



# **Policy Report on Reforms Supporting Sustainability in the Fashion / Textiles Industries**

## **(D6.2)**

**Project FEA-VEE**

**Fashion Earth Alliance – Vocational Excellence and Enterprise united for  
training, policy reform and sustainability in the fashion, textiles and  
apparel industries**

Project number: 101055934

**FINAL VERSION / 17 May 2024**



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflects the views only of the authors, and the Commission cannot be held responsible for any use which might be made of the information contained therein.

## TABLE OF CONTENTS

|  |    |
|--|----|
| INTRODUCTION .....   | 4  |
| I. SUMMARY OF THE COUNTRY-SPECIFIC POLICY REPORTS ON REFORMS SUPPORTING SUSTAINABILITY IN THE FASHION & TEXTILES INDUSTRIES..... | 5  |
| EU legal context.....  | 5  |
| Main findings at country level (in alphabetical order).....  | 6  |
| II. COUNTRY-SPECIFIC POLICY REPORTS ON REFORMS SUPPORTING SUSTAINABILITY IN THE FASHION & TEXTILES INDUSTRIES .....              | 10 |
| BULGARIA .....   | 10 |
| Situational snapshot of reforms supporting sustainability at national level .....  | 10 |
| Identification of current gaps, risks and/or imbalances.....   | 16 |
| Green measures/strategies or appearing future trends in the sector .....   | 16 |
| A good practice showcase .....   | 17 |
| Conclusion .....   | 18 |
| GERMANY .....  | 20 |
| Situational snapshot of reforms supporting sustainability at national level .....  | 20 |
| Identification of current gaps, risks and/or imbalances.....   | 24 |
| Green measures/strategies/roadmaps or appearing future trends in the sector .....  | 25 |
| A good practice showcase .....   | 26 |
| Conclusion .....   | 28 |
| GREECE .....   | 29 |
| Situational snapshot of reforms supporting sustainability at national level .....  | 29 |
| Identification of current gaps, risks and/or imbalances.....   | 36 |
| Green measures/strategies/roadmaps or appearing future trends in the sector .....  | 37 |
| A good practice showcase .....   | 37 |
| Conclusion .....   | 39 |
| ROMANIA .....  | 40 |
| Situational snapshot of reforms supporting sustainability at national level .....  | 40 |
| Identification of current gaps, risks and/or imbalances.....   | 41 |
| Green measures/strategies/roadmaps or appearing future trends in the sector .....  | 42 |
| A good practice showcase .....   | 42 |
| Conclusion .....   | 42 |
| SPAIN .....  | 44 |
| Situational snapshot of reforms supporting sustainability at national level .....  | 44 |
| Identification of current gaps, risks and/or imbalances.....   | 47 |
| Green measures/strategies/roadmaps or appearing future trends in the sector .....  | 48 |



|   |    |
|---|----|
| A good practice showcase .....  | 49 |
| Conclusion .....  | 51 |
| SWEDEN.....   | 52 |
| Situational snapshot of reforms supporting sustainability at national level ..... | 52 |
| Identification of current gaps, risks and/or imbalances.....                      | 56 |
| Green measures/strategies/roadmaps or appearing future trends in the sector ..... | 56 |
| A good practice showcase .....  | 57 |
| Conclusion .....  | 57 |
| SOURCES.....  | 59 |

## INTRODUCTION

### *Purposes of the report:*

The Policy report on Reforms Supporting Sustainability in the Fashion and Textiles Industries (D 6.2) is based on 6 policy reports, dedicated to the topic and following a common structure, which were elaborated by FEA-VEE project partnership in 6 EU countries – Bulgaria, Germany, Greece, Romania, Spain and Sweden.

The report provides an overview of the situation in these countries, participating in the project FEA-VEE, generalizing the prevailing information on the EU country's green reforms with special focus on identifying the key factors that facilitate the transition to sustainable production and consumption, existing challenges and imbalances, best EU practices to share, thus trying to present insights for greener development.

### *Methodology:*

The proposed method used at national level is a desk research - a main tool for data collection, which helps to explore the existing situation in the project countries: Greece, Germany, Spain, Bulgaria, Romania and Sweden. Each country report is following a preliminary defined structure and the quality content on the topic is provided by each Country Leader (project partner). The main sources for the desk include: national policy papers, green strategies, research articles, statistical databases (OECD, Statista, and local producers of statistics), etc.

The Policy report on Reforms Supporting Sustainability in the Fashion and Textiles Industries (D 6.2) is uploaded on the FEA-VEE project website <https://fea-vee.eu> and disseminated at national and EU level among the stakeholders selected by each project partner.

### *Abstract:*

This policy report provides an overview and analysis of the reforms supporting sustainability in the fashion and textiles industries in six European countries: Greece, Germany, Spain, Bulgaria, Romania and Sweden. The findings of the report emphasize the significance of enhancing digitalization, promoting sustainability and circular economy practices, bridging the gap between education and employment, tackling the existing challenges and fostering collaboration and networking within the fashion and textiles industries. It highlights the importance of improving performances of industries, greening the entire value chain by boosting innovations and competitiveness, thus reducing the environmental impact of the sector.

More investments are needed to cultivate expertise in sustainable practices and eco-friendly materials, along with supporting research and development efforts for innovative technologies aligned with circular economy principles. Collaboration and networking within the industry can be fostered through the establishment of formal organizations or associations, enabling knowledge exchange and the adoption of resilient business models while promoting transparency, responsible practices and green transition.

By implementing the results outlined in this policy report, countries can enhance the introduction of green practices in the fashion and textiles industries, fostering sustainable growth and competitiveness while addressing the existing gaps and challenges.

## I. SUMMARY OF THE COUNTRY-SPECIFIC POLICY REPORTS ON REFORMS SUPPORTING SUSTAINABILITY IN THE FASHION & TEXTILES INDUSTRIES

Sustainability is crucial in fashion because the industry appears to be one of the largest polluters in the world with significant environmental and social impacts. The industry has a massive carbon footprint due to the energy required for manufacturing, transportation, and disposal of clothes. Moreover, the use of non-renewable resources, such as petroleum-based synthetic fibers and dyes, contributes to the depletion of natural resources.

Sustainability in fashion involves creating clothing and accessories that have a minimal environmental impact and promote social responsibility. This can be achieved through practices such as reducing waste and water usage, using eco-friendly materials, implementing ethical labor practices, and designing products that are meant to last longer.

Sustainability also means creating a circular fashion system that encourages the reuse, repurposing, and recycling of materials. A study underscores the environmental benefits of second-hand clothing, revealing that one kilogram of second-hand clothes can save 5.9 kilograms of carbon dioxide and 5,448 liters of water.

In the European Union alone, 5 million tonnes of textiles are discarded annually, with individuals purchasing nearly 15 kilograms of textiles per year and discarding 11 kilograms. The textile industry's greenhouse gas emissions rival those of aviation, rail, and shipping combined, accentuating the urgent need for sustainable practices in the fashion and textile sector.

By prioritizing sustainability in fashion, we can minimize the negative impact of the industry on the environment and society, create a more responsible and ethical industry, and ensure that future generations can enjoy a healthier life.

### EU legal context

On 10 March 2020, the Commission adopted a new industrial strategy, which aim was to help the EU industry lead the green and digital transformation and to boost the EU's global competitiveness and open strategic autonomy. In light of the COVID-19 pandemic, the industrial strategy was updated in 2021, highlighting the need to further accelerate the green and digital transitions and to increase the resilience of EU industrial ecosystems. To do so, the Commission proposed to launch so-called "Transition Pathways", co-created with stakeholders, including for the textiles ecosystem.

The textiles ecosystem is characterised by high quality of production, front runner position in terms of uptake of sustainability practices and strong leadership in high value-added segments where drivers of competitiveness are difficult to replicate. A set of challenges stem from the ecosystem's deep integration in global value chains. This strong exposure to international trade and global value chains inevitably increases the ecosystem's dependence on imports for domestic production and consumption. Over 70% of fashion products consumed in the EU are imported.

A key challenge for the green transformation is to boost investments to accelerate sustainability and circularity. Hence, efforts are needed to boost production of circular textiles, as well as investments in digitalisation to enhance the production flows of textile manufacturing. Another challenge is to onboard consumers in the green transition and create more demand for sustainable products and reshape consumption patterns. Digitalisation provides the operational tools to make textile manufacturing more competitive and sustainable. Efficient textile production requires well-planned production flows. Challenges operators face are to adapt to fashion trends, stock planning and product lifecycle management. Digitalisation can give operators the tools to adapt to flexible production cycles and hence become more efficient.

The Transition pathway for the textiles ecosystem policy report, published in 2023, identifies 50 specific actions under 8 building blocks, namely: Sustainable competitiveness; Regulation and public governance; Social dimension; R&I, Techniques, and Technological Solutions; Infrastructure; Skills, Investments and funding;

Ecosystem's readiness to support EU strategic autonomy and defence efforts, which are reflected to some extent in the county-specific papers and included in the present report as well.

The digitalisation revolution since the Covid-19 and climate change have attracted the interest of consumers and policymakers over the last few years, and while it was expected, it has compelled the fashion and textile industries, their stakeholders and consumers to take a new approach towards topics such as sustainability, circular economy and digitalisation.

While environmental awareness still does not determine purchases, it influences how the industries are perceived and encourages the close attention policymakers pay to the manufacturers and brands.

In consequence, while for some companies, above-mentioned events and changes in mentality could become blockers that lead to the closure of operations, for others, they open new opportunities and markets and an increased competitiveness due to their enabling character. These developments should not only be considered in the context of offered products and services but also in the context of their impact on the character of production processes, materials, and the workforce, the main asset of these industries. Focusing only on market needs and types of goods without analyzing the context of manufacturing and preservation of existing skills and knowledge may lead to challenges when said trends will change.

The discussion on how to preserve and strengthen the unique skills and knowledge of the European textile sector have gathered stakeholders from policy, education, and industry background multiple times over the past decade. Based on research and surveys conducted within this project, it is clear that each of the stakeholders has a unique role, but the green transition of the sector cannot be achieved without collaboration and structured efforts.

The policymakers can take the role of facilitators of dialogue between social partners, industry representatives, education and research providers, taking a more neutral role in the conversation. However, the horizontal and sectoral legislative actions they propose, particularly those connected to the green and digital transition, should also consider the specificities of the businesses, who should be thoughtfully consulted beforehand.

## **Main findings at country level (in alphabetical order)**

### ***BULGARIA:***

The Bulgarian textile and clothing sector is expected to experience a sustainable development. However, the overall uptrend will be backed mainly by the growth of the wearing apparel segment with more foreign manufacturers and brands entering the market. The sector will continue to rely on CMT services and attract investments by offering affordable workforce and competitive production quality.

The findings of the report undoubtedly indicate that there is still room for enhancing awareness, development and implementation of sustainability practices in Bulgaria, especially in the sectors that mostly affect environment. Hence, better assistance from the government is required in order to overcome some of the main challenges, which the companies encounter.

Key advantages of the TFI sector in Bulgaria include:

- Well-educated, experienced and affordable workforce;
- Modern textile and clothing making machinery, providing high-quality products;
- Easy access to large markets such as EU, Russia and the Middle East;
- Financing under EU structural funds;
- Transfer of know-how from major international companies, operating in the country.

Key gaps and barriers:

- Insufficient financial resources to introduce new digital and green production processes;
- Shortage of professionals who possess expertise in sustainable practices, circular economy principles, and knowledge of eco-friendly materials and production processes;
- Consumers in general are price sensitive and fast fashion is currently predominating.

Nevertheless, it is expected that more and more businesses will start implementing practices for sustainability in their day-to-day operations in the upcoming years. This is a measure in order to pursue the goals for sustainable development and of ensuring a better life for future generations, as well as preserving the Earth's natural resources.

#### **GERMANY:**

Germany is recognized for its commitment to sustainable development, with economic, social and environmental dimensions present in its society and political systems (German Council for Sustainable Development, 2018[2]). It is strongly committed to the 2030 Agenda for Sustainable Development and actively drives implementation.

As far as green fashion and textiles are concerned, Germany has taken numerous measures in recent decades to combat gas emissions, energy consumption and water wastage. Thanks to constant awareness-raising through associations, including state initiatives, Germany is trying to fight the increasing pollution.

In 2014 the Partnership for Sustainable Textiles was officially inaugurated with the overarching goal of promoting continuous improvements in social, environmental, and economic sustainability throughout the textile supply chain.

Key imbalances:

- Germany's fashion industry is responsible for emitting 38 million tons of greenhouse gasses annually and a significant water footprint of 6.4 billion cubic meters annual consumption;
- Clothing imports to Germany raise the problem with employees' poor labour conditions and ethical concerns regarding labor rights;
- The explosive rise of online shopping among consumers also leads to stores closing, in addition to changing customer preferences and quality standards.

The existing gaps, risks, and imbalances pose significant hurdles to achieving a sustainable green transition in the fashion and textile industry. Overcoming these challenges necessitates heightened efforts to advocate for sustainable practices, enhance transparency in the supply chain, and educate consumers about the implications of their purchasing choices. Effectively addressing these issues requires coordinated action from governments, businesses, and consumers alike.

#### **GREECE:**

Greece, as a member of the European Union, supports the European reforms that affect industries emissions environment and, consequently, that of the Fashion and Textiles Industry. Actions have already been taken to reduce emissions and the goal is to reach 80% by the year 2040, compared to the year 1990 level. Similar efforts are being made in the areas of energy consumption, water use, and waste reduction supported by good management and recycling incentives.

At economic level, the changes affect all levels of education by emphasizing digital learning, training of trainers, and vocational training with adult engagement. In the labor market the emphasis is given to recruiting and employment procedures.

Key gaps and barriers:

- Lack of skilled workforce to leverage new technologies;
- Shortage of adequately trained and qualified personnel in green and circular economy techniques;
- Many companies lack professionals who can ensure and maintain high-quality standards in production.

In 2018, Greece's Governmental Economic Policy Council approved a National Action Plan on Circular Economy (CE), signaling a commitment to embracing CE principles for long-term economic development. This initiative

aligns with Greece's broader economic strategy, emphasizing the greening of the economy with a focus on job creation, particularly for women and youth. The plan is designed to foster equitable and inclusive growth by prioritizing resource efficiency, supporting small and medium-sized enterprises (SMEs), promoting innovation, investing in new technologies, and harnessing the potential of the "social economy." Overall, the National Action Plan on Circular Economy reflects Greece's dedication to sustainable economic practices and social development.

#### **ROMANIA:**

The process of sustainable development and transition of the fashion and textile industry in Romania is a complex one. The state and private entities involved in this strategic change understand the need to improve the legislation in force, in order to enhance the green transformation of the sector.

Main actions supporting sustainability reforms in the FTI sector include:

- Introduction of mandatory eco-design requirements;
- Stopping the destruction of unsold or returned textile products;
- Combating microplastic pollution;
- Introduction of information requirements and a digital product passport;
- The ecological claims for truly sustainable textiles;
- The extended producer responsibility and stimulation of reuse and recycling of textile waste

Key gaps and barriers:

- lack of financial resources and highly qualified personnel for research and innovation activities;
- reduced access to information about market trends and new technologies emerging worldwide;
- fragmented and discontinuous communication between entrepreneurs and research-development and higher education institutes;
- lack of adequate economic policies to support the development of this sector.

#### **SPAIN:**

The alignment of Spain's national landscape with EU regulatory framework serves as a foundational pillar for concerted efforts towards compliance and responsiveness to evolving consumer expectations favoring sustainability and ethics within the sector. Stakeholders across the FTS are increasingly collaborating to ensure preparedness for existing regulations and directives, while also proactively addressing emerging consumer preferences for sustainability and ethical practices. A notable emphasis is being placed on achieving circularity within the sector, marked by investments in operational waste management infrastructure and concerted efforts towards minimizing environmental impacts.

Despite growing initiatives aimed at enhancing sustainability, challenges persist due to the lack of harmonization in regulatory application, leading to some confusion and inefficiencies. Addressing these disparities is crucial to unlocking the full potential of sustainability initiatives within the Spanish FTS sector. Digitalization and data collection are identified as pivotal facilitators towards a sustainability transition. Through data-driven insights, stakeholders can effectively measure and quantify their environmental impacts, thereby establishing baselines for improvement. However, achieving this requires concerted efforts towards standardization, harmonization, and interoperability to enable seamless communication and collaboration.

To achieve these goals within the FTS sector in Spain, increased investments and research efforts will be required on the financial, educational, and digital levels. Particularly, there is a pressing need for support within the SMEs European ecosystem, both operationally and financially, to ensure their meaningful participation in sustainable practices. This comprehensive approach is essential not only for meeting regulatory requirements but also for maintaining competitiveness and fostering innovation within the Spanish FTS sector.

Key challenges:



- To make the sector more sustainable and efficient while maintaining product quality, which involves adopting circular economy practices, recycling, reducing resource and energy consumption, and minimizing the carbon footprint. The need to invest in technology to achieve these goals is highly emphasized.
- To foster internationalization, as it is considered crucial for the industry's development, emphasizing the importance of protecting and promoting the "Made in Spain" concept.
- To boost innovation in the sector.

#### **SWEDEN:**

Sweden's climate policy (2017) aims for net-zero greenhouse gas emissions by 2045. Despite progress, consumption-based emissions remain a challenge, requiring continuous policy adjustments.

Social sustainability challenges persist, with fair wages in the FTS proving difficult. Even sustainability-focused companies struggle to ensure living wages for a significant workforce.

Key factors in the transition include: legislative frameworks, producer responsibility for textiles, and the Ecodesign Regulation.

Key challenges that may pose obstacles to the ongoing climate transition:

- The design of climate policy;
- The economic recession is adversely affecting investments in green initiatives;
- The impact of the security situation on resource allocation.

Navigating these challenges will be critical to achieving long-term and sustainable environmental goals.

Recommendations include designing products for longer life cycles, promoting circular manufacturing, incentivizing recycling, optimizing supply chains, and educating consumers.

In conclusion, Sweden's FTS is actively transforming towards sustainability, addressing challenges and implementing strategies for a more resilient industry.

## II. COUNTRY-SPECIFIC POLICY REPORTS ON REFORMS SUPPORTING SUSTAINABILITY IN THE FASHION & TEXTILES INDUSTRIES

### BULGARIA

Bulgaria stands at the forefront of the global shift towards a circular economy, leveraging innovation and collaboration to redefine its economic landscape. With a rich tapestry of cultural heritage and natural beauty, Bulgaria is poised to lead the charge in sustainable development.

**Eco-friendly Materials Adoption:** There has been an increasing adoption of eco-friendly materials in Bulgaria's fashion industry, including organic cotton, recycled polyester, and sustainable alternatives to leather. While precise figures may vary, surveys and reports suggest a growing interest among Bulgarian fashion brands and consumers in sustainable materials.

