

# Tools in Assessing the Sustainability

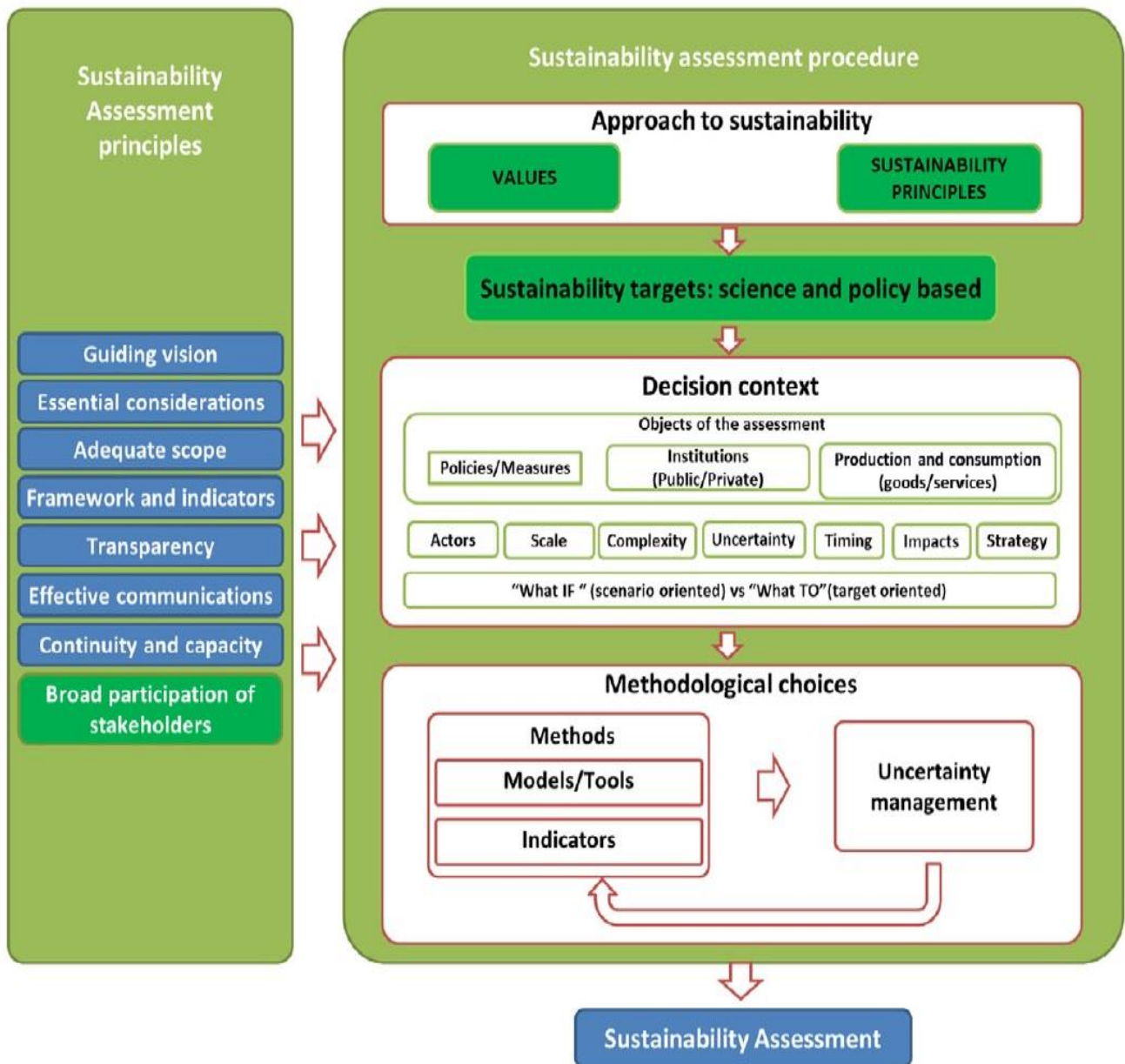
- ▶ **Sustainability Assessment**
- ▶ **Life Cycle assessment (LCA)**
- ▶ **The Higg Index;**
- ▶ **Sustainable Textile Production (STeP);**
- ▶ **The sustainable apparel index;**
- ▶ **Standards and test methods for sustainability**

(2022)

**Sustainability Assessment (SA)** is a methodology “that can help decision-makers and policy-makers decide what actions they should take and should not take in an attempt to make social, Economic and environmental **sustainable**

**Sustainable Assessment (SA)** evaluates economic, social and **environmental impacts** of any project/proposal and also keeps the perspective on **sustainable** development during **evaluation**. **Assessments** can be either formal or informal.

