



# Ecodesign in the Textile Sector

## Unit 05: Certifications in the Textile Sector

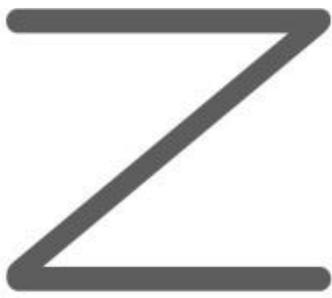
STeP by Oeko-Tex®, UNI EN ISO 9001, UNI EN ISO 14001, SA8000, OHSAS 18001, ISO 45001

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With this unit, students will be able to:

- Resume the principles of quality, environmental, safety and health management certifications in the workplace: UNI EN ISO 9001, UNI EN ISO 14001, SA8000 OHSAS 18001
- Know the STeP by Oeko-Tex® certification as a harmonized sustainability certification



## 5.1 Introduction

The concept of sustainable development is based on the principle of resource conservation: nature, land, biodiversity and ecosystems must be supported for a harmonious life in the present and future.

## 5.2 Definition of the Sustainability

Today, one of the first objectives that are required of companies is to tend towards sustainability, but in order to meet the requirements it is important to try to understand what sustainability means. On several occasions, it has tried to give a correct definition that could assist companies to set concrete objectives with respect to this topic. Following, some famous definitions:

- "...improving the quality of human life while living within the carrying capacity of supporting ecosystems"- Caring for the Earth, 1991, UNEP, IUCN, WWF
- "...Maximum value which a community can consume in a certain period and still expect to be as well off at the end of that period as it was at the beginning..." J. R. Hichs
- "... Sustainable development means improving the quality of life not exceeding the carrying capacity of the ecosystems" - ONU, 1992
- "... Development that delivers basic environmental, social and economic services to all members of a community, without threatening the viability of the natural, built and social systems upon which the delivery of these services depends" - International Council for Local Environmental Initiatives, 1994
- "A community is unsustainable if it consumes resources faster than they can be renewed, produces more wastes than natural systems can process or, relies upon geographically distant sources for its own needs" - Sustainable Community Roundtable

The statements you can understand what is meant when we talk about sustainability, appreciating every variation that is given depending on the historical period and the context in which it is born.

However, what is commonly accepted as the univocal definition of SUSTAINABLE DEVELOPMENT is shown below:

*«Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs» - Brundtland Report (1987).*

The fundamental concept introduced here is that of "DEVELOPMENT" which underlines that this topic is not static, but on the contrary, it is meant as a process of continuous refinement.



The terms “Sustainability / Sustainable Development” are frequently linked to the environmental aspect, but in reality the meaning goes far beyond this principle, even if this aspect is taken into account.

When it comes to sustainability it is important to know that it concerns three main aspects:

- **ECONOMIC** sustainability represents the ability to generate income and work to satisfy people’s basic needs.
- **SOCIAL** sustainability represents the ability to ensure human well-being conditions (safety, health, education) equally distributed by class and gender.
- **ENVIRONMENTAL** sustainability represents the ability to produce while respecting the environment.

The textile production, as described in Unit 02, consists of a long chain, which starts from the extraction of raw materials to make the yarn and / or from the cultivation of fibers, passes through various intermediate processes (spinning, weaving and ennobling) ) to end with the production of the final good, which can be a clothing, an home textile, a technical product, etc.

Taking into consideration the life cycle of textile products, as detailed in Unit 06, in several studies relating to different textile products (LCA of a shirt, a tablecloth) it emerges that the entire production chain can cover half of the aspects and environmental impacts of the concerned product.

As shown in Units 06 and 08 of the basic module, an Environmental Management System (EMS) is a tool with which both public and private organizations demonstrate that they monitor all the processes related to the environment: the aspects and the resulting impacts.

Sustainable practices in the textile industry include reducing the resources consumption (materials, water, energy), minimizing the consumption of hazardous chemicals, adopting efficient and environmentally friendly production processes, and introducing the 3R concept - Reduce, Reuse and Recycle, quality management, worker safety management and corporate social responsibility.

### 5.3 Sustainable Textile Production (STeP) by OEKO-TEX®

The STeP (Sustainable Textile Production) by Oeko-Tex® is an independent certification system for producers in the textile supply chain who want to communicate their results in terms of sustainable production in a transparent, credible and clear way.