**Rise of Sustainable Fashion Brands:** A number of sustainable fashion brands have emerged in Bulgaria in recent years, offering clothing and accessories made from environmentally friendly materials and produced under fair labor conditions. While the exact number of such brands may not be readily available, their presence indicates a growing market for sustainable fashion in the country.

**Redefining waste management, recycling and green initiatives:** Bulgaria, waste management is undergoing a transformative evolution. It has embraced decentralized composting initiatives, food waste utilities and measures, recycling practices, affecting all sectors of the economy.

The textile industry is undergoing a circular revolution in Bulgaria, with initiatives like “From Old to New” leading the charge. By collecting and upcycling discarded clothing, these initiatives breathe new life into old fabrics while reducing waste and supporting vulnerable communities. Local artisans transform pre-loved garments into unique, eco-friendly fashion pieces, fostering a culture of conscious consumption.

**Circular design thinking** goes beyond recyclability. It involves designing products with the end in mind, ensuring they can be easily disassembled, upgraded, or repurposed. Circular Economy 2.0 prioritizes aesthetics, functionality, and sustainability in equal measure, proving that eco-friendly design can be both stylish and practical. It challenges the traditional ownership model. Instead of owning products, consumers subscribe to Product as a Service (PaaS) models. This shift encourages manufacturers to create durable, modular, and upgradable products, as their revenue is tied to the longevity and performance of the items they produce.

**Circular education for future generations:** Schools across the country are integrating environmental literacy into their curriculum, teaching students about resource conservation, waste reduction, and sustainable living practices. Hands-on initiatives like school gardens and recycling programs instill lifelong values. Bulgaria's journey towards a circular economy is a testament of collective actions. By embracing sustainable practices across sectors, from waste management to tourism, Bulgaria is not only safeguarding its natural heritage but also shaping a resilient and prosperous future for generations to come.

#### **Situational snapshot of reforms supporting sustainability at national level**

##### *A) Main aspects enhancing the sustainability process in FTS at national level*

The fashion industry in Bulgaria is increasing its efforts to tackle environmental, social and governance (ESG) issues. Leaders are supporting the scaling of new solutions in product development, sourcing, logistics and fulfillment, leveraging advances in data technology for ESG reporting, traceability, supplier engagement, and more. Coalitions are forming across the sector to promote progress towards a more sustainable fashion industry.

As social and environmental issues threaten to compromise fashion's current operating models, urgent actions are needed to deliver profitability and sustainability in tandem.

There are several key action areas for transformation identified across the industry, considering the innovation, technology, finance and policy needed to make meaningful change from 2023 onwards.

ESG practices not only support reversing the climate crisis, but also drive revenue growth, supply chain resilience, product innovation, brand differentiation, and exceptional customer experience – putting people and purpose at the center.

In addition, Circular Economy 2.0 adopts a holistic system thinking approach. It recognizes that true sustainability requires an interconnected view of environmental, social, and economic factors. It's not just about minimizing waste but creating regenerative systems that contribute positively to the overall well-being of the planet and its inhabitants.

### Environmental data

**Facts and figures:** In a recent study, Bulgaria has been confronted with an alarming environmental crisis as over 100,000 tonnes of textiles are discarded annually. The gravity of the situation is heightened by the revelation that only 2% of this substantial textile waste is currently being recycled, sparking concerns about the severe environmental repercussions and the pressing need for immediate action.

The Association for Textile Recycling has disclosed that between 50% and 70% of clothing and textiles collected in Europe are still in usable condition, underscoring the potential for improved waste management practices. Presently, Bulgaria's textile collection system operates on a voluntary basis, with various associations collaborating with municipalities for separate collection and recovery of textile waste. Some companies go the extra mile by offering home pickups to simplify the process for citizens.

However, a seismic shift is on the horizon as Bulgaria gears up to mandate textile waste management for all citizens. This move aligns with the extended producer responsibility, a mandatory requirement for textiles and footwear in the revision of the Waste Framework Directive for EU member states. Despite the impending necessity, Bulgaria currently lacks a recovery organization, a crucial element in fostering a competitive European recycling industry and supporting the circular economy.

Bulgaria's adoption of a mandatory system aims to heighten environmental awareness and diminish the considerable environmental impact caused by textile waste.

And also, the statistics show that 60-70% of the total textile waste in Bulgaria are prepared for reuse, a small portion goes for recycling, 7-8% are incinerated, and around 1% is deposited. However, the vast majority of unwanted clothing ends up in landfills, already constituting 4% of our household waste deposits.

Figures also indicate that in recent years, around 35,000 tons of second-hand clothes are processed in Bulgaria, the majority being imports from abroad. Approximately 24-25 thousand tons are exported mainly to Asia and Africa, meaning re-export accounts for about 75%.

Measures promoting a circular approach have already been implemented in some European countries to find adequate solutions to the growing problem that surplus textiles pose. In Bulgaria, efforts have been underway for 25 years to reduce and offset the negative environmental impacts on a global scale. However, it's not primarily for ecological reasons; rather, due to the low standard of living, many people are forced to use second-hand clothing. This reuse only solves a small part of the problem. Now, under pressure from the EU, the state will have to implement measures to accelerate the process.

The need to focus state's efforts on preparing an applicable strategy for separate textile collection is evident. A sustainable system can be created if all stakeholders - manufacturers, traders, businesses involved in reuse, recycling organizations, along with the Ministry of Environment - hold a roundtable discussion and share their arguments. The effects of reuse must be taken into account, as well as waste management hierarchy.

Eliminating double taxation with VAT on second-hand clothes, as it has already been done in some European countries, is one of the proposals. The availability of preferential areas for selling these goods in shopping centers, similar to electric vehicles, would also stimulate the second life of old clothes. With incentivizing measures, the country could be covered with textile collection containers in two years, which would be

implemented in an eco-friendly manner, according to the experts.

In addition, some countries have already introduced special product taxes for textile manufacturers to finance their reuse when they become unnecessary, which is a good EU practice to be taken in consideration.

EU countries are being asked to explore different methods and approaches to their contribution to green transition. This shift is pivotal for issues such as climate change and sustainability to be properly addressed. Accordingly, businesses have started to assess their environmental footprint and possible improvements with regards to their approach towards sustainability.

Bulgaria has brought in basic environmental protection legislation since its accession in the EU, and consequently has developed a national environmental strategy to mitigate adverse environmental consequences. The development of a framework to deal with those issues has been slow. However, the Bulgarian authorities have now begun to concentrate their efforts on taking action in this respect.

Areas of development illustrating certain environmental aspects of Bulgarian legislation with regard to green transition:

*National Ethical Standards govern environmental claims in marketing communications:*

The National Ethical Standards for Advertising and Commercial Communication in Bulgaria ("National Ethical Standards") envisage principles regarding marketing communications of environmental claims. According to the National Ethical Standards, the term "environmental claim" refers to "any statement, symbol or graphic that indicates an environmental aspect of a product, component, or packaging". The legal principles derive from different national and international standards, including the International Standard ISO 14021 on "Self-declared environmental claims".

The principles aim to facilitate a truthful presentation of claims in advertising. In Bulgaria, marketing communications should not contain any statement which can potentially mislead the 'reasonable consumer' regarding the environmental benefits of an advertised product, or the actions implemented by the trader aimed at protecting the environment. The rationale for this principle is not to diminish consumers' concerns for the environment, or to exploit their environmental knowledge.

Additionally, claims such as "ecologically safe" or "environmentally friendly", should be kept to a minimum unless they can be validly proven. The National Ethical Standards also encourage the use of scientific findings or technical demonstrations only in instances where they are supported by trustworthy, reliable evidence. For instance, if an environmental claim refers to health or safety, it should be backed by suitably robust scientific evidence.

Environmental claims should also never be made in a manner that implies that they apply to more aspects of a product's life cycle, or more of its characteristics, than the evidence supports. In practice, this means that the stage or subject to which a claim refers should always be apparent from the outset. A life cycle analysis should support a claim of life-cycle benefits. For example, when a claim mentions the elimination of substances or materials that influence the environment, it should be obvious what has been eliminated.

*Increased alignment of directors' duty of care standards with ESG factors:*

Under Bulgarian law, joint-stock companies' directors must comply with the "duty of care" standard, i.e., to act in the best interest of the company and its shareholders. At first glance, it is rather challenging for the duty of care principle to be reconciled with the recent changes in corporate governance in favour of ESG considerations. This is because ESG considerations can result in additional costs or reduced financial gains, for example.

On the other hand, ESG could be reconciled with the duty of care standard only in the case that the relevant ESG considerations in concern result in a long-term value for the business. If ESG considerations are implemented with the aim of mitigating or eliminating risks such as revenue losses, a decline in customer base, reputational risks, etc., then they will be in line with the duty of care principle.

Such risk management activities are tightly connected with the responsibilities of directors, and thus they should be implemented within a company's policies. Arguably, it is possible that a failure to take into account

ESG considerations when dealing with such risks may result in a breach of a director's duty of care. Additionally, such failure can negatively affect the company's activities and reputation. This is due to the fact that more and more emphasis is now placed on proactive ESG initiatives and internal mechanisms for demonstrating a responsibility towards the environment and other issues of sustainability.

#### Non-financial reporting:

In Bulgaria, public interest entities which are considered large under the Accountancy Act and whose workforce exceeds 500 employees are required to file a non-financial statement, including the information necessary to comprehend the development, performance, condition of the respective entity, and impact of its operation. Any such non-financial statement should include information regarding, amongst other things, environmental and social issues. At present, the number of entities that are obliged to file such a report is insignificant, given the aforementioned two-pillar approach. Nevertheless, this is expected to change once the forthcoming Corporate Sustainability Reporting Directive (CSDR) is transposed into Bulgarian law. Within this new legal regime, greenwashing is set to be targeted even further (with the ultimate aim of ending instances of greenwashing altogether), and it is anticipated that higher environmental standards will be set for traders and consumers alike.

#### Social data

**Income inequalities:** People living in Bulgaria have among the lowest standards of living of all the EU countries. Lower living standards, in turn, negatively affect people's subjective feelings about their lives as a whole and about various aspects of their lives. The score for life satisfaction is the lowest among all EU countries analysed. People in Bulgaria are concerned about tensions in society, particularly those that reflect traditional social divisions, for example between rich and poor people, and between management and workers. These tensions are related to the increased income inequalities and material polarisation experienced. Reducing the gap between rich and poor people therefore constitutes one of the key challenges for Bulgaria.

A low evaluation of the quality of society in Bulgaria has its roots in the economic, social and political context. The country's transition has led to profound changes in economic and social structures, which are often associated with negative processes such as a weakening of social control, increased crime and corruption, and greater disparities.

**Lack of flexible working time for women employees:** The data confirms that balancing work, family and social commitments represents a difficult task in Bulgaria. The proportion of women working more than 48 hours a week is close to the respective proportion of men and the government is still working on how to guarantee stronger support for the provision of different care services. A legislative reform is needed to develop and implement flexible working time arrangements that enable women to better combine their family responsibilities with their professional careers. Given the fact that the textile and fashion sector in Bulgaria predominantly employs women, comprising the majority of the workforce, this reform has been eagerly anticipated.

**Labour market:** The sharp decrease in the unemployment rate in the last four to five years in Bulgaria is attributed to the strong economic growth and the creation of new jobs, particularly in the private sector, but it is also related to the relatively high level of emigration to EU Member States and other countries.

In Bulgaria, the female employment rate is just below 50% and is one of the lowest in Europe. The employment rate of older workers is also below the EU average. Overall therefore, labour market participation in Bulgaria is quite low and should be a key policy concern.

Unemployed people and their families, as well as low skilled people, are the groups most at risk of income poverty. This indicates that social inclusion and anti-poverty policies should rely much more on labour activation measures, in particular on facilitation of job creation and increasing employability through education and training.

**Demographic shift:** Bulgaria, like many European countries, is experiencing an *aging population*. This shift has implications for the fashion and textile industry.

**Education:** Bulgaria has a well-developed educational system, which comprises more than 50 universities,

including five technical universities in major cities, with about 60,000 graduates every year. Technical schools and universities in Bulgaria are highly adaptive to the increase requirements by the business operating in the sector. Increasing number of students studying specialties where there is an expected shortage on the labor market. High number of innovations in the sector have been developed through the eco system of software companies with highly qualified personal.

Recent research on sustainability provides the following results being based on a survey distributed amongst 200 Bulgarian businesses:

The number of employees is not that significant for the implementation of sustainability practices. This means that whether it is a small or medium enterprise (SME) or a large corporation with many employees - it is management that determines the introduction of green measures. Furthermore, it is also evident that even small and medium-sized enterprises can integrate sustainability practices into their daily operations, if there is such an objective.

Most companies are aware of the UN Sustainable Development Goals but have difficulty following them. The management introduces sustainability policies and defines activities that comply with them, while Marketing and Human Resources departments are responsible for ensuring that all employees are aware of the company's sustainable practices.

The research shows that enterprises are not very strict about their requirements for suppliers to comply with sustainable practices and to have ISO 9000 or ISO 14000 certificates. On the other hand, Bulgarian businesses are willing to participate in green practices events to enhance their corporate reputation or for financial motives.

The findings of the study indicate that there is still room for enhancing awareness, development and implementation of sustainability practices in Bulgaria, especially in the sectors that mostly affect environment. Hence, better assistance from the government is required in order to overcome some of the main challenges, which the companies encounter.

It is also expected that more and more businesses will start implementing practices for sustainability in their day-to-day operations in the upcoming years. This is a measure in order to pursue the goals for sustainable development and of ensuring a better life for future generations, as well as preserving the Earth's natural resources.

## Economic data

**Facts and figures:** The textile sector contributes 5.0% of the country's total industrial production volume and generates 11.0% of the value added of the Bulgarian industry, according to Bulgaria's Ministry of Economy. The textile sector employs more than 100,000 people, or 22% of the total for the manufacturing industry. The FTI has always been an important sector in Bulgaria's economy, playing a significant role in the social and economic development of many regions across the country.

The per capita GDP, as one of the key macroeconomic indicators, shows that Bulgaria has the lowest level of economic output among all 27 countries studied. Consequently, citizens of Bulgaria also have the lowest standard of living. The analysis found that the gap in standard of living between it and the EU average is even wider than that for macro indicators (per capita GDP). High economic growth, which has been characteristic of the Bulgaria in the recent years, has not translated into a consequent increase of income.

Bulgaria's main export markets for clothing and textile products were the EU-countries and Russia. The EU member states accounted for 90.0% of the Bulgarian exports of such products with the main markets being Italy, Germany and Greece. As a whole, Bulgaria exported clothes and textiles to 143 countries. However, the leading five markets accounted for more than 70% of the total exports. Of the major export markets, Italy had the biggest share of 27.4% in Bulgaria's total clothing and textiles exports, followed by Germany with a 20.8% share and Greece with 10.2%. Exports to non-EU SEE countries were weak, with the main market being Turkey but it had only a 2.9% share of the total exports.

The main competitors of the Bulgarian clothing and textile sector on foreign markets are the world's major manufacturers such as China and Turkey. However, Bulgaria manages to be competitive by offering low

employment expenses, good production quality and proximity to the Western European countries. The major difference is that textiles dominate in imports whereas clothing dominates Bulgarian exports. The COVID-19 pandemic has resulted in a sharp decline of the imports of both clothing and textiles and in 2020 the drop was 11%. The higher decrease in imports than in exports contributed to maintaining a positive trade balance in the industry which is characteristic for Bulgaria throughout the whole analysed period.

The fashion and textile industry in Bulgaria is part of a global supply chain. It relies on sourcing raw materials, such as textiles, fabrics, and accessories, from both domestic and international suppliers. Bulgaria has been well integrated within the global supply chain, which influences the industry's efficiency, production costs, and responsiveness to market demands, by the time of the covid crisis. As in the majority of other sectors, the value chain disruptions are still in place and have their negative impact on the local industry, the textile sector inclusive.

Foreign direct investments play a significant role in the development of the fashion and textile industry in Bulgaria. International companies invest in production facilities, distribution networks, or establish partnerships with local businesses, taking advantage of the lower wages that ensure significant cost savings.

Financing and access to capital is essential for businesses in the fashion and textile industry. Companies require funding for various purposes, including research and development, machinery and equipment, energy efficiency improvements, inventory management, marketing, and expansion. Access to financial resources is available, even though direct state support incentives are still needed.

#### *B) Main factors facilitating the transition to sustainable production and consumption*

Bulgaria has made significant improvements in its environmental performance since its European Union accession in 2007. While Bulgarian legislation reflects the EU's environmental requirements, implementation remains a challenge. The following examples can be illustrated:

Concerns about *air quality*, especially in the big cities, construction in protected areas, lack of integration of nature and biodiversity policy, and lack of adequate management and conservation objectives continue to challenge Bulgaria's government.

Bulgaria's drinking *water*, due to extensive, high-quality aquifers throughout the country, is of excellent quality but of insufficient quantity. The country's sewage network is incomplete and sewage treatment rates for urban wastewater are low.

*Municipal/solid waste generation*: in Bulgaria increased slightly in 2022 but remains below the EU average. Contrary to the desired goal, there has been an increase in the usage of landfills and a decrease in recycling. Recycling of municipal waste (including composting) increased to 35 percent but is still low compared to the EU average of 46%. Bulgaria still has one of the highest landfill rates at 62% in comparison to the EU average of 24%. The country needs to either close or rehabilitate numerous non-compliant landfills. Full implementation of waste legislation could create more than 14,000 jobs in the country and increase the annual turnover of the waste sector by USD 1.6 billion.

In addition to that, Bulgaria's new Operational Program on the Environment 2021-2027 (valid through 2029) provides EU funding for water management, waste management, biodiversity, climate change and air pollution control. To meet EU requirements, most Bulgarian industries will need to construct or upgrade their wastewater treatment facilities. Urban wastewater treatment plants are planned for hundreds of cities and towns with less than 10,000 residents. Wastewater treatment plants of towns with more than 10,000 inhabitants have already been constructed.

The Bulgarian electricity market is in transition, as the government intends to decrease its coal power capacity and to gradually replace it with renewable power capacity. Still Bulgaria remains the most energy-intensive economy in the EU by a wide margin. The structure of Bulgaria's final energy consumption is like that of the

EU. Electricity production capacities meet consumer demand in the country and enable exports to neighboring markets.

In the period 2021-2027, the cohesion policy fund will invest EUR 5.3 billion in the green transition of Bulgaria. Bulgaria has a long tradition in the IT and electronics and is still known as the Silicon Valley of Southeastern Europe. It is home to approximately 10,000 ICT companies. According to International Data Corporation the Bulgarian ICT market has seen a 300 percent increase in revenue over the past seven years and has reached EUR 2.5 billion. This is to say that the ICT industry in Bulgaria appears to be a driving force for all the other industries, incl. textiles and fashion.

**Demographic changes:** Different age groups have distinct fashion tastes, lifestyles, and purchasing behaviors. For example, younger generations are more interested in fast fashion and trendy clothing, while older consumers are inclined to prioritize comfort and durability.