# Sustainability Assessment Methodologies



Difficulties of Sustainability Assessment in Textiles (Shortly):

Complex supply chains

Lack of standardized metrics

Inconsistent data collection

Limited transparency from suppliers

Difficulty in measuring social impacts

High cost and time for assessments

Rapid changes in fashion trends

## **Sustainability Assessment Principle (2022)**

The important principles for sustainability assessment are described as follows:

- 1. Guiding Vision:** Progress towards sustainable development should be guided by the goal of delivering well-being within the carrying capacity of the biosphere and ensuring it for future generations.
- 2. Essential Considerations:** Underlying social, economic and environmental components of the system as a whole should be taken into account as well as the interactions thereof. This includes issues related to governance; the dynamics of current trends and drivers of change, and interactions thereof; the risks, uncertainties, and activities that can have an impact across boundaries; and the implications for decision making (including trade-offs and synergies).
- 3. Adequate Scope:** The assessment of progress towards sustainable development should adopt an appropriate time horizon, to address both short- and long-term effects of current policy decisions and human activities, and an appropriate geographical scope, to capture both their local and their global effects.
- 4. Framework and Indicators:** SAs should be based on: a conceptual framework as basis for identifying core indicators and related reliable data, projections and models; the most recent data in order

to infer trends and build scenarios; standardised measurement methods wherever possible, to ensure comparability. Finally, the comparison of indicator values with targets and benchmarks has to be performed, where possible.

5. **Transparency:** In the context of SAs, transparency of data and data sources, models, indicators and results is crucial, as well as public accessibility to the results. Choices, assumptions and uncertainties which determine the results of the assessment have to be clearly reported and explained. Equally, sources of funding and potential conflicts of interest have to be disclosed.
6. **Effective Communications:** SAs should be required to use clear and plain language, to ensure effective communication and to attract the broadest possible audience as well as minimise the risk of misuse; for building trust and aid interpretation, information should be presented in a fair and objective way as well as supported by innovative visual tools and graphics;
7. **Continuity and Capacity:** SAs require that they are complemented by a continuous monitoring phase. Therefore, repeated measurements as well as responsiveness to change are needed. Investments are therefore necessary to develop and maintain adequate capacity (via, for example, continuous learning and improvement).

**8. Broad Participation:** SAs should find appropriate ways to strengthen legitimacy and relevance, engaging early on with users of the assessment, reflecting the views of the public while providing active leadership.

**Table 1: Characteristics of an ideal-typical sustainability assessment**

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Fostering sustainability objectives</b>                    | <ul style="list-style-type: none"> <li>• Intergenerational equity</li> <li>• Intragenerational equity</li> <li>• Geographical equity</li> <li>• Interspecies equity</li> <li>• Procedural equity</li> </ul>                                                                                                                                                                                                                                                                                                                                              |
| <b>2. Adopting a holistic perspective</b>                        | <ul style="list-style-type: none"> <li>• Assess the system as a whole, including its parts and their interactions</li> <li>• Assess the system considering the different sustainability objectives together (integration)</li> <li>• Assess dynamics and interactions between trends and drivers of change</li> <li>• Adopt appropriate time horizon (short, medium, and long term) and (geographical) scope</li> </ul>                                                                                                                                  |
| <b>3. Incorporating sustainability in the assessment process</b> | <ul style="list-style-type: none"> <li>• Consider the normative nature of sustainability</li> <li>• Broad participation of stakeholders, including experts, while providing active leadership to the process</li> <li>• Transparency regarding data (sources, methods), indicators, results, choices, assumptions, uncertainties, funding bodies and potential conflicts of interest</li> <li>• Avoid irreversible risks and favors a precautionary approach</li> <li>• Be responsive to change, including uncertainties and risks (dynamism)</li> </ul> |
| <b>4. Supporting Decisions</b>                                   | <ul style="list-style-type: none"> <li>• Assessment of sustainability impacts and alternatives for decision-making, including synergies and trade-offs</li> <li>• Establish formal and transparent synergy/trade-off rules</li> <li>• Assessment is based on a conceptual sustainability framework and its indicators</li> <li>• Ensure effective communications (clear language, fair and objective, visualization tools and graphics, make data</li> </ul>                                                                                             |

