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Sustainable Production and Consumption: A New Trend in the Fashion Industry

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Abstract: Sustainable fashion is not just a trend, but a call to action, a philosophy of responsible living. By understanding and applying these principles, we not only beautify ourselves but also contribute to protecting the planet and building a better future for next generations. In this article, the author analyzes the trends in the use of recycled materials in the textile and fashion industry worldwide, and in Vietnam specifically. Based on this analysis, the author provides insights, assessments, and proposes solutions for the sustainable development of the garment industry in the future.

Keywords: fashion industry, production and consumption, trend, sustainable development.

SUSTAINABLE FASHION - THE FUTURE TREND OF THE FASHION INDUSTRY

The fashion industry trend is a major shift towards sustainability, personalization, and tech integration, moving from fast to slow fashion with a focus on circularity, eco-materials, and ethical production. Technology, including AI, block-chain, and AR, is revolutionizing design, marketing, and shopping, while consumers demand authenticity, inclusivity, and unique experiences through platforms like TikTok. Key aesthetics include comfort, heritage work-wear, looser fits, and rich browns, reflecting a blend of nostalgia and practicality.

In the context of climate change and increasing environmental awareness, a new concept has emerged and quickly become a focal point: "Sustainable Fashion". Sustainable Fashion is a philosophy and practice in the fashion industry that focuses on minimizing negative impacts on the environment, society, and economy throughout the product's

lifecycle. This encompasses every stage from design, production, transportation, marketing, consumption to final disposal.

Key aspects of sustainable fashion include:

- Environmentally friendly materials: Using organic, recycled, or sustainably sourced fabrics (such as bamboo fiber, tencel, linen).
- Responsible production processes: Minimizing water, energy, and harmful chemicals; efficient waste management.
- Fair working conditions: Ensuring fair wages, reasonable benefits, and a safe working environment for workers.
- Long product lifecycles: Encouraging timeless designs, high quality, easy repair, and recycling.
- Waste reduction: Limiting overproduction, promoting a circular economy model.

The Role of Sustainable Fashion

The fashion industry is one of the world's biggest polluters. According to statistics, this industry is responsible for approximately 10% of global carbon emissions and consumes billions of liters of water annually. Therefore, sustainable fashion emerged to:

- Protect the environment: Reduce textile waste and limit the use of harmful chemicals.
- Support the community: Respect the rights of workers and local communities.
- Create lasting value: Encourage a minimalist lifestyle and responsible consumption.

Ways to Create Sustainable Fashion

- Shop consciously: Choose brands that are transparent about their production processes and material origins.
- Invest in quality: Instead of buying many cheap items, buy fewer but higher-quality items for long-term use.
- Learn how to care for your clothes: Wash properly and repair when necessary to extend the lifespan of your products.
- Reuse and Recycle: Participate in clothing swaps, donations, or learn about textile recycling programs.
- Learn about Materials: Understand environmentally friendly fabrics such as organic cotton, Tencel, modal, and recycled fabrics.

RECYCLED FABRICS

Fashion is closely linked to the textile industry. As the textile industry develops, the amount of waste released into the environment is immeasurable. People's habit of dressing

according to trends and buying "hot-trend" items stimulates the strong development of the fashion industry. Consequently, textile products also account for a large percentage of waste in landfills.

The development of the fashion industry, while boosting the economy, also causes waste and increases the amount of fashion waste as too many clothes are discarded, even those worn only once. This poses a difficult challenge for managers and society, requiring the development of a sustainable fashion trend through the recycling of used fashion products, reducing fashion waste, and contributing to environmental protection and resource conservation for future generations.

In reality, if we only focus on durable clothing without recycling, the fabric will eventually have to be discarded. The positive changes to the environment will be minimal. Therefore, recycled fabrics were created, not only saving production materials and reducing the consumption of natural resources, but also making a significant contribution to protecting our planet.