Introduced in 2013, the STeP certification aims to constantly implement eco-compatible production processes and ensure optimal conditions of health and safety at work and socially appropriate working conditions.



The certification tool is aimed at providing companies with targeted support for the continuous improvement of their sustainability performance.

Certification is possible for the production plants of all the processing stages, from the production of fibers to the manufacture of the final textile products, and provides for the implementation of production processes that respect the environment, health and safety of workers and working conditions socially acceptable.

It also establishes performance levels in terms of production sustainability in addition to legislative regulations, regardless of the country of production.

The STeP by Oeko-Tex® standard focuses on a comprehensive analysis and evaluation of production processes and conditions.

It uses standardized criteria that are comparable internationally. The standardization process involves the analysis, evaluation and continuous updating, for example in case of new market developments, or changes in the law, or in the case of technological innovations that improve certain environmental aspects.

It supports the textile sector to achieve continuous improvement of its production environment and unifies the various criteria that make a company sustainable in a single certification: STeP by Oeko-Tex® provides the possibility of a modular analysis of all the relevant company areas, integrating principles and rules regarding:

- management of chemical substances used in the production process
- environmental performance (in reference to the binding legislation of the country or to minimum requirements present in the standard itself, following the principle that the most stringent requirement is applicable)
- environmental management and protection (in reference to ISO 14001);
- quality management (in reference to ISO 9001)
- health and safety of workers (with reference to the OHSAS 18001 standard, to the binding legislation of the country or to the minimum requirements present in the standard itself)
- corporate social responsibility (in reference to the SA8000 standard)

A company that certifies STeP by Oeko-Tex® must therefore demonstrate compliance with minimum requirements in the individual thematic areas:

#### **Management of chemicals**

- Compliance with the guidelines of a restricted substances list (RSL)
- Proper management of harmful substances
- Compliance with the principles of 'green chemicals'
- Periodical training regarding the handling of the chemicals used



- Obligation to appropriately communicate dangerous chemicals subject to restrictions and their risks
- Monitoring the use of chemicals

### **Environmental performance**

- 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 accordance with the (United) 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
- Internal communication and distribution of responsibilities
- Commitment to the payment of fair wages
- Mandatory implementation of an effective social policy
- Freedom of association and collective bargaining agreements

### **Quality management**

- Implementation of a suitable Quality Management System, e.g. in line with ISO 9001
- 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 & Safety

- Proof of taking appropriate measures to ensure health and safety at work
- Guaranteed safety of buildings and production facilities
- Risk prevention
- Adoption of an online safety management system, for example with the OHSAS 18001 standard)

The STeP by Oeko-Tex® certification can also act as a source of information for those who, as designers, brands and retailers, are looking for suppliers that meet the requirements in terms of environmental protection and social responsibility. This facilitates the organization of the production chain to ensure sustainability and document the commitment in a clear and complete, thanks to the My STeP system, described in chapter 5.8.

The STeP by Oeko-Tex® certification is issued by the member institutes of the OEKO-TEX® association, which are spread all over the world.

These institutes are independent but accredited by the central organization OEKO-TEX® to carry out laboratory tests and to issue certifications in the textile and chemical fields provided by the Oeko-Tex® Association.

A STeP by Oeko-Tex® certificate is issued for a period of three years and can be renewed.

The certification process includes:

- the certification request to an OEKO-TEX® institute;
- the institute provides the company with access data for the online assessment tool
- the company proceeds with the data collection phase and the documents to be included in the on-line evaluation tool
- the institute carries out an assessment of the data and documents entered by the company in the on-line assessment tool
- the institute performs a verification audit in the field, with assessment of the information provided by the company in the on-line assessment tool
- the institution issues a report based on the results of the audit, and, if the criteria are met, issues the STeP by Oeko-Tex® Certificate

Once the certificate is received, the company is authorized to spread its certification outside and use it for commercial purposes.

The certification foresees three different levels based on the degree of satisfaction of the requirements reached by the company:

- Level 1 = minimum entry level,



- Level 2 = good implementation with further possibilities for optimization,
- Level 3 = exemplary implementation

The results of the evaluation are presented in detail in a report, so that the company can know its position in relation to the requirements of the STeP by Oeko-Tex® standard. The report also reports which areas have potential for improvement. In case of non-compliance with some standard requirements (exclusion criteria), certification is not issued until the company has implemented actions to meet these requirements.