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appropriately available)

- Adapted to and integrated into the institutional context
  - Iterative assessment process, starting at the onset of the decision-making process
  - Develop and maintain adequate capacity
  - Continuous learning and improvement
- 

## **Main steps of sustainability assessment: (2019,21)**

- ▶ **Relevance analysis** -- is sustainability relevant?
- ▶ **Scoping analysis** – what are the extent/depth, procedures and tools for the assessment?
- ▶ **Impact analysis** -- what are the short-and long-term economic, environmental and social impacts?
- ▶ **Comparative analysis** – what are the major interactions, conflicts and trade-off?
- ▶ **Associative analysis** – what measures can be put in place to mitigate harmful impacts?
- ▶ **Political analysis** – which path is the least-cost (economic, environmental and social) option?

# Higg Index (2019)

- The **Higg Index** is developed by the Sustainable Apparel Coalition (SAC).

## Sustainable Apparel Coalition (SAC)

The **Sustainable Apparel Coalition** is an industry-wide group of leading **apparel** and footwear brands, retailers, manufacturers, non-governmental organizations, academic experts, and government organizations working to reduce the environmental and social impacts of **apparel**, footwear, and textile products around the world.

- The **Higg Index** is a set of tools that enables brands, retailers, and facilities of all sizes — at every stage in their sustainability journey — to accurately measure and score a company or product's sustainability performance.
- The **Higg Index** delivers a holistic overview that empowers businesses to make meaningful improvements that protect the well-being of factory workers, local communities, and the environment.

The **Higg Index** is an apparel and footwear industry self-assessment standard for assessing environmental and social sustainability throughout the supply chain. Launched in 2012, it was developed by the Sustainable Apparel Coalition, a

nonprofit organization founded by a group of fashion companies, the United States government [Environmental Protection Agency](#), and other nonprofit entities.

The [Higg Index](#) provides a tool for the apparel and footwear industry to assess sustainability throughout a product's entire life cycle, from materials to end-of-life.<sup>[1]</sup> The metrics created Higg Index are limited to a company's internal use for the evaluation and improvement of environmental performance. Plans for a future version include the creation of a scoring scale designed to communicate a product's sustainability impact to consumers and other stakeholders.

- The three basic component of a Higg Index are (a) **Product Tools**, (2021,22) (b) **Facility Tools**, and **Brand Tools** as shown in Figure below.



**Figure: Basic Components of Higg Index (2021)**








## ❏ **Product Tools**

**Product Tools help** brands, retailers, manufacturers, NGO, academic experts, and government organizations working to understand the environmental and social impacts of **apparel**, footwear, and textile products around the world.

- From the materials a designer chooses to feature in your favourite **t-shirt** to the amount of water used to dye that worn pair of jeans, the Higg Product Tools assess a product's environmental sustainability impacts.
- **There are two Higg Product Tools:**
  - (i) the Higg Materials Sustainability Index (Higg MSI) and
  - (ii) The Higg Product Module (Higg PM).

These tools empower designers, brands, retailers, and manufacturers, to use life cycle assessment data to make informed decisions to create more sustainable products.

- **The Higg Product Tools assess the following [5 Environmental Impacts](#)**

|                                                                                   |                                              |
|-----------------------------------------------------------------------------------|----------------------------------------------|
|  | Global Warming Potential                     |
|  | Nutrient Pollution in Water (Eutrophication) |
|  | Water Scarcity                               |
|  | Fossil Fuel Depletion                        |
|  | Chemistry                                    |








## □ Facility Tools

Apparel, footwear, and textile production takes place at thousands of facilities around the world. Each facility plays a key role in the overall sustainability of the industry.