On the other hand, younger generations are more willing to demonstrate growing awareness of *sustainability and ethical practices* in the sector, though this trend is only roughly emerging. Younger consumers might be concerned about environmental and social issues, including the impact of the fashion industry on the planet and labor conditions.

### Identification of current gaps, risks and/or imbalances

Bulgaria's relatively low per capita income, and low-to-medium purchasing power means that consumers are price sensitive, though they are willing to spend more for high quality products. This fact explains why fast fashion is currently predominating in Bulgaria, as it is more accessible, cheaper and provides greater variety, though the consumer mindset is continuously changing towards sustainable fashion.

There is a shortage of professionals who possess expertise in sustainable practices, circular economy principles, and knowledge of eco-friendly materials and production processes.

The main barriers and challenges for companies in the textile sector regarding sustainability are administrative (bureaucratic) and insufficient financial resources, because the main funding comes from the company's own budget. Sectors such as energy, agriculture, waste management, textile, construction and tourism should be among the first to mandatorily adopt and follow sustainability practices.

Lack of employees in general proves to be a significant barrier to growth in the sector as a result of declining population and a tight labor market in the country.

Bulgaria needs to address a severe digital skills gap because only 41 percent of the population has basic digital skills. On the other hand, Bulgarian internet users are among the most intensive users of online video calls (1st place) and social networks (6th place).

Finally, Bulgaria is reporting one of the highest inflation rates within the EU during 2022. The economy grew 3.4% which was higher than initially predicted. A potential recovery could be driven by higher wages, export increases, and EU-post-COVID recovery grant funds through the National Recovery and Resilience Plan to improve its economy in areas including green energy, digitalization, and private-sector development.

### Green measures/strategies or appearing future trends in the sector

**Innovation and Technology Adoption:** the country encourages the adoption of new technologies, such as digital design tools, automation, and smart manufacturing, to improve productivity, quality, and efficiency. The aim is to enhance the industry's competitiveness and position Bulgaria as a hub for innovation in the sector.

**Digital Public Services:** Improved online/e-government public services will enable Bulgarians to interact more with public authorities. This change is expected to be performed by the new Ministry of e-Government.

**Sustainability and Circular Economy:** efforts are being made to promote sustainable practices, such as the use of eco-friendly materials, waste reduction, and energy efficiency. The government encourages the adoption of



circular economy principles, including recycling, upcycling, and responsible supply chain management, to minimize the environmental impact of the industry.

**Market Access and Internationalization:** Bulgaria aims to strengthen the international presence of its fashion and textile sector. The country actively participates in trade fairs, exhibitions, and fashion events to showcase Bulgarian designers and manufacturers to a global audience.

Efforts are made to facilitate market access, expand export opportunities, and attract foreign investments in the sector.

### A good practice showcase

Title of the good practice: Sustainability Fabric Management

Country/Region: Bulgaria, Smolyan

Scope: EU/Global

KPIs:

- Organic Material Use: 100% transition to organic materials like organic cotton and hemp by 2026. Currently over 70+ of the fabrics used in production are organic.

- Water Reduction: 50% reduction in water usage for fabric dyeing by 2026 using recycled water systems.

- Waste Reduction: Achieve zero fabric waste in production by 2025 through optimized cutting techniques and recycling scraps.

Specific area:

Circular Economy, Sustainability, Energy Efficiency

Good practice owner: [Kosara Style](#)

Description of the selected initiative:

Kosara Style is a Bulgarian company working in the sector of fashion and textile, which has adopted a trio of sustainable manufacturing practices to enhance environmental stewardship and align with EU priorities on sustainability and the green transition.

By transitioning to organic fibers, the company is minimizing its environmental impact by avoiding pesticides and chemicals typically used in conventional fabric production to conserve water.

KosaraStyle employs modern technologies such as recycled water systems and innovative dyeing processes that require less water. Finally, the company is striving for zero waste in its manufacturing process by designing patterns that maximize fabric use and recycling any leftovers into new products or donating them for community use.

These initiatives undertaken by Kosara Style reduce environmental impact, minimize waste, and conserve natural resources, supporting a more sustainable fashion industry.

**What particular problem this solution is addressing:** These practices address the environmental degradation associated with traditional fashion manufacturing, such as high water usage, chemical runoff, and textile waste.

**EU priorities focus:** This aligns with the EU's focus on sustainability, specifically the green transition and circular economy. By implementing these practices, Kosara Style contributes to the EU's goals of reducing environmental footprint and promoting sustainable industry practices.

Title of the good practice selected:

Holiday Academy for sustainable fashion for children and students

Country/Region: Bulgaria, Plovdiv district

Scope: Regional

Specific area: Education and Training

Good practice owner:

The National Fashion Academy of Bulgaria, which is part of the National Fashion Chamber of Bulgaria

Description of the selected initiative:

A Holiday Fashion Academy for children, pupils and students opened its doors for the first time in August 2023 in the village of Tsarimir, Plovdiv region, with free Creative Ateliers from Monday to Friday. It is intended for every talent from the village and neighboring settlements in the municipality, region of Plovdiv, for anyone who wants to learn to knit, embroider, learn to create clothing patterns during the summer vacation, to paint on silk and fabric, to recycle materials, design clothes and accessories from old yarn and fabrics. The workshops aim to finally prepare an exhibition of all hand-made & unique items to promote the initiative and multiply it in other regions.



The idea is to raise awareness on sustainability issues, zero waste techniques and responsible consumption in the fashion among the young generation. Participants may also rediscover their talent, while students can get a direction for their vocational education.

What particular problem this solution is addressing:

- to develop and enhance the creative sustainable thinking
- to raise awareness among children/students and inspire them to be green and responsible
- to foster talents in the rural regions

EU priorities focus: sustainability



## Conclusion

The Bulgarian textile and clothing sector is expected to experience a sustainable development. However, the overall uptrend will be backed mainly by the growth of the wearing apparel segment with more foreign manufacturers and brands entering the market. The sector will continue to rely on CMT services and attract investments by offering affordable workforce and competitive production quality.

Key advantages of the TFI sector in Bulgaria include:

- Well-educated, experienced and affordable workforce;
- Modern textile and clothing-making machinery, providing high quality products;
- Easy access to large markets such as EU, Russia and the Middle East;
- Transfer of know-how from major international companies, operating in the country;
- Financing under EU structural funds.

Key market challenges:

- Regulatory and legislative unpredictability;

- Inefficient bureaucracy and a slow-moving court system;
- Influence of entrenched interests in the sector;
- Long and arduous process of acquiring construction permits;
- Complex, and often opaque, tendering process;
- Aging population with low purchasing power.

Key market opportunities:

- Lowest minimum wage rates in the EU;
- Strategic geographic location;
- Simplified registration process for new businesses;
- Low corporate taxes;
- Incentives for investment in sectors such as IT, research and development, and manufacturing.

## GERMANY

Germany is recognized for its commitment to sustainable development, with economic, social and environmental dimensions present in its society and political systems (German Council for Sustainable Development, 2018[2]). It is strongly committed to the 2030 Agenda for Sustainable Development and actively drives implementation. It places high importance on the role of the High-level Political Forum in overseeing implementation and led by example, submitting a voluntary national review report to the first forum in 2016 (Federal Government, 2016[5]). Germany recognizes the universal applicability of the 2030 Agenda and takes a triple approach to implementation focusing on impacts in Germany; impacts in other countries and on global well-being; and support to other countries through international cooperation (Federal Government, 2016[5]). While the strategy strives for a holistic approach across all policy areas (Bundesrechnungshof, 2019[10]), an independent review in 2018 noted that more could be done in areas such as biodiversity loss, phasing out of fossil fuels and moving to sustainable energy, and circular consumption and production (German Council for Sustainable Development, 2018[2]).

As far as green fashion and textiles are concerned, Germany has taken numerous measures in recent decades to combat gas emissions, energy consumption and water wastage. Thanks to constant awareness-raising through associations, including state initiatives, Germany is trying to fight the ever-increasing pollution. This report will underline not only the above-mentioned data but also what labor practices, educational methods, health and safety measures, and campaigns promoting sustainability are concerned.

### Situational snapshot of reforms supporting sustainability at national level

#### *A) Main aspects enhancing the sustainability process in FTS at national level*

#### Environmental Data

##### Regulation and Legislation

As per the Confederation of the German Textile and Fashion Industry's findings, the cost of one hour of labor in the garment sector in Germany amounted to 27.70 euros, considered by many companies as a too high remuneration. Consequently, numerous aspects of textile production processes are being outsourced to countries with lower wage standards.

In the textiles sector, the Federal Ministry for Economic Cooperation and Development (BMZ) is working for improving environmental and social standards at various levels: the fashion and textile sector has significant impacts on the environment, particularly in terms of greenhouse gas emissions, energy consumption, water usage, and waste generation. For this reason, in April 2014, German Development Minister Dr. Gerd Müller initiated the formation of a Round Table on the Textiles Industry, inviting various stakeholders to explore avenues for enhancing environmental and social standards in the sector. Over 70 representatives from the textiles industry, trade unions, and civil society actively participated in the Round Table, collaboratively drafting an ambitious Plan of Action. On the 16<sup>th</sup> October 2014, the Partnership for Sustainable Textiles was officially inaugurated with the overarching goal of promoting continuous improvements in social, environmental, and economic sustainability throughout the textile supply chain. To realize this objective, the Partnership for Sustainable Textiles employs the following strategic approach: the standards of the Partnership for Sustainable Textiles are grounded in established international principles such as the ILO's core labor standards, the OECD Guidelines for Multinational Enterprises, and the United Nations Guiding Principles on Business and Human Rights. These standards are also influenced by existing systems (e.g., for organic textiles and Fair Trade), technical industry standards, and voluntary commitments (codes of conduct) within the private sector.

##### Promotion of Renewable Energy

In the renewable energy field, Germany has formulated guidelines for an environmentally sound, reliable and

affordable energy supply. The key elements of this are expanding the use of renewable energies and increasing energy efficiency. In electricity production, Germany aims to raise the share of renewables from 17% today to more than 80% in 2050, while completely phasing out electricity production from nuclear power plants. Greenhouse gas (GHG) emissions would be cut by 80% by 2050 and in the field of energy efficiency Germany intends to reduce primary energy consumption by 50% by 2050 compared with 2008. Overall, the Energy Concept contains more than 100 specific measures in the fields of electricity, heat and transport.

#### Environmental Certifications and Standards

In 2019, BMZ (Federal Ministry of Economic Cooperation and Development) established a government-awarded certification label, the “Grüner Knopf”, (Green Button), to help consumers make informed decisions when buying sustainable clothes, bedding and other textile products. To earn the Green Button label, a product must meet 26 social and environmental standards. So far, audits are conducted on the cutting; sewing; bleaching and dyeing stages of production, but eventually will cover the entire value chain. In addition to certification of products, participating companies also must comply with 20 due diligence requirements based on United Nations (UN) guiding principles and OECD recommendations.

The Green Button has gained considerable consumer recognition and interest by the textile industry in Germany and abroad. More than one third of German consumers recognize and approve of the label. Already in the first year since the certification label “Green Button” was established, nearly 80 companies offered Green Button products and approximately 90 million Green Button-certified products were sold in 2020. Green Button is also of increasing importance for the procurement sector, both private and public. Public transport companies, hospitals, police units, hotels and others are using Green Button-certified textiles to underline their sustainability efforts.

#### Consumer Education

Consumers hold a degree of responsibility for the working conditions in the garment industry through their consumption behavior. By making well-informed purchasing decisions, they have the ability to drive the availability of products that adhere to social and environmental standards in the market.

However, achieving this requires transparency. Consumers must have the ability to discern the production methods behind their garments. Established quality labels like Fairtrade and the Global Organic Textile Standard (GOTS) can play a helpful role in this regard. An increasing number of companies are specializing in environmentally friendly and ethical fashion. Despite this positive trend, what is still lacking is a comprehensive guide for consumers.

#### Social Data

Promoting the sustainability process in the national fashion textile sector requires a variety of measures and initiatives. Here are some key aspects that can contribute to this goal:

##### Digital education

German schools face digital education challenges with equipment and connectivity below the EU average, especially in primary and upper secondary levels. Access to digital resources is varied, with significant disparities in ICT policy and support across school levels.

While students possess above-average ICT skills, there are gaps in basic computational thinking knowledge, with socio-economic and language background differences. Teachers lag in ICT skills, using it less in daily teaching, citing poor equipment, lack of materials, and insufficient training. Teacher training programs lack minimum digital skills, and reform initiatives are yet to be implemented.

COVID-19 prompted a shift to distance learning, revealing weaknesses in preparation, student-teacher contact, and parental support. Concerns about increased inequalities lead to various measures, including a EUR 500 million emergency program and accelerated Digital Pact implementation, addressing hardware and learning materials.

### Investing in education and training

The 2020 European Semester country-specific recommendation urged Germany to 'focus investment on education. The government introduced spending initiatives in the 2020 national reform program, with federal and regional levels investing in education quality and addressing identified issues. From 2017-2020, EUR 1.126 billion went into expanding Early Childhood Education and Care (ECEC). In 2020, a EUR 2 billion fund aimed to help primary schools transition to all-day schooling until 2025. Municipalities received financial support for infrastructure (particularly ECEC and school building green initiatives) and around EUR 3.5 billion from 2017-2022 for school building renovations. Despite these investments, the perceived backlog in education infrastructure at the municipal level is estimated to be over EUR 40 billion.

### Health and Safety Performances of Businesses

The German occupational safety and health system operates on a dual structure, comprising state-level safety and health provisions and independent accident insurance institutions. Legislation and regulations are enacted at both federal and state levels, with state boards establishing rules. Accident insurance institutions, following examination and approval by federal and state governments, release their own accident prevention rules.

Supervisory authorities and accident insurance institutions officials from the relevant state (Land) oversee businesses and offer guidance. The Joint German Health and Safety Strategy (GDA), collaboratively developed by the Federal and Land governments and accident insurance institutions, aims to uphold, enhance, and advance workplace safety and health through a unified and systematically implemented policy. Future coordination between the GDA parties will involve closer collaboration, aligning activities based on jointly agreed safety and health goals at work.

While maintaining the dual system for safety and health at work, Germany seeks to enhance cooperation between the supervisory services of statutory accident insurance institutions and state safety and health authorities. This collaboration aims to provide businesses with better advice and strengthen oversight responsibilities.

### Awareness Campaigns

Awareness campaigns that focus on sustainability issues are of great importance. These campaigns should inform consumers about the environmental impact and working conditions in the fashion industry while also offering solutions.

Climate change is a global challenge affecting nations worldwide, including Germany.

Germany's commitment to a secure future involves various stakeholders, particularly organizations dedicated to comprehensive climate actions, which encompass efforts to reduce greenhouse gas emissions and enhance resilience, like for example *The Deutsches Klima-Konsortium (DKK)*; *Bund für Umwelt und Naturschutz Deutschland (BUND)* and *Deutsche Umwelthilfe e.V. (DUH)*.

### Research, Development and Incentives for Sustainable Practices

Government agencies can create incentives and tax benefits for companies implementing sustainable practices in the fashion industry. This can help reduce the costs of sustainable production and encourage businesses to make environmentally friendly decisions.

The 28th Subsidy Report for example is dedicated to outlining measures aimed at achieving the German government's objectives in climate action and environmental protection. Notably, initiatives aligned with the climate goals for 2030 and the immediate climate action program were allocated funding in accordance with their prioritized significance. In these specific domains, federal subsidies, including financial assistance and tax benefits, were projected to increase from €24.6 billion in 2019 to €47.2 billion in 2022.

### Partnerships and Collaborations

The German Partnership for Sustainable Textiles (GPST), also known as the German Textile Alliance, was established in 2014 as a multi-stakeholder initiative led by the German Federal Minister for Economic Cooperation and Development, Dr. Gerd Müller. Comprising companies, NGOs, trade unions, standard organizations, and the German government, the partnership aims to enhance the sustainability of the global

textile supply chain. Guided by the OECD Due Diligence Guidelines, as well as international standards such as those set by the International Labor Organization and the UN Principles on Business and Human Rights, the GPST encourages its members to engage in partnership initiatives, uphold individual responsibilities, and actively contribute to dialogues on textile production issues. Collaboration among GPST members, suppliers, and local stakeholders is crucial for advancing the sustainability of the textile industry.

Emphasizing individual responsibility, GPST members are required to prioritize sustainability within their respective supply chains. They submit future work plans and progress reports on risk management and limitation to an external third party and the GPST Secretariat. Facilitating a Dialogue Forum, the GPST provides a platform for stakeholders to discuss challenges associated with the sustainable transition in the textile industry. This platform enables the exchange of good practices and collaborative development of sustainable solutions among its members.

## Economic Data

Over the last decade, the importance of sustainably designed global supply chains has steadily increased across various economic sectors. The business and political communities, civil society, and the public have become more conscious of the social and environmental risks associated with global supply chains.

### Statistical Data, Analysis and labour market overview

Germany, boasting a population of 84.3 million, holds the position of the largest economy in the European Union (EU) and ranks as the world's fourth-largest economy after the USA, China, and Japan. It stands as the third-largest global exporter, with major players in automotive, chemicals, and electronics sectors, including Volkswagen, Daimler, BMW, BASF, and Siemens. Notably, 55.1% of Germany's workforce is engaged in small and medium-sized enterprises (SMEs).

As of March 2023, the country recorded a workforce of 45.72 million, reflecting a 1.0% year-on-year increase. Employment figures subject to social insurance contributions saw growth in nearly all federal states, with Hamburg leading at a notable 2.8% increase. Conversely, Thuringia, Saxony-Anhalt, and Mecklenburg-Western Pomerania reported marginal year-on-year decreases.

In April 2023, the overall unemployment rate stood at 5.7%, with a stable seasonally adjusted rate of 5.6%. A 0.7 percentage point year-on-year increase was partly attributed to the migration of Ukrainian refugees. Eastern Germany experienced a higher unemployment rate (7.2%) compared to western Germany (5.3%), although the gap between these rates has been gradually narrowing. Bavaria maintained the lowest unemployment rate among federal states, while Bremen reported the highest.

The influx of Ukrainian refugees, totaling around 1.175 million by March 2023, contributed to a 0.4 percentage point increase in the unemployment rate. Ukrainian refugees with residence permits gained access to the labor market and have been eligible for basic income support since June 1, 2022.

As of April 2023, reported job vacancies numbered 773,000, reflecting a 9% decrease (79,000) compared to the previous year. In 2022, Germany hosted 237,929 cross-border commuters, underscoring the significant presence of foreign nationals employed in the country while residing outside its borders. This trend is particularly noteworthy due to Germany's central European location, attracting cross-border workers, with a substantial number originating from Poland and France.