The STeP by Oeko-Tex® certification therefore incorporates several areas covered by company management standards, including ISO 9001 for quality management, ISO 14001 for environmental management, the SA800 standard for corporate social responsibility, the OHSAS 18001 and the ISO 45001 standard for the management of health and safety at work, which will be briefly described in the following chapters.

## 5.4 ISO 9000

The abbreviation ISO 9000 identifies a series of standards and guidelines developed by the International Organization for Standardisation (ISO), which define the requirements for the implementation, in an organization, of a quality management system.

ISO 9001 defines the requirements of a quality management system for an organisation. The requirements expressed have a general nature and can be implemented by any type of organisation; last revised in 2015 (ISO 9001:2015).

The adoption of this standard allows to address company processes, improve production efficiency and optimize service delivery, in order to achieve and increase customer satisfaction.

ISO 9001 is the reference standard for those who want to ensure the quality of their production process, starting from the definition of the requirements (expressed and not) of the customers, coming up to the monitoring of the entire process / production process.

The customer and his satisfaction are at the heart of ISO 9001; every activity, application and monitoring of activities/processes are in fact aimed at determining the maximum satisfaction of the end user. The application phases of the standard start from the definition of procedures and records for each single process or macro process identified within the company organisation.

We pass through all areas of the organization, including:

- corporate management
- planning
- marketing



- design
- sale
- supply
- production or supply
- installation
- after-sales service

All this with a careful analysis of business opportunities, starting from the definition of the mission and the company vision that is expressed through the quality policy. Careful monitoring of the company and management of human and instrumental resources are carried out.

From the point of view of a client company, the presence of ISO 9001 certification in their suppliers is an important indicator of how they manage the employment relationship, under which the certification itself guarantees the appropriate procedures for the management and satisfaction of the customer.

## 5.5 ISO 14001

The ISO 14001 standard, detailed in Unit 08 of the basic module, defines the requirements for a globally recognized environmental management system.

The benefits of implementing an EMS according to ISO 14001 are:

- Continuous improvement of company environmental performance
- Control of processes and activities that have an impact on the external environment
- Guarantee of compliance with formal obligations
- Optimization of costs due to compliance with legislative requirements and management of environmental aspects
- Green Marketing

## 5.6 SA 8000

SA 8000 (Social Accountability SA8000:2014) identifies an international certification standard drawn up by the CEPAA (Council of Economical Priorities Accreditation Agency) and aimed at certifying certain aspects of corporate social responsibility (CSR) in English. These are:

- respect for human rights
- respect for workers' rights
- protection against exploitation of child labour
- safety and health guarantees in the workplace



The international standard is therefore aimed at improving working conditions worldwide and, above all, allows the definition of a standard verifiable by Certification Bodies.

The standard arises as an aggregation formed by the principles established by other international documents such as:

- ILO (International Labour Organisation) Conventions;
- Universal Declaration of Human Rights;
- International Convention on the Rights of the Child;
- United Nations Convention to eliminate all forms of discrimination against women.

Random interviews with employees are scheduled during the certification audit. This allows to detect any cases of non-fulfillment of human rights established by the standard, impossible to prove if the verification was only at managerial levels.

The global list of companies with SA8000 can be found on the SAAS website.

## 5.7 OHSAS 18001

OHSAS 18001 (Occupational Health and Safety Assessment Series) is the international standard that deals with the management of health and safety in the workplace and in the workers.

Issued by the BSI (British Standards Institution) in 1999 and subsequently revised in 2007, the OHSAS certification attests the voluntary application, within an organization, of a system that allows to guarantee adequate control on safety and health of workers, in addition to compliance with mandatory rules.

The OHSAS 18001 standard can be adopted by any organization and aims to make a company's control, knowledge and awareness of all the possible risks present in normal and extraordinary situations in the workplace.

OHSAS 18001 certification is based on the management of health and safety at work and requires organisations to make continuous improvements, thus providing with a guarantee of compliance with the specified safety policies.

