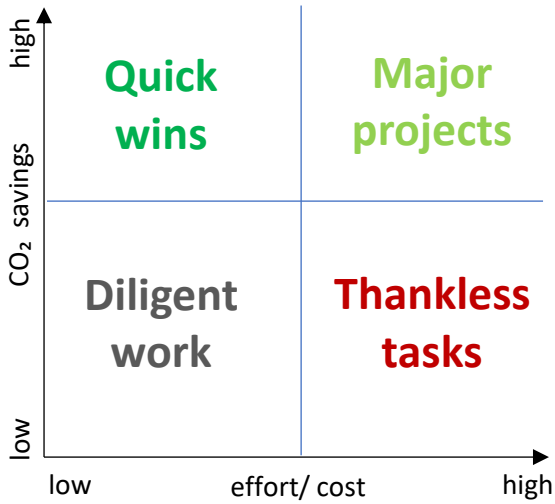
5. EMISSION REDUCTIONS

Let's get it done: here you can act very concrete!

5.1 METHODOLOGY ON PRIORITIZING REDUCTION MEASURES

CO_2 emissions can be reduced by lowering the consumption of materials and fossil-based energy. In many cases, this also leads to lower operating costs. A useful guiding principle is efficiency: achieving maximum output with the least possible input of materials and energy. Within a company, there are many opportunities to improve efficiency across almost all departments.

Start with a brainstorming session involving relevant colleagues to identify possible measures to reduce energy and material consumption. Evaluate on the criteria ***CO_2 saving*** and ***effort/ costs***. The matrix on the right can help you prioritize which measures to implement first.



Begin with **"quick wins"**, which often reduce emissions and operating costs immediately without major investment. For more complex "major projects", form dedicated teams to support implementation. These measures usually require investment and deliver results over a longer period, so involving an external consultant may be helpful.

Tasks and responsibilities should also be defined for "diligent work". Regular maintenance is an example of these kinds of measures. Remember that many small and simple measures add up to a big saving. The "thankless tasks" should have the lowest priority and might be monitored from time to time to re-evaluate the cost-benefit consideration.

Alternatively, you can engage an engineering firm to conduct an energy audit at your site. This will provide an overview of potential measures and their expected impact. Setting up a management system based on the **Plan-Do-Check-Act** cycle and defining **SMART** sub-targets can also help you stay on track to achieve your climate goals.

5.2 EMISSION REDUCTION OPPORTUNITIES

Improving energy efficiency is often the first step in reducing CO_2 emissions, while switching to renewable energy can deliver even greater impact. These low-carbon energy sources can be used in different ways – for example, by purchasing alternative fuels such as biomass or sourcing green electricity from the grid. Generating your own electricity through solar panels can also be a cost-effective climate protection measure and should be evaluated for your site. The following table provides some examples of GHG emission reduction opportunities.

Climate Action Playbook , p.37-51

Examples for GHG emission reduction measures in production	
Energy Efficiency	▪ Reduce energy use in NF production e.g. by… a) Operational Improvement b) Exchange of Inefficient Equipment c) Smart Control Systems
Renewable Electricity	▪ Switch to green electricity e.g. by… a) Rooftop Photovoltaic (self-generation of renewable electricity) b) Power Purchasing Agreement (PPAs) (long-germ contracts for the purchase of renewable energy enable investor to build new plants) c) Direct Purchase of Green Electricity d) Purchase Renewable Electricity Certificate (RECs)
Renewable Heat	▪ Switch to low carbon heat technologies e.g. by… a) Solar Thermal Technologies b) Combustion Technologies c) Power to Heat (PtH) technologies d) Waste Heat Recovery Technologies

On the appendix pages of The Climate Action Playbook, suppliers can find additional examples of initiatives, energy-efficiency measures, and renewable-energy opportunities for manufacturers. Suppliers are encouraged to refer to these resources and identify the options that best fit their specific situation.

Climate Action Playbook , p.61-67

6. CONTINUOUS IMPROVEMENT & QUALIFICATION

Leverage brand and industry resources to achieve your climate goals.