## *B). Main factors that facilitate the transition to sustainable production and consumption*

### Legal and Regulatory Framework

The European Commission's Sustainable Finance Strategy with its Action Plan on Financing Sustainable Growth, presented an ambitious programme of work to strengthen sustainable finance in the EU. It was followed up by a slew of legislative initiatives, the adoption of which set important waymarkers for a sustainable financial system in Europe:

- Taxonomy Regulation (Regulation (EU) 2020/852)

- Transparency Regulation (Regulation (EU) 2019/2088)
- Benchmark Regulation (Regulation (EU) 2019/2089)

The German Government expresses support for the increased attention at the EU level to incorporate governance and social aspects into sustainable finance, implementing the EU Sustainable Finance Strategy through an ambitious set of measures.

### Circular Economy

Economic activity relies on the utilization, processing, and transformation of natural resources unless secondary raw materials are employed. Policymakers play a crucial role by establishing product standards, promoting environmental efficiency in production plants and recycling processes, advocating for the circular economy, setting limits for substances released into the environment, and empowering consumers through quality labels and discussions on sustainable business and consumption practices. Additionally, the German Government can contribute by incorporating sustainable resource use considerations into its procurement processes for goods. In this way, sustainable public procurement becomes a pivotal force in advancing the principles of a circular economy.

Resource-efficiency not only minimizes the demand for new resources but also reintegrates materials no longer needed for production and consumption into the circular economy, allowing secondary resources to replace primary ones. Sustainable consumption and business practices revolve around the responsible utilization of resources, waste avoidance, and efficient recycling. These principles collectively work towards closing the cycle as comprehensively as possible.

### Research and Development

Germany has a strong network of textile research centers. The high-performance institutes are located in the former historical centers of the textile industry in Baden-Wuerttemberg, North Rhine-Westphalia, Saxony and Thuringia. Thanks to them, the textile industry has turned from a traditional sector for clothing, home textiles and fashion into the world's largest producer and exporter of technical textiles.

Textile research gives priority to material research. It focuses mainly on new materials, fibers' and fabric's properties, composites, surface functionalization, production and processing technologies, material safety, value chain, resource efficiency and sustainability.

FKT (Forschungskuratorium Textil e. V.) for example coordinates a network of 16 textile research institutes in Germany. About 1.200 researchers participate in national and EU funding schemes to develop new technologies and innovations in the field of fiber-based materials and textile composites giving input into many industrial growth sectors linking education, research and economy. The German Federal Ministry funds collective research projects initiated by SME on a pre-competitive level in the scheme of Industrielle Gemeinschaftsforschung (IGF) for Economic Affairs and Energy.

## Identification of current gaps, risks and/or imbalances

As one of the largest industries globally, the textiles sector employs millions of people and stands as a crucial component of Europe's manufacturing industry. Despite its significance, textile production and consumption contribute substantially to environmental, climate, and social issues, involving the use of resources, water, land, chemicals, and the emission of greenhouse gasses and pollutants.

### Environmental Impacts and Energy Consumption

Germany's fashion industry is responsible for emitting 38 million tons of greenhouse gasses annually on a global scale, with a substantial 90% of these emissions occurring abroad. A primary contributor to this environmental impact is the industry's energy consumption, which stands at an estimated 535,000 terajoules per year, with 83% of this energy derived from fossil fuels. The remaining 27% is generated through a combination of nuclear power and renewable energies.



In addition to greenhouse gas emissions, the fashion industry also releases other air pollutants globally, including particulate matter and carbon monoxide, totaling 740,000 tons annually.

The industry's water footprint is also significant, with an annual consumption of 6.4 billion cubic meters. This consumption is categorized into "green water," representing rainwater used for crop cultivation (constituting two-thirds of the total), "grey water," denoting polluted water (1.6 billion cubic meters), and "blue water," sourced from public water supplies (900 million cubic meters).

To meet its needs, the fashion industry demands an estimated 2.5 million hectares of agricultural land annually, primarily for cotton cultivation, but also for the production of wool, leather, and other fibers.

#### Working Conditions

In many parts of the world, workers in the fashion industry are still employed under poor working conditions, raising ethical concerns regarding labor rights. Like many Western countries today, Germany's clothing and textiles are not all manufactured nationally, with production being outsourced to factories elsewhere in the world. Based on import value, the leading countries for clothing imports to Germany are China, Bangladesh and Turkey and concerns and issues accompanying clothes imports are working conditions for employees abroad, benefits and salaries, as well as following labor laws.

#### Throwaway Culture and Fast Fashion

The explosive rise of online shopping among consumers also leads to stores closing, in addition to changing customer preferences, quality standards, convenience and rent costs in cities. Of course, the future may look different for those stores that embrace and develop their own online shops, thus creating a new revenue stream within their own brand. Most recently, online fashion shops in particular generated 11.17 billion euros worth of revenue. The emergence and accelerated development of online clothing retail does not remove the aforementioned requirements for a fair textile industry. In fact, the issues surrounding textile manufacturing become even more acute with the ongoing development of online textile and clothing retail, as the rising demand from consumers, due in part simply to the convenience of online shopping, puts further pressure on industry employees and sectors.

The existing gaps, risks, and imbalances pose significant hurdles to achieving a sustainable green transition in the fashion and textile industry. Overcoming these challenges necessitates heightened efforts to advocate for sustainable practices, enhance transparency in the supply chain, and educate consumers about the implications of their purchasing choices. Effectively addressing these issues requires coordinated action from governments, businesses, and consumers alike.

### Green measures/strategies/roadmaps or appearing future trends in the sector

The Circular Economy Action Plan of the EU, outlined by the European Commission in 2020, underscored the textile industry as a pivotal sector in the shift towards a circular economy. This strategic move positions Europe to actively address its textile waste and imparts significant political importance to the textile industry within the broader framework of the European Circular Economy Strategy and the European Green Deal, as articulated by the European Commission in 2019.

With regard to the practical implementation of this EU Textiles Strategy, Germany has the opportunity to play a significant role in protecting the climate and environment on the one hand, while at the same time it can contribute to the long-term competitiveness of its industrial sector.

The German federal government has already taken various steps in this direction. For example, it announced the development of a National Circular Economy Strategy, which should have a specific focus on the textile value chain. On the subject of textiles, **Germany's Waste Prevention Programme** ("Wertschätzen statt wegwerfen" – "Value it, don't throw it away") already contains numerous ideas for preventing waste, which

are aimed at federal, state and municipal governments as well as consumers and economic operators, through a clear roadmap:

- Transparent definition of responsibilities
- Economic incentives for circular products
- Closed-loop material cycles
- Putting technical innovations into practice
- Building awareness

### A good practice showcase

Title of the good practice selected: Initiatives and measures regarding sustainability at Trigema

Country/Region: Germany

Scope: National

Specific area: Energy Efficiency, Circular Economy, Local Production

Good practice owner: Trigema (Company)

Description of the selected initiative:

Trigema has taken some important initiatives and measures regarding sustainability:

- Sustainable Materials: Trigema is committed to using sustainable materials for its products, including organic cotton and recycled materials.
- Production in Germany: The company manufactures a significant portion of its clothing in Germany. This reduces transportation distances and the ecological footprint of its products.
- Environmental Conservation Measures: It has invested in improving the energy efficiency of its production facilities. This includes the use of renewable energy sources and the implementation of energy-efficient technologies.
- Regional Sourcing: Trigema sources from regional suppliers to shorten transportation distances and strengthen local economic cycles.
- Longevity and Quality: Trigema emphasizes the longevity and quality of its products to ensure they can be worn for a longer time, contributing to waste reduction.
- Transparency: The company communicates its efforts in sustainability and environmental protection on its website and in other marketing materials to inform consumers about its initiatives.

What particular problem this solution is addressing: These initiatives are addressing problems such as air pollution, over-consumption, the throw-away culture and the lack of transparency.

EU priorities focus: Digital transformation, green transition, circular economy, sustainability, resilience

Reference: <https://www.trigema.de/>



Other companies in Germany committed to sustainability:

Nikin is a German brand that makes sustainable fashion affordable. From every NIKIN sale, a portion goes to tree planting programs around the world. Since its founding in 2016, NIKIN has planted more than 2 million trees.

Why are over 2 million more trees on earth even important?

- 80% of all biodiversity on land is found in the forest
- Worldwide, 350 million people live in or from the forest
- 60 million people around the world, including many indigenous peoples, cannot live without forests
- Trees provide shade, protect against soil erosion, floods and avalanches
- Forests are important retreats for humans and animals
- Trees filter pollutants from the air and water

„A single tree doesn't change the world overnight, but little by little, we and our community are making the earth a greener place. But the quest for greater sustainability doesn't stop there for us. We always act in an innovative, open-minded, sustainable and fair way. In production, the materials for our articles, external & internal sales processes, but also as an employer and as part of society. Transparency towards our community is important to us. That's why you can find information about our philosophy and its concrete implementation on our website.“

Together with their partner organization “One Tree Planted”, they plant one tree for every product sold reforesting forests around the world that are threatened by deforestation, natural disasters or diseases. Because trees produce oxygen, store CO<sub>2</sub>, protect against flooding and landslides, and provide habitat and food for an extremely large number of animals and plants, to name just a few of their properties.

Sustainability plays a central role for NIKIN. This also applies to the design of their articles and their implementation with external manufacturers.

About Materials: Nikin selects its materials according to some guidelines: Use organic natural fibers; Do not use any animal materials (ex. leather or wool); Recycled material; Traceable materials

Hess Natur-Textilien GmbH & Co. KG - For around 50 years, the company has attached great importance to sustainable materials, such as bamboo: <https://www.hessnatur.com>.

It is important to point out that the number of young entrepreneurs and start-ups in the sector is constantly increasing. Some interesting examples:

Tina Noack - Alpin Lodge Fashion brings loden into fashion: <https://www.alpin-lodge.fashion>,

Sophia Schneider-Esleben SSL combines art with sustainable fashion: <https://www.schneider-esleben.com>,

Anna Karsch and Michaela Wunderl-Strojny - Akjumii OHG, experiment with new sustainable fibers for a fashion that is unisex: <https://www.akjumii.com>,

Barbara Gebhardt - Nix Design GmbH produces sustainable fashion herself, trains and repairs: <https://www.nix.de>.

## Conclusion

The concerted efforts of the Federal Ministry for Economic Cooperation and Development (BMZ) in the textiles sector, exemplified by initiatives such as the Partnership for Sustainable Textiles and the establishment of the "Grüner Knopf" (Green Button) certification label, underscore Germany's commitment to enhancing environmental and social standards in textile production. Through collaborative frameworks and stringent certification criteria, Germany not only aims to mitigate the environmental impact of the fashion and textile industry but also seeks to empower consumers to make sustainable choices. Moreover, Germany's proactive stance on renewable energy and its robust investment in education and research reflect a holistic approach towards securing a sustainable future, wherein stakeholders across various sectors converge to address pressing challenges and drive innovation. This integrated approach underscores Germany's leadership in fostering sustainability and resilience, both domestically and globally, while nurturing a vibrant textile industry anchored in cutting-edge research and development.

Despite several commendable initiatives, though, the sector continues to grapple with formidable challenges. Environmental sustainability remains a key concern, with the fashion industry contributing significantly to global greenhouse gas emissions, air pollutants, and substantial water consumption. The industry's dependence on fossil fuels and the associated environmental impacts necessitates a comprehensive shift towards renewable energy sources and improved production processes. Addressing these environmental issues requires not only domestic action but also international collaboration to mitigate the global impact of German fashion and textile consumption.

Moreover, the persisting ethical concerns surrounding working conditions in the global supply chain demand a reevaluation of Germany's outsourcing practices. The reliance on countries like China, Bangladesh, and Turkey for clothing imports raises critical questions about labor rights, fair wages, and adherence to international labor laws. The industry's pursuit of efficiency and cost-effectiveness should not come at the expense of workers' well-being and ethical considerations, urging the need for more stringent regulations and oversight.

The surge in online shopping, while reshaping the retail landscape, introduces additional challenges related to the throwaway culture and fast fashion. The convenience of online shopping has led to changing customer preferences and increased demand, putting additional pressure on industry employees and sectors. To ensure a fair and sustainable textile industry, efforts must be directed toward aligning online retail developments with ethical and environmentally responsible practices, fostering a balance between consumer convenience and responsible consumption.

## GREECE

The achievement of sustainable changes in Greece's fashion industry can be impeded by various influences. Environmental, social, and economic aspects are among the concerns that must be addressed. The environmental data in this report covers subjects such as greenhouse gas emissions, energy consumption, water usage, and waste management. The social data details concerns relating to labour practices, educational methods, health and safety measures, and campaigns promoting sustainability with added value. The economic data pertains to the financial performance of companies, economic indicators and innovative practices. This report further outlines and explains the key channels used to disseminate the final fashion policy statement.

### Situational snapshot of reforms supporting sustainability at national level

#### A.) Main aspects enhancing the sustainability process in FTS at national level

##### Environmental data

**Greenhouse Gas Emissions:** Greece has been working to reduce its greenhouse gas emissions in alignment with EU targets. Greece has adopted ambitious plans to reduce GHG emissions over recent years (Box 1). In 2022 it raised the targets in its National Energy and Climate Plan and in its Climate Law is now committed to cutting GHG emissions by 55% by 2030 and 80% by 2040 compared to 1990 levels, in line with recent (Leidecker, T., Bulman, T., Levin, I., & Blake, H. (2023). *Transitioning to a Green Economy in Greece*.

Legislative measures have been in place to encourage the use of renewable energy sources and energy efficiency.

**Energy Consumption:** Efforts have been made to promote energy efficiency in various sectors, with a focus on reducing overall energy consumption.

The government has introduced policies to support the transition to cleaner and more sustainable energy sources. Specifically, Greece has set targets to reduce greenhouse gas emissions by more than 56% by 2030 compared to 2005 and to have a climate neutral economy by 2050. Most coal fired generation will be phased out by 2023 and EUR 5 billion has been committed to assist impacted communities. Most coal fired generation will be phased out by 2023 and EUR 5 billion has been committed to assist impacted communities. Auctions are driving strong deployment of solar PV and onshore wind. The government is implementing reforms to standardise and simplify licensing procedures for renewable projects and is investigating options for offshore wind. There are also projects for interconnections and renewables to decarbonise electricity on Greek islands. Greece has reformed its wholesale electricity market to support better coupling with the rest of Europe, which will result in lower prices.

**Water Usage:** Water scarcity is a concern in certain regions and water scarcity issues exacerbated by regional climate variations and increasing demand. The greater Athens area witnesses a staggering six percent annual increase in water demand, driven by urban expansion and changing residential landscapes. Also, Greek households use the most drinking water in the EU, consuming prosimetely 170m<sup>3</sup>/household /year (EurEau, 2017). Urgent measures are needed to balance supply and demand, emphasizing water conservation and efficiency at the national level (Heggie, J. (2020). Preventing a water crisis in Greece. National Geographic. ] Greece is the 26th country in the global water stress ranking, according to the [WRI's Aqueduct Water Risk Atlas](#). Regulatory frameworks address water management practices and encourage responsible water use.

**Waste Generation/Management:** Legislation exists to regulate waste management practices and promote recycling initiatives. The transfer of waste management responsibility to the Regulatory Authority for Energy is outlined in Law 5037/2023, which also permits small biological treatment units on high productivity lands.

Law 4819/2021 incorporates EU directives on waste and packaging waste into Greek legislation. The law supports the national waste management plan, with the goal of minimizing landfills to 10% by 2030, five years earlier than the EU requirement. Waste management legislation and policy now includes, in addition to reuse and recycling, other waste streams such as energy recovery (Title: Greece Waste Management Opportunities, Greece grapples with a plastic waste crisis, generating 700kT annually, with 68 kg per capita. Tourist influx spikes waste by 26%. Only 8% is recycled, mostly ends up in landfills, causing 40kT leakage into nature. Economic losses are €26M/year. Despite ambitious targets, low implementation of waste management initiatives persists. Greece aims to divert 74% from landfills and recycle 70% of plastic by 2020, proposing a 4-stream collection system and landfilling tax. Challenges include low municipal capacity and stakeholder resistance. Key solutions involve reducing plastic consumption, enhancing waste management, and holding the plastic industry accountable. Currently 8th in regional plastic production, Greece relies heavily on landfills, with concerns about landfill standards and open dumps. Bold actions are needed to meet targets and address the plastic pollution crisis effectively (Dalberg Advisors, WWF Mediterranean Marine Initiative, 2019 “Stop the Flood of Plastic: How Mediterranean countries can save their sea”)

## Social data

### Education in Greece:

The Greek educational system is divided into three levels, namely primary, secondary and tertiary, with an additional post-secondary level providing vocational training. Education in Greece, including pre-school, primary and lower secondary education, is compulsory for all children 6 to 15 years old.

In Greece, 66% of 18-24 year-olds are still in full- or part-time education or training at either upper secondary or tertiary level (significantly above the OECD average of 54%).

Based on Greece - Education and Training Monitor 2020

### Digital Education Focus:

- Greece has prioritized digital education, especially during the COVID-19 pandemic, with efforts to move learning online.
- Challenges include access and implementation issues.
- Decline in reading, math, and science performance observed, with socio-economic background significantly influencing achievement levels.

### Higher Education Modernization:

Higher education is undergoing reforms in funding, quality assurance, and internationalization.

Raising attractiveness and participation in vocational education, training, and adult learning remains a challenge.

### Digital Education Challenges:

Despite efforts to upgrade digital infrastructure, Greece lags behind other EU countries.

Inequalities in access to digital devices and technical support, with challenges highlighted during the COVID-19 lockdown. Limited monitoring of in-school digital education outcomes.

### Teacher Training and ICT Integration:

Teacher preparation is crucial for effective ICT integration.

EU-supported training programs, like the In-service training of teachers in digital technologies, aim to provide digital knowledge.

Lack of time, support, and curriculum flexibility hinder effective ICT integration.

#### Education Funding and Underachievement:

Education remains underfunded, particularly at the tertiary level.

PISA 2018 reveals persistent underachievement in basic skills, with a focus on reading, math, and science.

Disparities in performance based on gender, location, and socio-economic background.

#### Early Childhood and School Education Challenges:

Challenges in early childhood education include low participation rates and unmet needs.

Underachievement in basic skills remains high, with concerns about gender, rural-urban gaps, and migrant students.

New legislation emphasizes skills development and quality assurance.

#### Vocational Education and Training (VET):

Efforts to increase the attractiveness of VET and strengthen links to the labor market are ongoing.

Digital skills gaps impact employment prospects, emphasizing the need for a high-capacity digital infrastructure.

#### Higher Education Challenges and Reforms:

Tertiary graduates' employment has risen, but soft skills deficiencies affect job prospects.

Greek higher education focuses heavily on undergraduate studies, with challenges for master's graduates.

Reforms include performance-based funding, amendments to degree recognition, and the establishment of the Hellenic Authority for Higher Education.

#### Adult Learning Participation:

Adult learning participation remains a challenge, with a decrease in the share of adults engaged in learning.