The aims of the standard are:

- a) establish a safety management system to eliminate or minimize the risks associated with its activities, both for employees and for all other persons who may be exposed to such risks;
- b) implement, maintain and continuously improve the safety management system;
- c) ensure that it complies with the declared security policy;
- d) demonstrate this conformity to third parties;



e) request certification / registration of its safety management system to an external body;

f) make a self-declaration of conformity to this OHSAS specification.

## 5.8 ISO 45001

The ISO 45001, which is scheduled for March 2018 the first official publication, establishes the requirements of management systems for health and safety at work. It is inspired by the OHSAS 18001 standard, and has the aim to assist organizations guarantee health and the safety of the people who work for them.

Following the publication of ISO 45001, the British Standard BS OHSAS 18001 of 2007 is expected to be withdrawn from the "British Standards Institution" (BSI).

The standard refers to OHSAS 18001 and is in line with ISO 9001 and ISO 14001 standards. In particular, it maintains the high-level structure and the reference to the Deming Cycle (Plan Do Check Act).

It introduces the "Risk Based Thinking" approach, a method of assessing the business management of potentially critical aspects, both traditional ones, such as those related to health and safety at work, and the risks that could derive from the way the company, and from the relationships that the company has with external subjects.

The new ISO 45001 meets the growing need of companies to implement their own Safety Management System in a constantly evolving scenario.

The ISO 45001 standard is compatible and easily integrated with other standards (ISO 9001, SA 8000, ISO 14001).

## 5.9 MySTeP and Made in Green by OEKO-TEX®

MySTeP by OEKO-TEX® is a database for brands, retailers and manufacturers that allows to manage and strengthen own community of textile suppliers.

It is a tool to manage the entire production chain, evaluate it and identify which interventions are appropriate to make the production of a more sustainable product.

MySTeP simplifies the creation of partnerships and encourages positive change through strategic and sustainable supply chain management.

The MySTeP database also allows you to manage the OEKO-TEX® certifications (which will be detailed in Unit 07) and to perform benchmarking and statistical analysis of the production chain.

From a company's point of view, the advantages of adopting the MYSTeP system are:

- have a customized system of mapping the production chain;
- manage the OEKO-TEX® certifications;



- have a targeted analysis, based on the score of the STeP by OEKO-TEX® certified companies, by means of performance indicators, the so-called Key performance indicators (KPI);
- elaborate benchmarking and statistical analysis of the production chain based on a series of sustainability factors;
- select new suppliers using sustainability data important for their activity;
- identify and eliminate possible risks in the production chain in progress.

A KPI is a performance measurement value and is calculated following two steps:

1. the production chain is divided into three levels and the average performance score is calculated for each level;
2. the overall performance score derives from the average of the performance scores of the three levels

On the MySTeP dashboard, users can define specific objectives for their production chain in relation, for example, to water consumption or CO2 emissions and then track performance against these objectives.

Each user of the MySTeP database therefore has a personalized view of the data related to their production chain. Each supplier defines what data to provide to customers and whether to allow them to disclose them to other companies in the supply chain.

The data managed by the database are related to: company registry, type of production, country and geographical location, obtained OEKO-TEX® certifications, the level of sustainable performance of the STeP score, and, finally, to the details of the STeP audit report.

Made in Green is an independent textile label that can be used on any textile product that is finished in both clothing and furniture, and intermediate or semi-finished products.

The label ensures that:

- the products have been made with materials free of harmful substances;
- production processes are respectful of the environment;
- working conditions are safe and socially responsible

The label certifies that the product has been tested and is within the tolerable limits of harmful substances. Furthermore, production processes are controlled according to the OEKO-TEX® guidelines to be defined as sustainable.

Every article bearing the Made in Green label has a unique product identification and also serves as a tool for traceability and transparency for the consumer. It provides details on the production plant used, on production, and in which countries the work has been carried out.



The benefits of adopting the Made in Green label are:

- the trademark can be used for the promotion of new functions and characteristics of the products and to underline their close collaboration with suppliers;
- the reliability of the relationship between supplier and producer, which is considered a key factor for the success of sustainability. Sustainability criteria include product quality, employee training and improvement of the working environment and the Made in Green label conveys all this to the customer;
- Made in Green makes the entire supply chain of the company transparent and represents a sign of trust, given that suppliers from other countries must also comply with quality standards;
- companies are oriented towards continuous improvement to achieve greater sustainability in the individual production units.