6.1 TCHIBO ENVIRONMENTAL PROTECTION ENGAGEMENT PROGRAM (EP_2)

The Tchibo Environmental Protection Engagement Program (EP_2) is an environmental program for tier 1 and tier 2 factories to reduce their environmental footprint regarding climate change, pollution, and water use. With a core focus on climate protection, the program aims at identifying the most relevant measures to increase energy efficiency and promote energy transition.

Key steps of this program involve:

1. Online data collection on energy and emission data
2. 2-day on-site data assessment
3. Factory-specific list of decarbonization measures
4. Prioritization of measures and climate target setting
5. Continuous expert support for decarbonization
6. Access to a digital monitoring platform

The program also covers aspects of chemical, wastewater and water management.

Feel free to reach out to us if you have questions about the program or are interested in joining:

environmentalprotection@tchibo.de

6.2 INDUSTRY RESOURCES

If you need further support, such as training or technical advice, the following resources may be helpful:

Free learning platforms:

- Climate and Environmental Change (atingi.org)

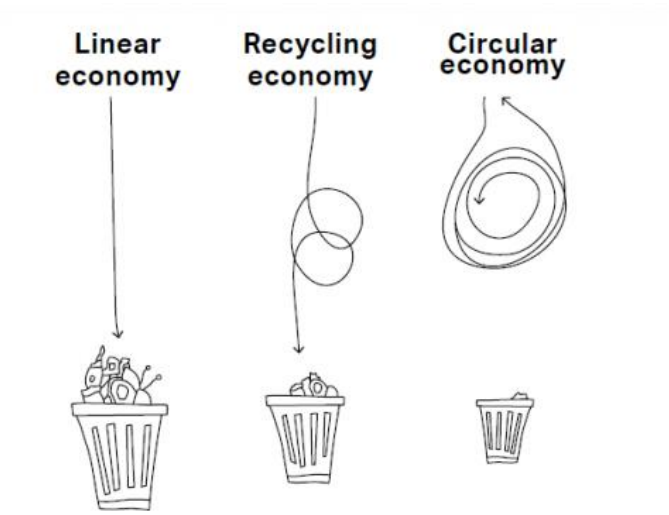
Training programs:

- ZDHC Resource Efficiency Module (REM) via ZDHC Supplier Platform

7. CIRCULAR ECONOMY

Circular Economy aims to decouple economic growth from resource consumption.

In our current economy, we take resources, make products from them, and eventually throw them away as waste – the process is linear. In a circular economy, by contrast, we aim to keep materials and products in use for as long as possible to maximize their value and eliminate waste and pollution. In a circular economy, products are designed to be long-lasting, to be repaired, reused and finally recycled at their end-of-life.



Circular Economy is not only good for the environment but also good for business. By reducing waste and increasing resource efficiency, businesses can save costs, improve customer loyalty, create new revenue streams.

To adopt circular economy principles, textile suppliers can take the following steps:

- ✓ Choose recycled materials instead of virgin, e.g. certified by Global Recycling Standard (GRS), Please note: there are different sources, e.g. recycled polyester from PET bottles, post-production wastes or from post-consumer waste like discarded clothes (preferred)
- ✓ Prioritize mono-material composition over material blends, because it's easier to recycle when the garment reaches its end-of-life.
- ✓ Choose low impact production methods like dope dyeing vs. piece dyeing or waterless dyeing to reduce wastewater
- ✓ Minimize cut-off waste, e.g. by lay plan and pattern optimization or utilise fully fashioning for knitwear
- ✓ Reuse or resell your own production waste, like cutting waste, fabric selvedges, damaged/scrap yarn, excess garments. Check-out waste trading platforms like Reverse Resources
- ✓ Aim for high quality durable products, that can be used and reused again, to increase the lifetime value for costumers
- ✓ Make design, sourcing, and sales processes digital – such as using 3D design and digital showrooms

Climate Action Playbook, p. 53-57

8. CLOSING AND NEXT STEPS

Cooperation across the entire value chain is needed – only together can we make the difference!

