

Industry Objectives



Support the fashion industry goal of 30% reduction in carbon emissions by 2030.



Reduce industry's impact on water.



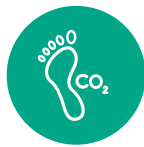
Screening Life Cycle Assessment (LCA) for Facilities

Aligned with the Sustainable Development Goals (SDGs)

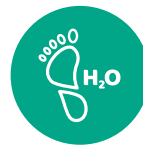


Value-add for Facilities

- Demonstrate leadership
- Strengthen trust
- Grow business



Carbon Footprint



Water Footprint

Our Approach

The diagram explains the rigorous process undertaken to develop the Carbon and Water Footprint Tool for OEKO-TEX® STeP certified facilities.

7. Iterated model

Continuous improvement

The tool is built so that future updates can easily be made in various areas:

- Datasets
- Explanations
- User Experience

1. Defined scope

Guided by principles of screening LCA

As there is no standard for production facilities nor market appetite for an expensive full Life Cycle Assessment (LCA), our approach followed five principles of a screening LCA:

- Simplicity
- Efficiency
- Credibility
- Transparency
- Iterative

2. Gathered stakeholder input

Identified 100+ activities and inputs & outputs / activity

Together with industry experts, over 100 key production activities with corresponding inputs and outputs were identified and categorized:

Main Categories:

- Yarn Production
- Fabric Manufacturing
- Pre-Treatment
- Drying
- Dyeing
- Washing
- Printing
- Finishing
- Making-up

Inputs/Outputs:

- Electricity
- Steam
- Water
- Chemicals
- Packaging
- Transportation
- Wastewater
- Waste Packaging

6. Tested model

Five test locations

To ensure global applicability, the tool was tested in key textile markets:

- India
- Hungary
- Switzerland
- Italy
- Germany
- More to come

5. Developed "proof of concept"

Designed carbon & water footprint model

The tool enables facilities to input real data. If datapoint is unknown, the model selects the respective default data, then calculates the emissions and water usage.

Input categories:

- Country Location
- Facility Boundaries
- Materials Processed (inputs & outputs)
- Inventory per Facility
- Transportation

Resulting output:

Carbon emissions and water reported:

- per facility
- per processing step
- from "sourcing origin"
- per yearly production
- per 1 kg of material output

4. Identified data sources

Incorporated relevant datasets

The datasets and models leverage inputs from vetted data sources and credible industry databases to provide "best of" industry averages:

Data sources:

- OEKO-TEX® anonymized STeP customer data
- OEKO-TEX® experts' data on textile production

Databases:

- **WALDB** – environmental data on fibre production and textile processing steps (see Step 2 "Main Categories")
- **ecoinvent v 3.5** – global/regional/country level data on:
 - Electricity
 - Steam
 - Packaging
 - Waste
 - Chemical
 - Transport

3. Selected methodologies

Combined product and corporate LCA methodologies

Our approach is aligned with the requirements described in the following standards:

- Product LCA based on [ISO 14040](#) and [PEF](#) – for materials used
- Corporate Water Footprint based on [AWARE](#)
- Corporate Carbon Footprint based on [IPCC 2013](#) – for production related impacts