A project is launched to increase participation among low-skilled adults and enhance their core skills, including digital skills. In summary, Greece is actively addressing challenges in its education system, emphasizing digital education, teacher training, and reforms across various education levels to enhance quality and address disparities. The focus extends to adult learning and skills development, reflecting a comprehensive effort to improve the overall education landscape.

#### Labour market overview:

Seasonally adjusted data shows a 5.2% increase in Greece's Gross Domestic Product (GDP) volume in Q4 2022 compared to Q4 2021 and a 1.4% increase compared to Q3 2022.

Employment was at 4,135,231, with 558,416 jobseekers in Q4 2022. The unemployment rate increased slightly to 11.9%, up from 11.6% in Q3 2022 but decreased from 13.2% in Q4 2021.

#### Employment Statistics:

Employment decreased by 1.9% compared to the previous quarter but increased by 2% compared to the same quarter of the previous year.

Unemployment increased by 0.5% compared to the previous quarter but decreased significantly (9.6%) compared to the same quarter of the previous year.

Economically inactive persons totaled 4,351,018, with a 2.3% increase over the previous quarter.

#### Demographic and Regional Trends:

Unemployment is highest among women, individuals aged 15 to 24, and in the Region of Thessaly. The highest employment rates are among men, aged 30 to 44, in the Region of Attica.

Foreign nationals have higher employment rates than the national average.

#### Employment Types and Working Hours:

Salaried employees constitute 69.6% of the workforce, while self-employed without staff make up 19.8%.

Part-time employment increased by 10.1% compared to the previous quarter, and temporary employment decreased by 24.7%.

#### Occupational Distribution:

Professionals (22.4%) and service providers/salespersons (20.9%) are the largest occupational groups. Particular increases were seen in professional roles, while service providers/salespersons experienced a decrease.

#### Work Hours:

49.5% of the employed work 40-47 hours a week, and 19.2% work 48 or more hours a week. 78.1% work normal hours, while 7.1% express a desire for longer working hours.

#### Labor Force Participation:

Among those outside the labor force, 46.4% have never worked before, and 28.6% have been unemployed for more than 8 years. 92.1% of those outside the labor force declare they would not like to work.

#### Immigration and Refugee Impact:

Greece, once home to over one million foreign immigrants, faced a significant loss of foreign jobs during the recession (2009-2013). The country grapples with the impact of the refugee crisis, affecting the economy and tourism.

#### Legal Framework and Migration:

Law 4251/2014 regulates the employment conditions of foreign workers to integrate them smoothly into the labor force. Labor mobility is limited due to high home ownership, strong family connections, and a higher unemployment rate among foreigners.

#### Business Landscape:

Over 80% of businesses in Greece are small, with a turnover of up to EUR 150,000. More than 85% of businesses have no more than five employees, reflecting the predominance of small businesses in the country.

#### Available Jobs:

In Q4 2022, the sectors with the highest employment are professionals and service providers/salespersons. Positive trends and increased employment are observed in processing, transport, storage, public administration, education, and the tourism sector.

#### Available Workers:

Many unemployed individuals have past experience in wholesale/retail trade, motor vehicle/motorcycle repair, processing, and accommodation/food service activities.

#### Improving Employability:

To enhance the employability of the local workforce, there is a need to focus on developing green and digital skills, along with general soft skills through targeted education initiatives.

#### Health and Safety Performances of Businesses:

Regulatory frameworks mandate health and safety standards in workplaces. Companies in Greece are obligated to adhere to health and safety regulations outlined in Framework Directive 89/391/EEC, transposed into Greek law by Presidential Decree 17/1996 and codified by Law 3850/2010. According to Law 3850/2010, employers must engage the services of a safety technician and occupational physician, both possessing



specified skills and qualifications. These professionals, whether employed directly or through service contracts, collaborate in performing their duties, including jointly authoring and revising the written occupational risk assessment required by law. The appointment of safety technicians (ST) and occupational physicians (OP) must be done exclusively online through the Management Information System (MIS) of the Labour Inspectorate. The assignment is restricted to individuals registered in the MIS Database, and detailed instructions for the announcement process can be found on the MIS website.

General risk prevention principles for worker health and safety are stipulated in Article 42 of Law 3850/2010, amended by Article 7 of Law 4808/2021. Employers must document specific measures for the protection of workers' health and safety in the written occupational risk assessment, aligning with the provisions of the Framework Directive 89/391/EEC and national statutes.

#### Awareness-Raising Campaigns:

Greece has taken significant steps to raise awareness about sustainability issues, encompassing environmental, social, and economic dimensions. The country's efforts have evolved over the years, reflecting a commitment to sustainable development. Here are key strategies and initiatives undertaken by Greece

- **National Strategies for Sustainable Development (NSSD):** Greece adopted its first NSSD in 2002 with a strong environmental focus. Subsequent strategies, such as the 2007 NSSD, aligned with the EU Strategy for Sustainable Development and included additional national priorities. The establishment of the Ministry of Environment, Energy, and Climate Change in 2009 marked a shift toward "Green Growth" in response to the financial crisis.
- **2030 Agenda for Sustainable Development and SDGs:** The adoption of the Sustainable Development Goals (SDGs) in 2015 provided a transformative framework for Greece. The National Strategy for Sustainable and Fair Growth 2030, aligned with the SDGs, was adopted in 2019. This strategy includes 40 key performance indicators related to SDG implementation at the national level.
- **Institutional Changes for SDG Coordination:** The organizational modalities for coordinating SDG implementation at the national level underwent changes after the 2019 elections. The General Secretariat of the Government was merged under the Presidency of the Government, emphasizing the importance of Policy Coherence for Sustainable Development (PCSD).
- **Multi-Stakeholder Engagement:** The Secretariat Special for the Monitoring and Evaluation of the Government's Programme has initiated projects contributing to SDG implementation. This includes the development of a multi-stakeholder platform and methodology/tools for monitoring quantitative data on the SDGs at the national level. The engagement of international experts and collaboration with Custodian Agencies, such as UNEP, FAO, and UNESCO, demonstrates a commitment to learning from global experiences.
- **Regulatory Impact Assessment (RIA):** Greece has enriched its Regulatory Impact Assessment (RIA) process to include a section assessing which of the 17 SDGs are pursued by proposed regulations. This ensures that all draft bills explicitly reference the SDGs, contributing to Policy Coherence for Sustainable Development.
- **Engagement with Local and Regional Authorities:** Recognizing the role of local and regional governments in SDG implementation, there is constant cooperation between national, regional, and local levels. The former General Secretariat of the Government facilitated consultation with multiple stakeholders, including regional and local authorities, to raise awareness of the integrated nature of the 2030 Agenda.
- **EU Green Deal Support:** Greece strongly supports the EU Green Deal as a development strategy aligned with its priorities. The EU's recognition of the SDGs as an overarching priority within the European Green Deal provides a framework for Greece's efforts.
- **Stakeholder Consultation and Public Participation:** The Economic and Social Council of Greece plays a vital role in social dialogue, engaging various stakeholders. Public consultation on draft legislation and government policy initiatives is facilitated through the government portal, promoting transparency and inclusivity.
- **Youth Engagement:** Initiatives and workshops, including those organized with academia and the Synod of

Rectors in Universities, focus on raising awareness among the youth for the achievement of the SDGs.

- European Sustainable Development Week (ESDW): Greece actively participates in the ESDW, disseminating information and encouraging stakeholders to organize and register SDGs-related activities. This promotes collective awareness and engagement across various target audiences.
- Local Initiatives: Several local initiatives, such as a radio program dedicated to the SDGs and the promotion of Sustainable Urban Mobility Plans, aim to raise awareness and citizen participation at the local level.

In summary, Greece's approach to sustainability encompasses a comprehensive and integrated strategy, involving government restructuring, stakeholder engagement, alignment with global goals, and active participation in European initiatives. These efforts reflect a commitment to a sustainable and fair development path, balancing economic growth, social cohesion, and environmental protection.

### Economic data

**Financial Performance:** As of 2022, Greece is the sixteenth-largest economy in the European Union. According to the International Monetary Fund's figures for 2023, Greece's GDP per capita is \$23,173 at nominal value and \$39,864 at purchasing power parity. The financial performance of companies in Greece is influenced by economic conditions and global market trends. The annual inflation rate is forecast to drop to 2.6% by the end of 2024 from 4.1% this year. Unemployment is also seen declining to 10.6% next year from 11.2% in 2023. Athens also expects to raise 5.77 billion euros from state asset sales in 2024, the budget said

The tourism sector, among others, plays a significant role in the country's economic performance. In 2022, Greece's travel and tourism sector contributed 7.4% less to the GDP than in 2019 due to the COVID-19 pandemic, totaling 37.8 billion euros. These industries accounted for over 18% of the country's GDP, the second-highest among EU nations, and supported about 800 thousand jobs in 2022

**Economic Contributions:** Various sectors contribute to Greece's economy, including tourism, agriculture, and services. Greece's main industries are tourism, shipping, industrial products, food and tobacco processing, textiles, chemicals, metal products, mining and petroleum. In 2022, agriculture contributed around 3.92 percent to the GDP of Greece, 16.81 percent came from the industry and 67.09 percent from the service sector. Sustainable practices in these sectors contribute to long-term economic stability.

### Innovation and Sustainability Reports/Practices:

Companies in Greece publish sustainability reports outlining their environmental and social impact.

Innovative practices, such as green technologies and sustainable supply chain management, are emerging in various industries.

## *B.) Main factors facilitating the transition to sustainable production and consumption*

Greece is actively working towards sustainable production and consumption, considering various environmental, social, and economic factors. Here are the main facilitators of this transition:

### Environmental Factors

#### Greenhouse Gas Emissions Reduction Targets:

Greece has committed to ambitious targets for reducing greenhouse gas emissions, aligning with EU goals. Legislative measures incentivize the use of renewable energy sources and energy efficiency, supporting the transition to cleaner energy.

#### Energy Consumption and Transition:

Policies promoting energy efficiency and the transition to sustainable energy sources are in place.

Greece has set targets to significantly reduce greenhouse gas emissions by 2030, with a focus on phasing out coal-fired generation and investing in renewables.

#### Water Usage and Conservation:

Greece faces water scarcity challenges, especially in regions with increased demand.

Regulatory frameworks emphasize water management practices and encourage responsible water use, addressing issues exacerbated by climate variations.

#### Waste Generation and Management:

Legislation regulates waste management practices and promotes recycling initiatives.

Greece aims to minimize landfills by 2030 and has introduced measures to address the plastic waste crisis, emphasizing the need for reducing plastic consumption and enhancing waste management.

### Social Factors

#### Educational and Labor Practices:

Greece is addressing challenges in its education system, with a focus on digital education and reforms across various levels.

Efforts are underway to enhance green and digital skills to improve employability.

#### Labor Market Overview:

Employment statistics and demographic trends are considered to understand labor market dynamics.

Improving employability is highlighted, with a focus on developing green and digital skills for the workforce.

#### Health and Safety in Businesses:

Regulatory frameworks mandate health and safety standards in workplaces, ensuring the well-being of employees.

Businesses are obligated to adhere to health and safety regulations, contributing to a safer and more sustainable working environment.

#### Awareness-Raising Campaigns:

**Sustainability Awareness Initiatives:** Greece has implemented various strategies and initiatives to raise awareness about sustainability issues. National strategies, engagement with stakeholders, and participation in international events contribute to a comprehensive approach to sustainability.

### Economic Factors

#### Financial Performance and Economic Contributions:

Greece's economic performance, including GDP and inflation rates, is considered in the context of sustainability.

The tourism sector, a significant contributor to the economy, is acknowledged, and efforts are made to balance economic growth with environmental considerations.

#### Innovation and Sustainability Practices:

Companies in Greece are adopting innovative and sustainable practices, as reflected in sustainability reports.

Green technologies and sustainable supply chain management contribute to long-term economic stability.

In summary, the transition to sustainable production and consumption in Greece is multifaceted, involving a combination of environmental policies, social reforms, awareness campaigns, and economic considerations. The integrated approach reflects Greece's commitment to achieving a balance between economic development, social well-being, and environmental preservation.

### Identification of current gaps, risks and/or imbalances

#### Lack of Skilled Workforce:

**Issue:** The textile and clothing fashion sector in Greece is facing a shortage of adequately trained and qualified personnel in green and circular economy techniques. This shortage hinders the industry's ability to transition towards more sustainable practices and meet the growing demand for eco-friendly products.

**Details:** Many companies in the sector are struggling to find workers who possess the necessary skills to navigate and implement sustainable practices, both in design and manufacturing. The lack of expertise in green and circular economy techniques poses a significant barrier to the industry's efforts to adopt more environmentally friendly and socially responsible processes.

#### Lack of technology:

**Issue:** The textile sector needs to keep pace with technological advancements and foster innovation to stay competitive. However, there is a current gap in the industry's workforce, hindering its ability to leverage new technologies and drive innovation.

**Details:** With the rapid evolution of technology in textile manufacturing, there is a need for skilled workers who can operate and optimize advanced machinery, as well as contribute to the development of innovative solutions.

#### Quality Management and International Strategies:

**Issue:** Quality management and the development of effective international strategies are crucial for the success and competitiveness of textile businesses. However, there is a gap in the industry's workforce when it comes to expertise in these areas.

**Details:** Many companies lack professionals who can ensure and maintain high-quality standards in production processes. Additionally, developing successful international strategies requires a specific skill set that may be currently lacking.

#### Shortage of Trained Personnel in Sustainable Practices:

**Issue:** The textile industry is increasingly moving towards sustainability, but there is a shortage of personnel with the necessary training in green and circular economy practices.

**Details:** Companies aiming to adopt sustainable practices face challenges in finding workers who understand and can implement eco-friendly processes. This shortage is a significant barrier to the industry's overall transition to more sustainable production methods.

#### Adaptation to Circular Economy Practices:

**Issue:** The transition to a circular economy is essential for reducing environmental impact, but the textile sector faces challenges in adapting to these practices.

**Details:** Circular economy practices involve designing products with a focus on longevity, reuse, and recycling. However, there is a gap in the industry's workforce in terms of understanding and implementing these principles.

In summary, the identified issues in the textile and clothing fashion sector in Greece are multifaceted, ranging from a lack of specific skills to challenges in adapting to new technologies and sustainable practices.

## Green measures/strategies/roadmaps or appearing future trends in the sector

### Current reforms/strategies supporting sustainability

In early 2018, Greece's Governmental Economic Policy Council approved a National Action Plan on Circular Economy (CE), signaling a commitment to embracing CE principles for long-term economic development. This initiative aligns with Greece's broader economic strategy, emphasizing the greening of the economy with a focus on job creation, particularly for women and youth. The plan is designed to foster equitable and inclusive growth by prioritizing resource efficiency, supporting small and medium-sized enterprises (SMEs), promoting innovation, investing in new technologies, and harnessing the potential of the "social economy." Overall, the National Action Plan on Circular Economy reflects Greece's dedication to sustainable economic practices and social development.

The long-term (2030) goals of the Action Plan are:

- preventing waste and improving recycling
- promoting industrial symbiosis
- supporting circular consumption patterns
- enhancing multi-stakeholder partnerships
- monitoring progress towards a CE model through SMART indicators

### Communication strategies focusing on green consumer behaviour

In Greece, the fashion industry is undergoing a resurgence, and the dynamics of fast fashion play a pivotal role in this revitalization. The country's economic recovery, marked by a 2.3% growth in apparel sales to 3.5 billion euros in 2018 and an anticipated 2.2% increase in 2019, is partially attributed to the influence of fast fashion trends. The aftermath of economic challenges has driven consumers toward more casual and affordable clothing options, aligning with the strategies of retail giants like Inditex and H&M. Despite not fully regaining pre-crisis purchasing power, the fashion market's growth is further fueled by a tourism boom, contributing 20.6% to Greece's GDP and attracting luxury brands to establish a presence in the country. As the fashion sector embraces fast fashion practices, including pop-up stores and commercial malls for luxury brands, the landscape reflects a balance between economic recovery, changing consumer preferences, and the global dynamics of the fast fashion industry (Riera, S., & García, D. (2019, September 5). "Greece comes back from the ashes: tourism and fast fashion boost the sector in the country." MDS, The Global Fashion Business Journal, Preventing the dominance of fast fashion in Greece poses significant challenges despite the country's economic recovery and changing consumer preferences. The fashion industry's resurgence, fueled in part by fast fashion trends, indicates a demand for affordable and casual clothing. Large retail giants like Inditex and H&M have strategically capitalized on this demand. While Greece has experienced positive economic growth, the population has not fully regained its pre-crisis purchasing power. This economic reality may contribute to the continued appeal of fast fashion, which offers budget-friendly options. Additionally, the influx of tourists, comprising a significant portion of Greece's GDP, further influences the market dynamics. Luxury brands establishing a presence in the country suggests a growing appetite for diverse fashion choices. To counter the prevalence of fast fashion, sustainable fashion initiatives, consumer education on the environmental and social impacts of fast fashion, and regulatory measures may be necessary. However, implementing these changes effectively would require collaboration between the government, industry stakeholders, and consumers, making it a complex task.

## A good practice showcase

Sustainability is one of the core concepts that is being intensively promoted in the fashion industry. There is a whole new perception of what the businesses can do in order to reduce the impact of the fashion industry in the environment, extending from shifting to sustainable raw materials for the production of the fashion items, reducing the size of the collection or introducing digital tools in the design and manufacturing process. The number of second-hand companies, mostly small or medium-sized companies, is increasing and garment alteration and reuse is on the rise. There are businesses in the broader industry that have incorporated

sustainable practices in their way of operation, leading the way towards a greener future and a new consumption model. Although many businesses could be referred, we will focus on the following two:

### Good Practice: Salty Bag

Title of the good practice selected: Fashionable bags from torn or non-reusable sails, parachutes and kites

Country/Region: Corfu, Greece

Scope: regional/national/EU

Specific area: Circular Economy

Good practice owner: Salty Bag

What particular problem this solution is addressing: It helps reducing the waste that is created by the unused sails, kites and parachutes

EU priorities focus:

The company's activities are fully aligned with the European Commission's Green Deal and the SDGs that call for actions against climate change and the reduction of human imprint on the environment.

Reference: <https://saltybag.com/>

Other information:

With circular economy at its heart of operation and "Reduce-Recycle-Reuse" as its main slogan, this company creates hand-made bags from reused sails. Established in 2013 during its founder's attendance of the Corfu Sailing Club seminar, Salty Bag uses upcycling techniques to develop durable and fashionable bags, helping, at the same time, reduce the impact on the environment. As read in their website, the company uses "decommissioned sails, kites and parachutes, giving them a new life and new value".

Through the establishment of partnerships with Greek sailing organizations, the company's owners are able to find the raw materials to design their bags while they have also introduced a recycling policy, offering a considerable discount to the clients who return their old bags to buy a new one (at the time of the production of this document, the discount accounts for 30% of the item value the clients are interested in buying).