The **Higg Facility Tools** offer standardized social and environmental assessments that facilitate conversations among value chain partners to socially and environmentally improve every tier in the global value chain.



➤ **Facility Tools assess the below environment impact:**

-  Environmental Management Systems
-  Energy Use and Greenhouse Gas Emissions
-  Water Use
-  Wastewater
-  Emissions to Air (If Applicable)
-  Waste Management
-  Chemical Management

## ❑ Brand Tools

From materials sourcing to a product's end of use, the Higg BRM assesses the following life cycle stages of a product as it goes through a company's operations, identifying sustainability risks and impacts:



Brand Tools assess the following life cycle stages of a product.



## (2019,21) Importance of Higg Index in Company

The **Higg Index** is a learning tool for **companies** to identify challenges and capture on-going improvement. It targets a spectrum of performance that allows beginners and leaders in environmental sustainability, regardless of **company** size, to identify opportunities.

### ► **Higg Index simplifies sustainability.**

Global supply chains are complex, and figuring out where to focus your efforts can be overwhelming and expensive. Trying to do so alone has led more than a few companies to analysis paralysis. The Higg Index helps you take the analysis one step at a time to figure out what matters and how to measure it.

▶ **Higg Index protects you from unseen gaps.**

Don't get blindsided by the social and environmental risks in your supply chain. The Higg Index not only helps you identify those risks, it can help you proactively turn them into opportunities for innovation.

▶ **Higg Index is a one-stop shop.**

With this single, comprehensive tool for measuring and communicating your environmental and social performance, you can say goodbye to DIY approaches and conflicting software tools.

▶ **Higg Index puts you out front.**

Whether you're a brand, supplier or retailer, the entire industry is converging around a common approach for quantifying and improving environmental and social performance. Wouldn't you rather be a leader than a follower? Don't get left behind.

▶ **Higg Index has legs.**

Data collected from the Higg Index will allow our industry to take the next step of creating consumer-facing product labels with scores that communicate and certify sustainability under a single standard.

## **The Higg Index creates Business value in a company by the following 10 ways:**

1. Focus your sustainability strategy.
2. Identify opportunities to cut waste and cost, and drive innovation.
3. Avoid the time and cost of “do-it-yourself” approaches.
4. Reduce data sharing time, cost and complexity.
5. Drive improvement through industry benchmarking.
6. Optimize sourcing.
7. Reduce the time and costs of multiple assessments.
8. Support stakeholder communications.
9. Get out in front of regulation.
10. Be a better company - demonstrate impact.

## **What makes an impact assessment “sustainable”?**

- ▶ Examines LONG-TERM flows, investments and effects
- ▶ Examines economic, environmental and social impacts in equal measure
- ▶ Identifies synergies and trade-offs across domains
- ▶ Respects open and transparent processes

## How can synergies and trade-offs be identified?

- ◆ Comparative value analysis – impacts are scored according to pre-set values
- ◆ Utility analysis – impacts are rated on a uniform scale and weighted
- ◆ Cost-benefit analysis – positive and negative impacts are assigned monetary values and compared
- ◆ Multi-criteria analysis – both quantitative and qualitative impacts are ranked on pre-set criteria
- ◆ Risk assessment – degrees of risk reduction identified with pre-set risk thresholds

## What are the main difficulties with sustainability assessments?

- ▶ Giving equal attention to the three spheres and adequate attention to the longer-term
- ▶ Assigning monetary values to environmental and social assets for comparisons
- ▶ Identifying trade-offs – presenting positive vs. negative assessments in the three spheres on a comparable basis
- ▶ Reconciling conflicts between economic, environmental and social goals and providing the basis for political decisions



## **Sustainable Textile Production (STeP) (2021,22)**

A new tool to help fashion brands and retailers to evaluate and choose the sustainability of their suppliers is the Sustainable Textile Production (STeP).

STeP by OEKO-TEX® stands for Sustainable Textile & Leather Production and is a modular certification system for production facilities in the textile and leather industry.