Recycled fabrics are made from recycled plastic fibers. They undergo a closed-loop process, transforming plastic fibers into polyester fibers. Thus, plastic waste can be recycled into fabric fibers, serving the fashion industry well. This method of fabric recycling is currently becoming a trend with widespread participation from consumers and brands.

CHARACTERISTICS OF RECYCLED FABRIC

Compared to conventional fabrics currently available, recycled fabrics are identical in structure and application. They can be used as seasonal fashion materials just like any other fabric. The biggest advantage of items made from recycled fabric is their repeatable lifecycle. Clothing made from other materials is discarded after one use. While clothes made from recycled fabric can be spun again, and a new lifecycle of recycled fabric begins. Therefore, green fashion and sustainable fashion are becoming increasingly popular.

Because recycled fabric Made from recycled plastic materials, these fabrics are sourced from waste. Therefore, the production process must be rigorous, ensuring strong disinfection and sterilization. Ultimately, consumer health is the manufacturer's top

priority. Therefore, recycled fabrics must meet the Global Recycle Standard (GRS). This standard is defined based on the following criteria:

1. Processed raw material composition
2. Closed and rigorous production process
3. The amount of chemicals used complies with regulations
4. Product lifecycle and recyclability.

Thus, compared to existing fabrics, recycled fabrics have many outstanding advantages.

RECYCLED FABRIC PRODUCTION PROCESS

The production process of recycled fabrics is much more rigorous than that of virgin fabrics. Basically, this process goes through the following steps:

1. Collecting plastic waste, cleaning, and sorting by color.
2. Cooling and sterilizing the fabric.
3. Grinding the plastic into a fine powder and melting it into a liquid mixture.
4. Extruding the polyester plastic mixture into polyester fibers.
5. Spinning the polyester fibers.

The production of recycled fabrics does not require much dyeing. Therefore, it saves water resources and reduces environmental pollution caused by the dyeing industry. Thus, in the production of recycled fabrics, each user is a very important factor participating in the process, such as properly sorting plastic waste and old clothes and bringing them to recycling collection points, ensuring that plastic waste is in a suitable condition, cleaning it, and then taking it to the designated place. For fabric waste, ensure it is clean and dry. Because if a damp piece of fabric is put into a container of fabric to be recycled, it will ruin the entire container. Furthermore, if the fabric is dirty, it will contaminate the entire raw material.

THE APPLICATIONS OF RECYCLED FABRICS

In the sustainable fashion trend, the word "sustainable" means extending the lifespan of a product. Therefore, clothing must be made from safe, biodegradable, or ideally, recyclable materials. This trend helps reduce the consumption of natural resources and ensures fairness for workers involved in the fashion industry's production process. Thus, from many perspectives, recycled fabrics are suitable for sustainable fashion.

Recycled fabrics are becoming the optimal choice for fashion houses, due to their commitment to environmental protection. Currently, many major fashion brands have adopted recycled fabrics in their production. Products from Nike, Puma, Adidas, etc., are gradually shifting to primarily using recycled fabrics. The application of recycled fabrics in the fashion industry has significantly reduced the amount of solid waste released into the environment.

Besides recycled fabrics, there are now many types of fabrics that decompose very quickly. For example, linen and bamboo fabrics are increasingly popular. They not only

protect the environment and benefit the ecosystem, but are also extremely safe for users. Fashion clothing at Couple TX is moving towards sustainable fashion, helping consumers dress beautifully and comfortably with high-quality, biodegradable, safe, and protective materials.

NEW MATERIALS IN THE FASHION INDUSTRY

New materials in the fashion industry focus on sustainability and functionality, including recycled materials (such as recycled polyester), unique natural fibers (such as Algafila fiber from seaweed, Lotuxilk fiber from lotus), functional fabrics (such as water-repellent fabrics), and biodegradable materials, which are attracting significant attention. Popular new materials include:

Recycled Material

- Recycled Polyester: Widely used in the production of jackets, sportswear, and bags due to its water resistance, durability, elasticity, and environmental friendliness.
- Sustainable Denim: Designers are reshaping the structure and production process of denim to reduce its environmental impact.