To meet current and future requirements, cooperation along the value chain is indispensable. We need to share information on GHG emissions and work together to ensure compliance with the 1.5°C target through better product design and more efficient production. We have very little time to do this, given the scale of the effort that is needed.

Many relevant investments and technologies have long life cycles and payback periods. Therefore, from now on, it is necessary to stop investing in the use of fossil fuels and to give preference to renewable energies, which are also economically more favorable in the long term. In addition, material use and energy consumption must be significantly reduced; this is the only way to secure the future of our industry.

Tchibo strongly believes that the following concrete steps are necessary:

- ✓ **Let us cooperate!**
  In case of any questions, comments or suggestions please get in touch with our environmental team via environmentalprotection@tchibo.de
- ✓ **Set up your carbon accounting**
  We would like to encourage you to enter data on your production annually into the commonly used Higg FEM and connect your account with Tchibo.
- ✓ **Set yourself ambitious GHG reduction targets**
  Communicate them and regularly follow them up. Best practice is to submit an SBTi target for your organization.
- ✓ **Phase out coal**
  If you still use coal as an energy source at your site, please familiarize yourself with alternatives and plan a change of energy source.
- ✓ **Reduce your GHG emissions**
  Work on energy efficiency and the use of renewable energy as outlined in chapter 5.

APPENDIX

Scope 1-3 emissions details

	Scope 1	Scope 2
Emissions for a manufacturer might include:	• Natural gas or other fuels used for heating stores, offices, or warehouses that are owned or operated directly • Natural gas, coal, oil, or biofuels used for generators, heat-intensive processes, or boilers • Fugitive process emissions • Fuel used for owned or operated vehicles • Refrigerant leakage	• Grid electricity for heating, lighting or cooling in retail, offices, or warehouses • Grid electricity used for manufacturing processes • District heating or cooling • Purchased and consumed steam
Tools and data sources to measure these impacts:	• Information on the size of office, retail, and warehouse space (in square meters or square feet) • Actual fuel use data or purchase records (invoices) for office, retail, warehouses, and factories • Actual fuel use data or purchase records from vehicle fleet managers or users • Actual refrigerant losses data or modelled estimates • Emissions factors	• Actual or estimated meter readings or invoices from electricity providers • Actual or estimated usage or invoices from steam providers • Renewable energy contractual agreements, energy attribute certificates, etc . • Emissions factors

Scope 3 Categories	Description
1. Purchased goods and service	Extraction, production, and transportation of goods and services purchased by a company
2. Capital goods	Extraction, production, and transportation of capital goods
3. Fuel and energy-related activities (not included in scope 1 or 2)	Extraction, production, and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year, which have not been included in scope 1 or scope 2
4. Upstream transportation and distribution	Transportation and distribution of products purchased by the reporting company in the reporting year between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company). Transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between a company's own facilities (in vehicles and facilities not owned or controlled by the reporting company)
5. Waste generated in operations	Disposal and treatment of waste from the reporting company's operation.
6. Business travel	Transportation of employees for business-related activities (in vehicles not owned or operated by the reporting company).
7. Employee commuting	Transportation of employees from home to work (in vehicles not owned or operated by the reporting company).
8. Upstream leased assets	Operation of assets leased by the reporting company (lessee).
10. Processing of sold products	Emissions of processing intermediate products by downstream companies.
9. Downstream transportation and distribution	Transportation and distribution of products sold by the reporting company in the reporting year between the reporting company's operations and the end consumer (if not paid for by the reporting company), including retail and storage (in vehicles and facilities not owned or controlled by the reporting company).
11. Use of sold products	Emissions of processing intermediate products by downstream companies.
12. End-of-life treatment of sold products	Waste disposal and treatment of products.
13. Downstream leased assets	Emissions of assets owned by the company but leased to another entity.
14. Franchises	Emissions of franchises.
15. Investments	Emissions associated with investments.