At the same time, the variety of the available products is relatively limited, being categorized mostly as a capsule collection. More than that, the company's philosophy is reflected also on its support to environmental causes as part of their Social Responsibility strategy: Salty Bag calls for the protection and conservation of the Ionian nature, through its support to Ionian Environment Foundation (IEF), member of the international network of Conservation Collective.

The company is located in Corfu, which indicates that it operates at local level; however, their clientele is international, through their e-shop which allows them to sell their products worldwide. Although a small-sized company, Salty Bag aspires to make a big impact, not only through following green practices in its production process but also shifting the consumers' mindsets and participating in environmental awareness actions.

SALTY BAG

Shop Collections Salty Bag Upcycling



### Good practice: MINIMIS

Title of the good practice selected: Modern jewelry made from recycled glass bottles

Country/Region: Corfu, Greece

Scope: regional/national/EU

Specific area: Circular Economy

Good practice owner: MiniMis

What particular problem this solution is addressing: It helps reducing the waste that is created by glass bottles

EU priorities focus:

The company's activities are fully aligned with the European Commission's Green Deal and the SDGs that call for actions against climate change and the reduction of human imprint on the environment.

Reference: <https://minimis.shop/en/>

Other information:

Another example of a local fashion business that operates based on sustainable principles is MiNiMis, located again in Corfu. This company creates unique pieces of jewelry from recycled glass bottles (mostly bottles for beverages). It is a family business established by two sisters in 2013, with the assistance of their own mother and their passion for creating crafts from recycled objects.

The idea behind setting up their business was the lack of an established recycling infrastructure on the island and the high glass bottle waste – especially during summer when the beverage and alcohol consumption increases tremendously. Given their family's expertise in glass construction and processing (their family own a local glass construction factory), the two sisters decided to start their own branch.

Using the slogan "Drink me, Save me", the owners of the company aspire to raise awareness on waste management and circular economy, hoping to inspire people to follow more environmentally-friendly practices in their personal and professional lives. Through their paradigm, they show to the public that there are many ways to respect the planet and, at the same time, prolong the lifecycle of a product through repurposing it.



## Conclusion

Greece, as a member of the European Union, supports the European reforms that affect industries emissions environment and, consequently, that of the Fashion and Textiles Industry. Actions have already been taken to reduce emissions and the goal is to reach 80% by the year 2040, compared to the year 1990 level. Similar efforts are being made in the areas of energy consumption, water use, and waste reduction supported by good management and recycling incentives.

At the economic level, the changes affect all levels of education by emphasizing digital learning, training of trainer, and vocational training with adult engagement. In the labor market the emphasis is given to recruiting and employment procedures.

Greece also complies with European Union rules on health and safety by asking firms to recruit safety technicians and occupational physicians with particular skills and credentials. It has also taken great measures to improve awareness of environmental, social, and economic sustainability concerns. The country's initiatives have developed throughout time to show its commitment to sustainable growth.

On an economic level, there appears to be additional de-escalation of inflation and a fall of unemployment rates in 2024. Indicators of innovation that include environmental and sustainable development data are improving.

Best practices in the fashion industry in Greece demonstrate the potential at the national level, and the industry's ambitions for long-term development based on circular economy and innovation.

For the dissemination of the final policy report, communication channels are available to all stakeholders to inform and assist them on issues related to the FTS sector.

In general, at national level, Greece sustainable-development reforms include a comprehensive and integrated plan that includes government reorganization, stakeholder involvement, alignment with EU goals, and active participation in European efforts. These initiatives demonstrate a commitment to a path of sustainable and equitable development that balances economic growth, social harmony, and environmental conservation.

## ROMANIA

The reforms supporting sustainability in the fashion and textile industry in Romania are done with the common efforts of:

**EDUCATION** in the field of Fashion and Textile Technology (UAD -Cluj Napoca University of Art and Design, UNArte Bucharest, West University of Timisoara, the universities of Oradea, Arad and Iasi, Technical University of Moldova from Chisinau);

**MANUFACTURERS** from the textile industry - included in the Textile Clusters;

**SPECIALISTS** and **EXPERTS** in the field of Textile Industry - included in FEPAIUS (Federation of Textile Industry Employers);

**PROMOTION** of achievements in the field Fashion and of the Textile Industry at Global level, using the official tools of the **MINISTRY OF COMMERCE** and supplementary the 28 European member countries of the association **EUROPEAN FASHION COUNCIL**;

Setting up of **INTERNATIONAL FASHION EVENTS** (**TRANSILVANIA FASHION FESTIVAL** will polarize in the near future all similar events in Romania, under the owned trademark- **FASHION WEEK**)

In Romania, the process of development of the textile industry and its sustainability is a complex one, the most of state and private entities involved in this strategic industry understanding the needs of a policy to increase in force the supporting of the CDI activities, the seminars to address common problems, the personalized services, the transition to a green economy and to digitization, the reducing of the impact of production activities on the environment, the reducing of the waste and residual water.

We are in a large process of implementation of production tracking software, the purchase of high-performance machines - alternative forms of energy, the use of artificial intelligence in the cutting and prototyping processes, looking for organic or regenerated/recycled raw materials, creating ethical and sustainable collections

For increasing the visibility of the private producers, the Ministry of Commerce announced an important budget to allow the participation in international fairs: Paris - Premiere Vision, Who's Next, Frankfurt - Heimtextil, Premiere Vision Istanbul, Copenhagen - CPT Fashion, New York - Coterie, Melbourne - Australian International Fair, Shanghai;

The textile industry in Romania is producing for the internal needs but also is active in registrations in international programs, tenders and projects, in the strategic export promotion on foreign markets, thus providing specialized assistance to increase the number of companies accessing export promotion tools.

### Situational snapshot of reforms supporting sustainability at national level

#### A). Main aspects enhancing the sustainability process in FTS at national level

##### Environmental data

Textile industry, all around the world is a **POLLUTING INDUSTRY** – the statistics, available for **ROMANIA** also, are announcing:

- 4th place in the ranking of the factors that have the highest impact on the environment and climate change, after food, housing and mobility.
- 3rd place among economic sectors with the most intensive use of water and land.
- 5th place in terms of the use of primary raw materials and the generation of greenhouse gas emissions.

Global production of textile products almost doubled between 2000 and 2015, and by 2030 consumption of clothing and footwear is expected to increase by 63%, in the conditions of "fast fashion"



## Social data

In Romania, the human resource situation is a sensitive one: aging workforce/sector not attractive to youth.

The following statistics show an important decline:

2019: 220,000 workers in 8,190 companies

2020: 195,000 workers in 8,217 companies

2021: 151,000 workers in 7,826 companies

2022: 142,600 workers in 7,378 companies

2023 (November): 135.100 workers

The social dimensions should be improved, many projects dedicated to working conditions, quality and management in the textile industry, occupational health and safety of social responsibility, gender equality, improvement for the digital transition are in progress in Romania.

## Economic data

THE INDUSTRY OF TEXTILES, CONFECTIONS AND LEATHER, with an important tradition in Romania, experienced a strong development in the second part of the 1990s and the first part of the 2000s. Since then, it was entering in decline.

Currently, the figures show:

- 15% of the total jobs are in the textile manufacturing sector

- 6% of total exports are textiles

- approximately 80% of the textile production is exported, mainly to the EU, in the situation when the most of the factories still operate in the Lohn system.

FEPAIUS is the strongest and most trustable social partner, with a constructive role in communication with decision-makers in the Government, being member of committees affiliated to state institutions, to the Ministries of Labor, Education, Finance, Economy and Trade, member of the Social Dialogue institutions and the Export Council.

FEPAIUS is having a new approach, with the aim of creating a greener, more competitive and more modern sector, better able to withstand global shocks.

Actions aimed at the entire life cycle of textile products, its green and digital transition, designing textile products, including through sustainable technological solutions available, innovative business models are the tasks which will be implemented in the very next future

### *B.) Main factors facilitating the transition to sustainable production and consumption*

Legislative contribution to the development and implementation of a coherent national policy regarding the economic environment of the textile industry necessary for the sustainable development of Romania.

The industrial strategy for Europe, similar for Romania, identifies textiles as a key product value chain with an urgent need and strong potential to transition to sustainable and circular production, consumption and business models.

Businesses, consumers and public authorities in Romania are already focusing on increasing the sustainability and circularity of this sector, but the transition is slow and the environmental and climate footprint of the sector remains high.

## Identification of current gaps, risks and/or imbalances

Limiting factors in the process of developing the capacity of companies from Romania to create sustainable competitive advantages and perform are:

- lack of financial resources and highly qualified personnel for research and innovation activities;
- reduced access to information about market trends and new technologies emerging worldwide;
- fragmented and discontinuous communication between entrepreneurs and research-development and higher education institutes;
- lack of adequate economic policies to support the development of this sector.

### Green measures/strategies/roadmaps or appearing future trends in the sector

The strategies supporting sustainability are:

- introduction of mandatory eco-design requirements
- 20% of the separately collected waste textiles are reused as wipes in industry or other applications, while the rest is lost" (EU STRATEGY)
- Stopping the destruction of unsold or returned textile products
- Combating microplastic pollution
- the Introduction of information requirements and a digital product passport
- the "ecological" claims for truly sustainable textiles
- the extended producer responsibility and stimulation of reuse and recycling of textile waste

Up to 2.1 million tons of post-consumer clothing and household textiles are collected separately each year in the EU for recycling or sale on global re-use markets, which is around 38% of textiles placed on the EU market. The remaining 62% is assumed to be discarded and end up in mixed waste streams.

### A good practice showcase

The companies, members of the textile cluster ROMANIAN TEXTILE CONCEPT, developed a Study on the superior valorization of textile waste on the basis of which a project has been initiated to organize an integrated center for technological transfer and valorization of textile waste resulting from the process of production in the context of the circular economy concept. /still in progress/

An example of good practice is one interesting initiative in the sector, recently implemented by the company DATSA TEXTIL SRL - BUZAU, a Romanian private textile producer ([www.datsa.ro](http://www.datsa.ro)).

The purchase of machinery and the implementation of innovative technologies for replacement of traditional finishing processes with processes that use nitrogen nano-bubbles, are reducing significantly both water consumption and the resulting residual water.

- the attention to Quality and Certifications (Quality Management System: [ISO 9001: 2001](#), Occupational Health And Safety Management System: [ISO 45001:2018](#) , Social Responsibility Management System: [SA 8000](#)),
- the SMEs underwent an energy audit in 2014 as part of the European project SESEC (Sustainable Energy Saving European Clothing Industry), which resulted in the reduction of energy consumption at the plant,
- international audits done by renowned companies (Arcadia, Tesco, Marks & Spencer) are arguments to include DATSA TEXTIL SRL in the top of national initiatives.

This project is addressing the EU's key priorities such as green transition and resilience.

### Conclusion

The European Skills Pact is on the way to be implemented in the Romanian fashion and textile industry:

- acquisition and transfer of green and digital skills including knowledge of life cycle assessment and

of the value chain;

- increasing diversification in the management structures of enterprises by up to 5% per year;
- women's access to higher positions;
- supporting SMEs in their digitization efforts;
- designing new educational processes and tools targeting green and digital skills;
- increasing the supply of apprentices in this sector by 20%.

## SPAIN

This report provides an analysis of sustainability reforms within Spain's Fashion/Textiles Industries (FTS), contextualized within the framework of upcoming EU legislation. The alignment of Spain's national landscape with these regulatory frameworks serves as a foundational pillar for concerted efforts towards compliance and responsiveness to evolving consumer expectations favoring sustainability and ethics within the sector. Stakeholders across the FTS are increasingly collaborating to ensure preparedness for existing regulations and directives, while also proactively addressing emerging consumer preferences for sustainability and ethical practices. A notable emphasis is being placed on achieving circularity within the sector, marked by investments in operational waste management infrastructure and concerted efforts towards minimizing environmental impacts.

Despite growing initiatives aimed at enhancing sustainability, challenges persist due to the lack of harmonization in regulatory application, leading to some confusion and inefficiencies. Addressing these disparities is crucial to unlocking the full potential of sustainability initiatives within the Spanish FTS sector. Digitalization and data collection are identified as pivotal facilitators towards a sustainability transition. Through data-driven insights, stakeholders can effectively measure and quantify their environmental impacts, thereby establishing baselines for improvement. However, achieving this requires concerted efforts towards standardization, harmonization, and interoperability to enable seamless communication and collaboration.

To achieve these goals within the FTS sector in Spain, increased investments and research efforts will be required on the financial, educational, and digital levels. Particularly, there is a pressing need for support within the SMEs European ecosystem, both operationally and financially, to ensure their meaningful participation in sustainable practices. This comprehensive approach is essential not only for meeting regulatory requirements but also for maintaining competitiveness and fostering innovation within the Spanish FTS sector.

### Situational snapshot of reforms supporting sustainability at national level

#### *A). Main aspects enhancing the sustainability process in FTS at national level*

##### Environmental data

The Spanish government has been implementing emission standards aligned with European Union directives. These standards aim to curb greenhouse gas emissions, encouraging the fashion industry to adopt cleaner production processes and invest in renewable energy sources. Additionally, Spain has introduced measures to enhance energy efficiency in manufacturing facilities, promoting the use of advanced technologies to minimize energy consumption and reduce reliance on non-renewable sources.

Regarding water management, given Spain's periodic water scarcity challenges, the government has implemented regulations to control and reduce water usage in industrial processes, particularly in textile manufacturing. Companies are required to adopt water-saving technologies and implement closed-loop water systems. Furthermore, wastewater treatment regulations have been strengthened to ensure that effluents from textile processes meet stringent environmental standards.

In addition, Spain is actively promoting a circular economy within the fashion industry, emphasizing practices that minimize waste generation and encourage the reuse and recycling of textile materials. This commitment aligns with waste disposal regulations that mandate responsible waste management practices. Companies are incentivized to implement circular production models to reduce landfill waste and contribute to recycling initiatives.

Investment in research and development is pivotal in Spain's sustainability journey. The country encourages

innovation in sustainable materials, eco-friendly production technologies, and waste reduction methods. The fashion and textile sector in Spain increasingly adopts innovative and eco-friendly materials such as organic cotton, recycled polyester, and bio-based fabrics, although Spain's industry has still a lot to do in the field of innovation.

Companies in Spain's fashion industry are integrating comprehensive Corporate Social Responsibility (CSR) programs. These programs encompass ethical labor practices, fair wages, community engagement, and initiatives contributing to the social well-being of the communities they operate in.

These efforts underline Spain's commitment to fostering a sustainable fashion and textile industry, addressing environmental challenges, and contributing to the global transition towards a more responsible and eco-conscious sector. The combination of regulatory frameworks, industry collaboration, consumer awareness, and technological advancements positions Spain as a key player in the pursuit of sustainability within the FTS.

### Social data

The Spanish FTS demonstrates a commitment to social practices encompassing education, labor, health and safety, sustainability awareness, community engagement, and employee well-being. Through these initiatives, the sector actively contributes to societal well-being while recognizing its responsibility as a major player in Spain's economic landscape.

The FTS is closely linked to educational and labor practices, with a considerable workforce of around 131,000 employees in 2022. Companies in the sector often engage in educational initiatives, training programs, and collaborations with educational institutions to foster skills development and career opportunities. The sector places importance on employee well-being, recognizing that a healthy and satisfied workforce is crucial for sustained success. Companies implement policies that support work-life balance, mental health awareness, and employee assistance programs.

Efforts are made to ensure fair labor practices, including adherence to minimum wage standards and promoting a healthy work-life balance. Major players like Inditex often implement initiatives to empower workers through skill enhancement and career progression.

Ensuring health and safety in the workplace is a priority. Companies strive to create safe working environments, implementing measures to prevent accidents and occupational hazards. Compliance with health and safety regulations is crucial, and businesses often invest in training programs to educate employees on safety protocols. Monitoring and improving health and safety performances contribute to employee well-being and satisfaction.

The sector actively engages in awareness-raising campaigns centered around sustainability. These campaigns aim to educate consumers, employees, and the public on the importance of making sustainable choices in fashion. Major companies, often run campaigns promoting sustainable practices, ethical sourcing, and the environmental impact of consumer choices. These initiatives add value by encouraging conscious consumerism and promoting a sense of responsibility.

Stakeholders within Spain's fashion industry, including businesses, government bodies, and non-governmental organizations, actively collaborate on sustainability initiatives. These collective efforts address systemic issues and promote sustainable practices. The country supports various sustainable initiatives within the fashion industry, providing financial incentives and recognition for companies contributing to sustainability goals.

In addition, regarding consumer's awareness, ongoing educational campaigns in Spain raise awareness among consumers about the environmental impact of fast fashion. These campaigns aim to shift consumer preferences towards sustainable alternatives by highlighting the benefits of making eco-conscious choices. For instance, The Spanish brand Adolfo Domínguez launched the campaign "Think. Then buy" in 2019.

### Economic data

The fashion and textile sector in Spain plays a pivotal role in the country's economy. In 2022, the sector's total revenue reached 23,541.4 million euros, reflecting a significant contribution to the national economy. The

sector's export and import values in 2021 were noteworthy, with Spain trading textile and clothing products with key partners like France, Italy, and China. The industry employs a substantial workforce, with 131,000 employees in 2022. The average salary in the sector is 30,751.4 USD per year. Inditex, with brands such as Zara, Pull&Bear, Massimo Dutti, and others, significantly impacts the sector's financial performance. Inditex alone is a global giant, contributing substantially to the economic landscape.

The Spanish FTS sector has shown a commitment to innovation. Companies like Inditex and other major players invest in R&D to stay ahead in design, technology, and sustainability. Technology integration is prevalent in various aspects, from manufacturing processes to enhancing the online shopping experience, contributing to efficiency and competitiveness. Innovations in sustainable practices, such as recycling programs, waste reduction, and ethical sourcing, are becoming increasingly prevalent, adapting to consumer demand for eco-conscious fashion. Companies within the sector publish sustainability reports outlining their environmental, social, and governance (ESG) practices, communicating transparency and accountability.

The FTS in Spain is driving change through innovative design concepts, with companies investing in creative talents and leveraging technological advancements to shape the future of fashion. Sustainability is a driving force, with companies adopting circular economy models, exploring eco-friendly materials, and emphasizing ethical practices.

### *B). Main factors facilitating the transition to sustainable production and consumption*

#### Legislative Framework

The legislative landscape in Spain regarding the textile sector has witnessed significant changes. After the economic downturn in 2008, the industry rebounded, and legislative measures have played a role in shaping its trajectory.

In recent years, Spain has introduced laws addressing sustainability and social responsibility. These laws aim to regulate the environmental and social impact of fashion brands. This includes regulations related to waste management, energy efficiency, and sustainable sourcing.

For instance, the recent approved Law 7/2022, on waste and contaminated soils for a circular economy, also addresses aspects related to the fashion and textile industry. It aims to regulate the legal framework for the management of waste generated in this industry, promoting recycling, reducing environmental impact, and encouraging sustainable practices. The law introduces measures such as mandatory separate collection of textile waste and emphasizes the importance of eco-design and responsible production to minimize the environmental footprint of textiles.