The goal of STeP is to implement environmentally friendly production processes in the long term, to improve health and safety and to promote socially responsible working conditions at production sites. The target groups for STeP certification are textile and leather manufacturers as well as brands and retailer

### **What does the certification mean?**

STeP differs from other certification systems because, instead of considering only individual sustainability aspects, it includes a comprehensive analysis and assessment of the production conditions instead. STeP analyses all important areas of a company using 6 modules:

## **Benefit of STeP (2021,22)**

- ▶ Nowadays, consumers demand high quality products with harmless to health that's produced in a socially responsible and sustainable way. STeP supports you in managing the growing requirements relating to sustainability.



- ▶ STeP gives you the option to find suitable suppliers from around the world who can meet your demands for environmental protection and social responsibility.
- ▶ The STeP certificate enables you to document your sustainable commitment in connection with your supply chain to your end consumers in a clear and complete way.
- ▶ With the STeP scoring, you receive a comprehensive analysis and assessment of the production processes of the manufacturer and learn which areas of the company still have the potential for improvement.
- ▶ The independent verification system DETOX TO ZERO by OEKO-TEX® is integrated in STeP. You can thus easily determine the status with regard to fulfilment of the goals of the Greenpeace Detox Campaign. These refer to gradual optimisation and enhanced monitoring of chemicals management and wastewater quality.
- ▶ The STeP certificate is the prerequisite for **MADE IN GREEN** by OEKO-TEX®. **MADE IN GREEN** is an independent product label for textiles from all levels of the textile chain and indicates to the customer that the product has been tested for harmful substances and produced in a sustainable way.

- ▶ STeP by OEKO-TEX® recognises different standards and certifications from third-party providers, e.g. BSCI, FWF, SA8000, ISO, 14001, ISO 9001.

STeP is the new OEKO-TEX® certification system for brands, retail companies and manufacturers from the textile chain who want to communicate their achievements regarding sustainable production to the public in a transparent, credible and clear manner. Certification is possible for production facilities of all processing stages from fibre production, spinning mills, weaving mills, knitting mills, to finishing facilities and manufacturers of ready-made textile items. STeP replaces the previous OEKO-TEX® Standard 1000.



**Figure: Sustainable Textile Production (STeP) Certification System**

The aim of STeP certification is to provide fashion brands, retailers and manufacturers with the needed documentation of sustainable production across the international textile supply chain. This will allow an objective assessment of the sustainability of textile factories. This certification could be used to provide consumers with understandable and traceable documentation of a retailer's commitment to sustainability when sourcing its products.

The new system is intended to offer a single solution to the wide range of independent certification systems that cover different conditions in textile plants, including the internal working ones; it also addresses the plant's impact on the environment. It is a 'modular analysis' that scores facilities on issues such as quality management, use of chemicals, environmental protection, environmental management, social responsibility, health and safety.

This model means that STeP-certified companies can compare themselves with other firms in the sector, align themselves with examples of best practice, and work on continuous improvement. It also offers advantages for fashion brands and retailers in the global sourcing process, enabling them to choose the suppliers based on their sustainability performance in a specific area. Production facilities can be audited by one of the Oeko-Tex institutes, including unannounced visits, and can be integrated with existing company certificates, such as ISO 9000, ISO 14001, SA 8000 and OHSAS 18001. The new STeP certification also supports other existing sustainability initiatives such as

the Higg Index from the Sustainable Apparel Coalition and the Zero Discharge of Hazardous Chemicals (ZDHC) campaign.

## **Concept**

The objective of STeP certification is the permanent implementation of environmentally friendly production processes, optimum health and safety and socially acceptable working conditions. The dynamic further development of the STeP standard and the benchmarks allows certified companies to continuously improve their environmental protection achievements and their social responsibility as well as their efficiency. This in turn enables them to achieve the best possible competitive position on the market.

## **Advantages for brands and retailers**

STeP allows globally operating brands and retail companies to search for suitable suppliers worldwide who meet their demands regarding environmental protection and social responsibility. This enables them to clearly and completely document their joint sustainable commitment to end consumers together with the supply chain.

## **Advantages for production facilities**

Textile and clothing manufacturers can make their production processes much more efficient on the basis of a STeP certification. The system helps them to determine the company's positioning with regard to sustainability and shows areas for improvement. The independent proof of sustainable production conditions also provides an image boost allowing the companies to open up new markets and supplier relations.

## **Comprehensive approach and textile-specific criteria**

In contrast to other certification systems, which take into account only certain individual aspects of sustainability, STeP allows comprehensive analysis and evaluation with regard to sustainable production conditions. In addition to this, the requirements and criteria of the STeP certification are specifically adapted to the situation in the textile and clothing industry. The STeP criteria are standardised around the world to ensure global comparability. These are continuously analysed, evaluated and updated, if required.

## **Modular structure**

Through modular analysis of all relevant company areas such as management of chemicals, environmental protection, environmental management, health and safety, social responsibility and quality management, the STeP certification allows a comprehensive and reliable analysis of the extent of sustainable management provided by a production facility.

## **Requirements**

The prerequisite for STeP certification is the compliance with certain minimum requirements in the individual company areas. Based on this, the following issues are relevant

STeP differs from other certification systems because, instead of considering only individual sustainability aspects, it includes a comprehensive analysis and assessment of the production conditions

instead. STeP analyses all important areas of a company using 6 modules:

1. Chemical management
2. Environmental performance
3. Environmental management
4. Social responsibility
5. Quality management
6. Health protection and safety at work

The aim of STeP certification is the long-term implementation of environmentally friendly production processes, social working conditions and optimum health and safety

## **Chemical Management**

- ◆ Compliance with the guidelines of a restricted substances list (RSL);
- ◆ Introduction of a suitable harmful substances management;
- ◆ Compliance with the principles of ‘green chemicals’;
- ◆ Periodical training and further education regarding the handling of the chemicals used;
- ◆ Obligation for appropriate communication regarding the chemicals used and their risks;
- ◆ Monitoring the use of chemicals.

## **Environmental Protection:**

- ◆ Compliance with the stipulated limit values;
- ◆ Use of best available production technologies;
- ◆ Optimisation of production processes;
- ◆ Efficient use of resources;
- ◆ Responsible handling of waste, waste water, emissions etc.;
- ◆ Reduction of the CO2 footprint.

## **Environmental Management:**

- ◆ Proof of a suitable environmental management system for targeted coordination and systematic implementation of all environmental protection measures;
- ◆ Commitment to environmental targets;
- ◆ Periodic creation of environmental reports;
- ◆ Appointment of an environmental representative;
- ◆ Periodic training regarding the implementation of environmental targets and measures;
- ◆ Implementation of existing environmental protection systems (e.g. ISO 14001).

## **Social Responsibility:**

- ◆ Ensuring socially acceptable working conditions in the sense of the UN and ILO conventions;
- ◆ Execution of performance appraisals for employees;
- ◆ Implementation of existing social standards (e.g. SA 8000);
- ◆ Guaranteed training for employees regarding the social issues of an operation.

## **Quality management:**

- ◆ Implementation of a suitable QM system, e.g. in line with ISO 9001 or operational Approaches;
- ◆ Guaranteed traceability, responsibility and appropriate documentation regarding the flow of goods and manufactured products;
- ◆ Advanced management aspects such as risk management or corporate governance.

## **Health and safety:**

- ◆ Proof of suitable measures to ensure the required health and safety in the workplace (e.g. filter systems, ear protection etc.);
- ◆ Guaranteed safety of buildings and production plants (e.g. through constructive measures, escape plans, separation of production areas etc.);
- ◆ Risk prevention;
- ◆ Implementation of existing safety standards (e.g. OHSAS 18001).



## Scoring

STeP certification encompasses three different levels describing the extent to which the company has achieved sustainable production and working conditions:

- Level 1 = entry level;
- Level 2 = good implementation with further optimisation potential;
- Level 3 = exemplary implementation in the sense of a best practice example.

**The STeP certificate shows the following scoring results:**

- The sustainability level achieved;
- An overall evaluation in per cent;
- An individual evaluation of the analysed company areas in per cent.

The STeP scoring creates more transparency because it allows the sustainability of production facilities along the textile value chain to be compared on all relevant company levels across country borders and beyond legislative regulations. The detailed representation of the assessment results allows a sound definition of the company's positioning with regard to sustainability and illustrates in particular which company areas have further potential for optimisation.