Furthermore, to enhance transparency in the fashion supply chain, Spain has introduced legislative measures requiring companies to disclose information about sourcing, production processes, and the environmental impact of their products. Additionally, the country is exploring traceability standards to track the entire journey of textiles from raw materials to end products, empowering consumers to make informed, sustainable choices. Finally, it is important to consider the EU Green Deal as well approved in 2020 as a set of proposals to enhance policies in line with greenhouse gas emission reduction goals.

#### Demographic Changes:

Demographic changes in Spain contribute to the shift towards sustainable production and consumption in the FTS. There is an increasing awareness and demand for sustainable and ethically produced fashion among the younger demographic. Millennials and Generation Z, who form a significant consumer base, are more inclined towards eco-friendly and socially responsible choices. This demographic shift encourages businesses in the sector to align with sustainable practices to meet evolving consumer preferences.

#### Digitalization:

In Spain, amidst significant transformations in the FTS, a focus on sustainability and adapting to changing consumer demands is evident. With a growing emphasis on mass customization, Spanish brands are incorporating advanced technologies, such as voice-controlled weaving devices. As the industry progresses, artificial intelligence and big data are emerging as key components for the future, but still requires some time for maturity. Sensor-assisted data collection, particularly through technologies like RFID, is gaining prominence to enhance process efficiency and product quality.

Against this backdrop of technological evolution, Spanish fashion and textile brands are actively seeking to stay at the forefront, exploring more efficient and sustainable production models. The implementation of innovative concepts, such as the "factory-store," holds promise for creating customized products directly at the point of sale, underscoring the economic potential of such initiatives in the Spanish market.

Due to changes in consumer behavior and the continuous growth of online commerce (accelerated by COVID-19), a challenge is to integrate the digital and physical aspects of retail. Spanish companies need to adopt strategies that allow for the coexistence of online and physical stores, recognizing that consumers may interact with both channels. It is important therefore not only having a strong online presence but also ensuring that the physical store remains relevant. Companies need to focus too on updating inventory control systems, emphasizing the role of digitalization and technology. This involves leveraging digital tools to manage inventory more efficiently, respond to consumer demands, and enhance overall supply chain management.

In addition, it is worth mentioning the opportunities that the metaverse represents. This major technological revolution already provides a parallel and aspirational reality. Spanish fashion brands are starting to seize this opportunity, as evidenced by the acquisition of companies dedicated to digital assets and non-fungible tokens (NFTs) by big companies as Zara.

#### Green Innovations:

As stated above, several Spanish companies are adopting circular economy principles, emphasizing product durability, repairability, and recycling.

After the COVID-19 pandemic, with its widespread impact on businesses and economies, revealed the need for sustainable practices to prevent future crises. Despite companies demonstrating adaptability and innovation, studies indicated that similar situations could recur, primarily due to the adverse effects of climate change resulting from the mismanagement of natural resources.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services underscored the connection between climate change and the inadequate management of natural resources. To address the root cause and prevent future pandemics like that of 2020, there was a crucial need to explore the substitution of current manufacturing processes with more sustainable models. Therefore, Spanish businesses were urged to play a crucial role in the preservation of the environment and the prevention of future crises. The emphasis was on proactive measures and sustainable practices to address the underlying causes of climate change and biodiversity loss, reflecting a commitment to environmental preservation.

To give an example from a Spanish company, Inditex sustainable business model revolves around the concept of "Right to Wear," emphasizing sustainable and transparent practices, ensuring traceability throughout its operations. Inditex aims to create attractive, ethical, and quality products with a circular life cycle. It actively promotes a circular economy through initiatives like "Closing the Loop" launched in 2015, focusing on product reuse and recycling.

The challenge in Spain would be to address the so called "Green Gap", where consumers, sensitive to prices, face a dilemma between sustainability and affordability. Despite clear concerns about irresponsible practices, several Spanish consumers continue to shop at major retail chains, especially after the great rise of the price of energy, raw materials and general inflation that has impacted Spain since 2022.

#### Identification of current gaps, risks and/or imbalances

The FTS in Spain faces several challenges, with the green and digital transition of the sector being the primary concern. As stated above, the transformation towards more sustainable and digital practices is considered

crucial, as companies risk falling behind in the industry without this transition. The current complex situation, with high energy costs after the war between Russia and Ukraine (2022) and loss of competitiveness, highlights the need for this transformation. The main challenge is to make the FTS more sustainable and efficient while maintaining product quality. Sustainability involves adopting circular economy practices, recycling, reducing resource and energy consumption, and minimizing the carbon footprint. The need to invest in technology to achieve these goals is emphasized.

Therefore, in addition to sustainability, another important challenge is to boost innovation in the sector. It is recognized that the FTS industry is still traditional in many aspects, and there is a need for greater impetus towards innovation and investment in technology. Hyperautomation of processes and the training of a new generation of technological artisans are considered necessary for the sector's transformation. The industry can benefit as well from adopting emerging technologies such as 3D printing, artificial intelligence, and digital manufacturing to improve efficiency, reduce waste, and enable more personalized and sustainable processes. As mentioned before, Spanish consumers are increasingly expecting a unified experience across online and physical platforms. Thus, companies failing to digitalize themselves and integrate these channels effectively might find themselves at a disadvantage over foreign competitors. Implementing efficient recycling systems for manufacturing waste will contribute to reducing environmental impact as well. This can include recycling unused fabrics or reusing waste in new manufacturing processes. Also, optimizing production processes to improve energy efficiency is essential nowadays, due to the increasing costs of energy. Reducing energy consumption significantly and the use of clean energy sources should contribute to the sustainability of the industry in the years to come.

On an environmental level, sustainability faces the challenge of reducing pollution and managing waste in an industry that is the world's second-largest polluter. In Catalonia, for example, the low rate of clothing recycling raises environmental concerns. The European Union's Strategy for the Circularity and Sustainability of Textile Products represents a good framework, but it is also needed to set a robust support plan for companies to transition to a circular model. Given the complexity of the fashion industry's production model, achieving significant change requires a considerable effort. While progress is evident, there is a call for sustained efforts to make sustainability an integral part of every fashion company's strategy. The problem is that time is a crucial factor, as environmental impacts are already affecting climate change and ecosystems.

Internationalization would be another area in which the Spanish FTS sector could improve. Internationalization is considered crucial for the industry's development, emphasizing the importance of protecting and promoting the "Made in Spain" concept. However, Spain's FTS needs to set strong quality and design goals to maintain the presence of Spanish fashion in the (everyday more) competitive global market. Being competitive at international level is especially challenging after the impact of the rise of inflation in Spain and overall Europe since 2022, and the fact that after COVID-19 some companies intend to bring the production closer, which will increase costs of production.

### Green measures/strategies/roadmaps or appearing future trends in the sector

Between 2025 and 2027, around 16 EU legislations and regulations will be established with an impact on the textile sector according to [EURATEX](#) including the the EU Green deal and EU textile Strategy. The influence of the upcoming regulations will affect mainly in three ways according to (Svedlund, J.,2023):

- Broadening responsibility for products put to the market to include consideration of their afterlife, supported by legal obligations.
- Implementing traceability throughout the production process to manage impacts and inform stakeholders about recycling options.
- Embracing a circular design approach emphasizing versatility, longevity, sustainability, repairability, reusability, and recyclability, alongside stricter regulations on raw material extraction, environmental impacts, and chemical use.

Some of the most impactful upcoming regulations are summarized below:



The **Extended producer responsibility (EPR)**: It aims to expand the level of accountability of textile producers, making them responsible for the complete life cycle of their products. This includes funding the sustainable management of textile waste generated by them within the EU and reporting to local authorities about the number and type of products placed on the market. Each member state will establish its own textile register, and only registered organizations will be permitted to place products on the market. The Eu Waste Framework directive will establish the standard requirements for textile EPR schemes across the EU.

The **Ecodesign for sustainable product regulation (ESPR)**: aims to promote environmental sustainability within the EU. It mandates a comprehensive approach to product design, focusing on the entire life cycle of goods placed on the market. By enforcing principles of eco-design, ESPR requires manufacturers to consider factors such as resource efficiency, durability, reparability, and recyclability during product development. Through its guidelines, the ESPR seeks to minimize the environmental footprint of products, encourage circular economy practices, and foster a more sustainable future for both consumers and the planet within the EU. To support the compliance of the ESPR a Digital Product Passport (DPP) will be introduced for the products.

The **Corporate Sustainability Reporting Directive (CSRD)**: it requires large companies and listed companies to publish regular reports on the social and environmental risks they face, and on how their activities impact people and the environment, which will be subjected to audits. It will ensure that investors and other stakeholders have access to the information they need to assess the impact of companies on people and the environment.

The **Corporate Sustainability Due Diligence Directive (CSDDD)**: It aims to foster sustainability and responsible corporate behaviors and to anchor human rights and environmental considerations in companies' operations and corporate governance. The new rules will ensure that business address adverse impacts of their actions, including in their value chains inside and outside Europe. For large companies it includes climate reporting in line with the Paris Agreement.

### A good practice showcase

Title of the selected good practice: Textile Industry and Sustainability Conference in 2024 will be the 7th edition

Country/Region: Spain /Catalonia

Scope of application: regional/national/EU: National

KPIs: for example, number of people affected: The average number of attendees at each "Textile Industry and Sustainability Conference" is about 450 people.

Specific area: This event is an important platform for collaboration between academics, professionals and businesses, and plays a crucial role in promoting a more sustainable future for the textile industry.

Good Practice Owner: Polytechnic University of Catalonia (UPC)

Description of the selected initiative: The INTEXTER Industry and Sustainability Conference is an event organized by the Institute of Textile Research and Industrial Cooperation of Terrassa of the Universitat Polytechnic of Catalonia. This event focuses on discussing and sharing knowledge about sustainability in the textile industry, addressing topics such as microplastic pollution, sustainable fashion, and strategies to improve sustainability in the sector.

The day includes presentations and presentations from experts in the field, ranging from an overview of the sector and success stories to applied research. The topics discussed are diverse and range from servitization and new business models to the obtaining and ennobling of sustainable materials such as hemp.

The event has been organized both in person and by videoconference, depending on the edition, thus allowing broad participation. Attendees have the opportunity to interact with speakers and participate in question and answer sessions.

The purpose of the event is to promote sustainability in the textile industry, a sector that faces significant challenges in terms of environmental and social impact. By sharing knowledge and experiences, INTEXTER seeks to promote innovation and the adoption of more sustainable practices that contribute to the Sustainable Development Goals and the technological and digital transformation of the textile value chain.

What particular problem is this solution addressing?

The Conference is addressing several particular problems related to sustainability in the textile sector. One of the main challenges discussed is the application of the new Law on Waste and Contaminated Soil, as well as the European Strategy on sustainable textiles. These topics are crucial as they seek to improve waste management and promote more sustainable practices in the industry.

In addition, specific challenges are addressed such as eco-design, reuse, servitization, mechanical and chemical recycling, and the traceability of textile products throughout their value chain. These aspects are fundamental to implement the digital passport that the European Union plans to apply to all garments sold in the EU, which is an important step towards circularity and sustainability in fashion.

Another particular problem that stands out is the environmental impact of the production and use of recycled polyester, as well as the production and marketing of recycled work clothes, zero waste and with social impact.

The INTEXTER Industry and Sustainability Conference focuses on addressing current and future challenges of sustainability in the textile sector, promoting dialogue and collaboration to move towards a more responsible and environmentally friendly industry.

Focus on EU priorities

The INTEXTER Industry and Sustainability Day addresses the key priorities of the European Union, aligning with initiatives such as the European Green Deal and the European Industrial Strategy. These priorities include digitalization, ecological transition, circular economy, sustainability and resilience. Let's see how these areas are addressed:

**Digitalization:** The conference promotes the integration of new digital technologies in the textile industry, which is essential for innovation and competitiveness. This includes the use of digital tools for product traceability and the implementation of circular economy solutions .

**Ecological Transition:** Strategies to reduce the carbon footprint of the textile sector are discussed, such as the use of renewable energy and improving energy efficiency in production processes .

**Circular Economy:** Focuses on textile recycling and circularity, promoting the use of sustainable materials and the design of products with a longer useful life and that are recyclable at the end of their life cycle .

**Sustainability:** Topics such as reducing the environmental impact of textiles, responsible production and sustainable consumption are addressed, encouraging consumers to move away from fast fashion and opt for durable and sustainable textile products .

**Resilience:** The adaptation of the textile industry to global challenges, such as market changes and supply chain disruptions, is promoted, ensuring that the industry can withstand and recover quickly from setbacks .

In summary, the INTEXTER Industry and Sustainability Conference is aligned with EU priorities by providing a forum to discuss and develop strategies that drive the transformation towards a greener, digital and resilient textile industry.

Reference: <https://www.upc.edu/intexter/ca/jornada-industria-textil-sostenibilidad>

## Conclusion

The overarching trends within the Spanish national landscape are in line with the regulatory framework set by the European upcoming legislations. This alignment serves as a foundation for concerted efforts towards compliance and responsiveness to evolving consumer expectations favoring sustainability and ethics within the sector.

Stakeholders across the FTS are increasingly collaborating to ensure preparedness for existing regulations and directives, while also proactively addressing emerging consumer preferences for sustainability and ethical practices. A notable emphasis is being placed on achieving circularity within the sector, marked by investments in operational waste management infrastructure and concerted efforts towards minimizing environmental impacts. These initiatives underscore a commitment to sustainable practices and resource efficiency.

Despite growing initiatives aimed at enhancing sustainability, challenges persist due to the lack of harmonization in regulatory application, leading to confusion and inefficiencies. Addressing these disparities is crucial to unlocking the full potential of sustainability initiatives within the FTS sector.

## SWEDEN

Sweden's climate policy, established in 2017, aims for net-zero greenhouse gas emissions by 2045. Despite progress, consumption-based emissions remain a challenge, requiring continuous policy adjustments.

Social sustainability challenges persist, with fair wages in the FTS proving difficult. Even sustainability-focused companies, like Nudie Jeans, struggle to ensure living wages for a significant workforce.

Key factors in the transition include legislative frameworks, producer responsibility for textiles, and the Ecodesign Regulation. Initiatives include separate textile waste collection, extended producer responsibility, and ecodesign rules.

Obstacles include challenges in climate policy design, economic recessions impacting green investments, and security concerns diverting resources.

Recommendations include designing products for longer life cycles, promoting circular manufacturing, incentivizing recycling, optimizing supply chains, and educating consumers.

Regional initiatives, like the Remore project and Klimatklivet investment support, support circular consumption and fossil-free technologies. The Swedish Wool Standard addresses waste issues by classifying and promoting Swedish wool use in the fashion industry.

In conclusion, Sweden's FTS is actively transforming towards sustainability, addressing challenges and implementing strategies for a more resilient industry.

### Situational snapshot of reforms supporting sustainability at national level

#### *A). Main aspects enhancing the sustainability process in FTS at national level*

##### Environmental data

In 2017, Sweden adopted a climate policy framework consisting of a climate law, climate targets and a climate policy council. The climate policy framework is a key component in Sweden's contribution to living up to the Paris Agreement.

The purpose of the framework is to create long-term conditions for Sweden to reach its climate goals. The Climate Act establishes that the government has a responsibility to pursue a policy based on the climate goals. It also includes that the government must report on the development, which is done, among other things, through an annual climate report. In the climate report, the government must report on the emission trend and describe the most important decisions taken during the year and their effects.

Sweden's long-term climate goal means emissions of greenhouse gases are net zero by 2045. The Swedish Environmental Protection Agency assesses that the stage targets for 2030 and 2040 will not be reached with the currently decided and proposed policy instruments. As for the long-term goal until 2045, the distance to the goal has decreased compared to previous assessments.

The consumption-based greenhouse gas emissions are 88 million tonnes. 64 percent of emissions occur in other countries as a result of Swedish consumption. Since 2008, total consumption-based emissions have decreased by 20 percent compared to 2021.

Since the fashion industry in Sweden largely produces its goods abroad, the consumption-based emissions are the most relevant. But with an increased interest in bringing textile production home again, of course the domestic transition also becomes important.

Swedes' attitudes to climate issues have been surveyed with roughly the same questions since 2002. The latest survey shows that 95 percent respond that they believe Sweden will be affected by climate change. The vast majority, almost 8 out of 10, answer that we in Sweden can decrease our climate impact. Support for implementing societal measures to reduce climate change is high. 86 percent agree in the latest survey that it is very or fairly important.

## Social data

Sweden has a well-regulated labor market with collectively negotiated wages for those who work in the textile industry domestically. But since the majority of all clothes sold in Sweden are made abroad, the social aspects of the production are a highly relevant issue for all FTS companies.

The companies' sustainability work is becoming increasingly important, not least to retain the customer. It is more or less a hygiene factor to have a code of conduct that you follow and it is becoming increasingly common for FTS companies to report their supplier lists. However, paying a living wage is still very uncommon. As an example, we can look at Nudie jeans, a company that has become known for being durable and stylish. They are, according to many, the most ambitious company in terms of a living wage. Even though they have worked with a living wage program since 2013 they still only pay living wages that covers 7% of the total production volume equal to 40% of the workforce in tier 1. This tells a lot about the fashion business in general.

## Economic data

The report series “Fashion Transformation” by Swedish Fashion Council, The Swedish Trade Federation and TEKO aims to explore and discuss the transformation facing the fashion industry. According to the report the fashion industry is facing a paradigm shift—which includes digital innovations, a growing second hand market, new business models, new consumer values and a more inclusive approach. A sustainable, digital, innovative, diversified and competitive future awaits on the other side of the transformation of the fashion industry.

The Swedish fashion industry in numbers:

Total sales—ca. SEK 148 billion

Exports—ca. SEK 32 billion

Number of employees—ca. 42 000

Number of companies—ca. 13 000

Second hand market value—ca. SEK 3 billion

E-commerce trading—31 % took place online

All figures show the situation in 2020, except for e-commerce, which shows the situation in 2021. This is due to data availability.

## *B.) Main factors facilitating the transition to sustainable production and consumption*

### Legislative framework

Separate collection of textile waste by 2025 at the latest

Today, household waste is the responsibility of the municipality and other actors may only handle the waste if it is done on behalf of the municipality. Textile waste from households is therefore part of the municipality's responsibility. According to the EU's waste directive, all member states must collect textiles separately from other waste by January 1, 2025 at the latest. This means that large volumes of textiles will be collected and have to be handled. According to the directive, Member States must also ensure that the waste is prepared for re-use, material recovery or other recovery procedures and not incinerated. There is a government investigation into how producer responsibility for textiles can be formulated, where the responsibility ensures separate collection of textiles for reuse and textile waste for recycling.

In summary, the proposal for producer responsibility for textile waste means that the producers become fully responsible for the costs of the entire life cycle of textile products and a sustainable handling of textiles. The EU Commission's proposal will now be prepared by the EU Parliament and the Council of Ministers. It is not clear from the proposal when producer responsibility is proposed to come into force.

According to the European Commission, the proposal will accelerate the expansion of separate collection, sorting, reuse and recycling within the EU.

The EU Commission proposes a mandatory and EU-harmonized producer responsibility. It is about a so-called extended economic producer response, which means that the producers must also take full responsibility for the textile when it has become waste and cover the costs of collection, sorting, reuse and recycling.

The Ecodesign Regulation will apply to everything sold within the EU. From having originally concerned energy efficiency, the new regulation focuses on a product's entire chain at the same time as the energy requirements are progressively tightened. The agreement on 4 December 2023 is an important step on the road to sustainable production, but final approval from both the EU Parliament and the EU countries is required before the decision can formally come into force.

Three central points in the regulation:

- New eco-design rules should provide products that last longer and are easier to repair, upgrade and recycle.
- Prohibition against destroying unsold clothes and shoes.
- Sustainability requirements should be prioritized for, for example, steel, textiles, furniture, tires, chemicals.

The Ecodesign Ordinance may create completely new conditions for manufacturing, but also for consumption and the development of a circular economy. As we have long stated, upstream work is needed, it is too late to start in the waste stage, and this is now supported by the regulation. It is a real starting point for a more sustainable society, says Tony Clark, CEO of Waste Sweden.

### Demographic changes

The Swedish populations are getting older, especially those over 65. This age group is growing four times faster than others. Meanwhile, Swedish households' debt has gone up by over 50% in the last 5 years due to low interest rates. With interest rates now rising, this will directly impact many people, including the fashion industry. The unemployment rate in Sweden is 7,1 percent, a steady rate since the early 90's. The year 2022 is seen as a turning point for the industry. The number of high-income earners is also increasing, contributing to economic polarization in Swedish society, affecting how households can spend money. It's uncertain how these changes will specifically impact the fashion industry.

### Digitalization

Digitization in Sweden has been extensive and has been going on for a long time, and the country has emerged as a prominent player in this area. Here are some aspects of digitization in Sweden:

- Broad access to the internet:

Sweden has a high penetration rate of broadband and mobile internet, which enables a large part of the population to be connected. This has created a platform for digital services and innovation.

- Digital public services:

Sweden's public sector has actively worked to digitize its services to make them more accessible and efficient. Many public services can now be handled online, from tax refunds to health-related matters.

- Innovative technology sector:

Sweden's technology sector has been a leading force in innovation and digital development. Many prominent technology companies originated in Sweden, and the country has been known for promoting startups and entrepreneurship.

- E-health and digital healthcare services:

Sweden has been actively involved in introducing digital solutions in healthcare. E-health has become increasingly widespread, and digital tools exist to facilitate communication between patients and healthcare

providers, as well as to manage medical records electronically.

- Digitization in education:

Digital tools and platforms have been integrated into the Swedish education system to support learning and teaching. There is an increased use of digital teaching aids and tools to strengthen students' digital skills.

- Smart cities and sustainability:

Digitization has also played a role in the development of smart cities and sustainable societies. Technological solutions are used to optimize urban infrastructure, reduce energy consumption and improve the quality of life for residents.

- Focus on cyber security:

With the increasing digitization, Sweden has also placed great importance on cyber security. There are initiatives and resources aimed at protecting the digital infrastructure and dealing with online threats and attacks.

In summary, Sweden has successfully embraced digitization and used it as a catalyst for economic growth, efficient public administration and improved quality of life for citizens. Digitization is expected to continue to be a central part of Sweden's social development.

### Green innovations (circular economy business models, zero waste production, upcycling, etc.)

Green innovation within the fashion industry in Sweden has become increasingly significant with increased awareness of sustainability and environmental impact. Here are some examples of green innovation in fashion in Sweden:

**Material innovation:** Several Swedish fashion companies invest in developing and using sustainable materials, such as organic cotton varieties, Tencel (lyocell), recycled polyester and ecological fibers.

**Circular manufacturing processes:** Companies are experimenting with circular models by recycling and reusing materials to reduce waste and environmental impact.

**Digital platforms:** Many Swedish companies have created online platforms for the sale of second-hand clothing, which promotes circular consumption and reduces the need for new production.

**Physical stores:** There are stores and concepts that specialize in the sale of vintage clothing and second-hand fashion to promote a more sustainable consumption model.

**3D printing:** Use of 3D printing to create clothing and shoes with minimal material waste.

**Digital platforms for design:** Using digital tools for design and production to reduce overproduction and resource use.

**Sustainable brands:** Establishing new brands and companies with a focus on sustainability, which includes transparency in the production chain and the use of environmentally friendly materials.

- Rental and sharing: Introduction of clothing and accessory rental services to reduce consumption and improve usage efficiency.
- Campaigns and Activism: Collaboration between fashion companies and organizations to raise awareness of sustainability issues and drive change within the industry.
- Green Events: Organization of sustainable fashion events and fairs that focus on environmentally friendly and ethical brands.

The deteriorating economic situation may delay the transformation to more sustainable fashion. Generally speaking, customers often express a great willingness to shop more sustainably, but studies show that if the more sustainable option costs too much in comparison with the non-sustainable option, the consumer will choose the most affordable. However, the fact that price is becoming an increasingly decisive factor could drive another type of sustainable consumption— the second hand trade, which is usually characterised by lower prices.

## Identification of current gaps, risks and/or imbalances

Sweden is facing several challenges that may pose obstacles to the ongoing climate transition. These challenges include the design of climate policy, the impact of recession and the impact of the security situation on resource allocation. Navigating these challenges will be critical to achieving long-term and sustainable environmental goals.

### Design of climate policy:

Sweden's climate policy has historically been ambitious, with the goal of becoming climate neutral by the year 2045. Despite this, there are challenges in implementing effective measures. Bureaucratic obstacles and political decisions can delay or weaken the implementation of necessary initiatives. In addition, changing political priorities at the national level can affect the financing of climate projects and subsidies.

### The recession:

During periods of economic uncertainty and recession, investment in green technologies and sustainable initiatives may decline. Companies and households can prioritize cost minimization and short-term survival over long-term sustainability goals. In addition, the government may face pressure to reconsider or reduce funding for climate-related projects to meet urgent financial needs.

### The security mode:

The security situation internationally, can influence resource allocation and political decisions. Prioritizing defense and security can lead to climate issues and the green transition being overshadowed. In addition, climate change itself can contribute to increased uncertainty by affecting natural resources, migration and geopolitical dynamics.

## Green measures/strategies/roadmaps or appearing future trends in the sector

### Design and product life cycle:

Design products with longer life and higher quality to reduce the need for frequent consumption.  
Promote timeless design to reduce fashion's rapid mobility and overconsumption.

### Production and manufacturing:

Promote circular economy by supporting recycling and reusing materials in the production process.

### Recycling and reuse:

Create incentives for recycling clothes and other fashion products.  
Promote the second-hand market and circular consumption.

### Transport and logistics:

Optimize the supply chain to minimize carbon dioxide emissions and other environmental impacts.  
Consider local production methods to reduce transport distances and to avoid exploitation of labor.

### Information and marketing:

Educate and inform consumers about sustainable choices and responsible consumption.  
Avoid greenwashing and ensure honest marketing about environmentally friendly products.

### Innovation and technology:

Using technological innovations to create more sustainable and efficient production processes.  
Explore new business models and technologies to promote sustainability.



## A good practice showcase

### Examples of projects supporting the green transition of the Fashion and textiles sector:

The **Remore project** run by Scinece center Borås, which has been granted funding from the Västra Götaland region, will now collect, make visible and develop circular offers for clothes and shoes with the help of local center leaders and shops to make it easier to consume sustainably.

- We see that many young people think it is obvious to make sustainable choices, but are not always willing to put in the time, energy and resources that may be required. With Remore, we want to operate at the intersection between consumer behavior and companies' circular offers and make circularity the norm, says Adrian Zethraeus, project manager for Remore at Science Park Borås.

**Klimatklivet** is the investment support that makes it possible to invest in fossil-free future technology and green transition. It can be applied for by companies, municipalities, regions and organizations throughout Sweden. The climate step is partly financed by the EU's recovery fund, NextGenerationEU.

Half of all wool produced in Sweden is thrown away, at the same time that Swedish brands in fashion, outdoor and home furnishings are feverishly looking for sustainable textile materials. **Swedish Wool Standard** is the first Swedish classification system for wool. The standard makes it easier to both sell and buy in Swedish wool raw material of high and consistent quality.

The classification system for Swedish wool has been developed by The Swedish Wool Initiative, a broad collaboration between actors from the entire value chain run by Axfoundation. The initiative brings together wool specialists, wool brokers, sheep shearers, sheep owners and the brands Filippa K, Fjällräven, Tiger of Sweden and Klippan Yllefabrik. The standard has begun to be tested in practice in 2023.

## Conclusion

### Environmental Aspect:

Sweden's climate policy, established in 2017, aims for net-zero greenhouse gas emissions by 2045. Consumption-based emissions, particularly relevant for the fashion industry, have decreased by 20% since 2008. Public support for societal measures to reduce climate change is high, with 86% considering it important.

### Social Aspect:

The majority of clothes sold in Sweden are made abroad, emphasizing the social aspects of production for FTS companies. While sustainability efforts are increasing, paying a living wage remains uncommon, exemplified by Nudie Jeans.

### Economic Aspect:

The Swedish fashion industry is undergoing a paradigm shift with a focus on sustainability, digital innovation, and competitiveness. Economic data for 2020 indicates total sales of approximately SEK 148 billion, with a growing second-hand market.

**Facilitating Transition:** Legislative frameworks, such as separate textile waste collection by 2025, are in place to drive sustainability. The proposed producer responsibility for textiles aims to cover the entire life cycle, supporting recycling and reuse.

### Additional Factors Impacting the Sector:

Demographic changes, digitalization, green innovations, and economic challenges pose uncertainties and

influence consumer behavior.

Identified Gaps and Risks:

Challenges in climate policy design, economic recessions impacting green investments, and security concerns diverting resources are potential obstacles.

Green Measures and Strategies:

Recommendations include designing products for longer life cycles, promoting circular manufacturing, optimizing supply chains, and educating consumers.

Good Practices:

Initiatives like the Remore project and Klimatklivet investment support promote circular consumption and fossil-free technologies. The Swedish Wool Standard addresses waste issues and ensures high-quality wool in collaboration with various industry stakeholders.

In conclusion, Sweden's Fashion and Textile Sector actively addresses sustainability challenges, focusing on legislative changes, consumer education, and collaboration with stakeholders to drive a more resilient and environmentally conscious industry.

## SOURCES

<https://single-market-economy.ec.europa.eu/system/files/2024-03/Report%20on%20stakeholder%20pledges%20and%20commitments.pdf>

<https://kohantextilejournal.com/footwear-industry-bulgaria-footwear-manufacturers-bulgaria>

<https://www.economic.bg/bg/a/view/byrzata-moda-izliza-ot-moda>

<https://cms.law/en/gbr/publication/cms-green-globe/bulgaria>

[https://revistia.org/files/articles/ejme\\_v6\\_i1\\_23/Dimitrov.pdf](https://revistia.org/files/articles/ejme_v6_i1_23/Dimitrov.pdf)

<https://www.investbulgaria.com/>

[https://cdn.seenews.com/reports/TEXTILE\\_Textile%20Report%20-%20Bulgaria%20\(2015\).pdf](https://cdn.seenews.com/reports/TEXTILE_Textile%20Report%20-%20Bulgaria%20(2015).pdf)

<https://www.trigema.de/>

<https://www.hessnatur.com>

<https://www.alpin-lodge.fashion>

<https://www.schneider-esleben.com>,

<https://www.akjumii.com>

<https://www.nix.de>.

<https://sustainfashion.info/the-german-partnership-for-sustainable-textiles/>

<https://textil-mode.de/en/research/>

[https://www.bvse.de/dateien2020/2-PDF/02-Press/06-Textil/2020/bvse-Textilstudie\\_2020\\_eng.pdf](https://www.bvse.de/dateien2020/2-PDF/02-Press/06-Textil/2020/bvse-Textilstudie_2020_eng.pdf)

<https://www.bundesregierung.de/resource/blob/974430/1940716/1c63c8739d10011eb116fda1aecb61ca/german-sustainable-development-strategy-en-data.pdf?download=1>

<https://www.bmz.de/resource/blob/23648/a435c4e0c807d0303636ac8611110784/materialie240-textilbuendnis-data.pdf>

<https://fashionweek.berlin/en/blog/single-news/der-fussabdruck-der-deutschen-mode-eine-analyse.html>

[https://epub.wupperinst.org/frontdoor/deliver/index/docId/8108/file/ZI23\\_Textile\\_Industry.pdf](https://epub.wupperinst.org/frontdoor/deliver/index/docId/8108/file/ZI23_Textile_Industry.pdf)

<https://en.nikinclothing.com/>

[www.oecd.org/eco/workingpapers](http://www.oecd.org/eco/workingpapers)

<https://www.iea.org/countries/greece>

<https://www.nationalgeographic.com/science/article/partner-content-where-our-water-goes-greece>

<https://www.trade.gov/market-intelligence/greece-waste-management-opportunities>

<https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/countries/greece.html>

[https://eures.europa.eu/living-and-working/labour-market-information/labour-market-information-greece\\_en](https://eures.europa.eu/living-and-working/labour-market-information/labour-market-information-greece_en)

<https://www.gov.gr/en/sdg/health-and-safety-at-work/health-and-safety-obligations/independent-authority-labour-inspectorate/obligations-of-companies>

[https://www.esdn.eu/country-profiles/detail?tx\\_countryprofile\\_countryprofile%5Baction%5D=show&tx\\_countryprofile\\_countryprofile%5Bcontroller%5D=Country&tx\\_countryprofile\\_countryprofile%5Bcountry%5D=12&cHash=cd46ded9e2eadb26b8ed282f5fef306c](https://www.esdn.eu/country-profiles/detail?tx_countryprofile_countryprofile%5Baction%5D=show&tx_countryprofile_countryprofile%5Bcontroller%5D=Country&tx_countryprofile_countryprofile%5Bcountry%5D=12&cHash=cd46ded9e2eadb26b8ed282f5fef306c)

<https://www.reuters.com/markets/europe/greek-economy-seen-growing-by-29-next-year-strong-investment-2023-11-21/>

<https://www.statista.com/statistics/644573/travel-tourism-total-gdp-contribution-greece/>

<https://www.statista.com/statistics/276399/distribution-of-gross-domestic-product-gdp-across-economic-sectors-in-greece/>

[http://www.revistaindustriatextila.ro/images/2020/5/015%20MANUELA%20AVADANEI\\_Industria%20Textila%205\\_2020.pdf](http://www.revistaindustriatextila.ro/images/2020/5/015%20MANUELA%20AVADANEI_Industria%20Textila%205_2020.pdf)

<https://www.themds.com/markets/greece-comes-back-from-the-ashes-tourism-and-fast-fashion-boots-the-sector-in-the-country.html>

<https://saltybag.com>

<https://minimis.shop/en/>

<https://saltybag.com/>

<https://minimis.shop/en/>

[www.datsa.ro](http://www.datsa.ro)

<https://www.adolfodominguez.com/on/demandware.static/-/Library-Sites-ad-shared-library/default/dw7e5cc0b0/pdf/press-releases/2522019.pdf>

[https://cambrabcn.sharepoint.com/sites/FSD15-OPE/Documentos%20compartidos/OPE Projects/OPE 2021 ERASMUS FEA-VEE/05.%20WP/06.%20Support%20for%20policy%20reform/D6.2/Useful%20info/pdf\\_informe\\_economico\\_2021.pdf?CT=1706442217425&OR=ItemsView](https://cambrabcn.sharepoint.com/sites/FSD15-OPE/Documentos%20compartidos/OPE%20Projects/OPE%202021%20ERASMUS%20FEA-VEE/05.%20WP/06.%20Support%20for%20policy%20reform/D6.2/Useful%20info/pdf_informe_economico_2021.pdf?CT=1706442217425&OR=ItemsView)

<https://gabrielfariariribaren.com/innovaciones-en-la-industria-textil-y-moda/#:~:text=Las%20innovaciones%20en%20la%20industria,big%20data%2C%20tomar%3%A1n%20m%3%A1s%20tiempo>

<https://www.businessinsider.es/5-retos-abren-moda-2022-983203>

[https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-la-biodiversidad/conservacion-de-la-biodiversidad-en-el-mundo/cb\\_mundo\\_plataforma\\_ipbes.html](https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-la-biodiversidad/conservacion-de-la-biodiversidad-en-el-mundo/cb_mundo_plataforma_ipbes.html)

<https://fashionunited.es/statistics/estadisticas-de-consumo-y-ventas-de-la-moda-en-espana>

<https://es.fashionnetwork.com/news/Los-retos-de-la-industria-textil-para-2023,1470685.html>

<https://industrytalks.es/la-sostenibilidad-clave-de-boveda-del-futuro-de-la-industria-textil/>

[https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

[https://environment.ec.europa.eu/strategy/textiles-strategy\\_en](https://environment.ec.europa.eu/strategy/textiles-strategy_en)

[https://issuu.com/hogskolaniboras/docs/guidence\\_report\\_traceability\\_tools\\_for\\_textile\\_sup?fr=xKAE9\\_zU1NQ](https://issuu.com/hogskolaniboras/docs/guidence_report_traceability_tools_for_textile_sup?fr=xKAE9_zU1NQ)

<https://www.ohanapublicaffairs.eu/2023/11/02/epr-overview-analysis/>

[https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/sustainable-products/ecodesign-sustainable-products-regulation\\_en](https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/sustainable-products/ecodesign-sustainable-products-regulation_en)

[https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting\\_en](https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en)

[https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence\\_en](https://commission.europa.eu/business-economy-euro/doing-business-eu/corporate-sustainability-due-diligence_en)

<https://www.upc.edu/intexter/ca/jornada-industria-textil-sostenibilidad>

<https://www.naturvardsverket.se/amnesomraden/klimatomstallningen/>

<https://www.naturvardsverket.se/amnesomraden/klimatomstallningen/>

<https://www.nudiejeans.com/sustainability/living-wages>

<https://www.avfallsverige.se/aktuellt/nyheter/regeringen-har-beslutat-om-textilinsamlingen/>

<https://www.avfallsverige.se/aktuellt/nyheter/eu-forslag-om-textil-samt-skarpta-mal-for-matavfall/>

<https://scienceparkboras.se/2023/12/nu-ska-det-bli-lattare-for-unga-att-valja-cirkulara-tjanster/>

<https://www.naturvardsverket.se/klimatklivet>

<https://www.axfoundation.se/en/swedish-wool-standard#:~:text=The%20Swedish%20Wool%20Standard%20has,of%20the%20Swedish%20wool%20market>