Unique Natural Materials

- Algafila Fiber (from seaweed): A new material inspired by the ocean, showcasing the potential of marine resources.
- Lotuxilk Fiber (from lotus): A special fabric created from lotus stems, offering uniqueness to fashion products.
- Gamblinged Canton Silk: A traditional silk combined with Kinyan Lam techniques, creating valuable new materials.

Functional Fabrics

Materials with special features such as water resistance, antibacterial properties, or self-cleaning capabilities, meeting the diverse needs of consumers.

Biodegradable Materials

The fashion industry is moving towards biodegradable alternatives, reducing waste and negative environmental impacts. Pioneering designers are actively seeking and applying next-generation materials to create fashion products that are not only aesthetically pleasing but also environmentally friendly and functionally superior.

NATURAL, EASILY BIODEGRADABLE ORGANIC MATERIALS

This source of materials is considered common and highly applicable, and can come from:

Plant-Based Materials

With plant origins, especially utilizing plants from product processing stages... This has helped minimize the waste of natural resources and limit environmental pollution from chemicals and fertilizers. Some of the main raw materials include: pandan leaves, coffee grounds, garlic peels, apple cores, lotus leaves, and bamboo. Fabric made from "pandan leaf" fibers – a new plant-based raw material from ECOSOI. The common characteristics of plant-based raw materials are their large quantity, rapid growth, and independence from chemicals. Furthermore, coffee grounds, apple cores, and pandan leaves – leftovers from the production of other industrial products – are also prioritized for reuse. Therefore, utilizing these plant-based raw materials is a promising field, currently receiving significant investment and development both now and in the future.

Animal-derived Materials

Unlike plant-derived materials, animal-derived materials are subject to ethical concerns and are therefore subject to strict controls on their origin and harvesting methods to avoid negative impacts on biodiversity and the survival of animal species. Most of these materials come from sheep wool, rabbit fur, goat wool, silk, clam shells, etc. However, there is currently much debate surrounding the ethical implications of these materials, and some consumers have boycotted fashion products made from animal skin or fur.

The use of natural materials has both advantages and disadvantages. If these resources are utilized and exploited accurately and appropriately, they will bring enormous benefits to the environment – the goal of sustainable fashion.

RECYCLED MATERIALS

Recycled materials can come from recycling natural products (wood, cotton, etc.) or from waste (plastic bottles, paper, etc.). Creating fashion products from these sources reduces waste, is environmentally friendly, and enhances creativity in the fashion industry.

However, the production process of fashion products from recycled materials requires machinery, advancements in science and technology, and a skilled workforce to ensure consistent quality and sustainability for the fashion industry.

SOLUTIONS TO PROMOTE SUSTAINABLE FASHION

Research and development of recycled fabrics and eco-friendly fibers is one of the important steps to minimize environmental pollution from the fashion industry... Currently, more and more textile companies are switching to using recycled materials to reduce their environmental impact. For example, one company produces nylon from recycled fishing nets, while another focuses on post-consumer cotton and polyester... Even these forward-thinking businesses are increasingly looking to create innovative products from agricultural waste.

It's not just textiles that benefit the environment through recycling. Some brands report that their fabric production processes reduce water use by 98% and emissions by 90%. Many conscious consumers are eager to help the planet by choosing eco-friendly clothing. For green fashion enthusiasts, fabrics made from agricultural waste, such as pineapple leaf fibers, are not uncommon. However, for the first time in Vietnam, a unit has achieved large-scale production. The newly launched eco-friendly silk, yarn, and fabric product, named Ananas, is the result of a collaboration between Ecofa Vietnam (a pineapple fiber producer) and Bao Lan Textile (a developer and provider of textile solutions). This transforms unutilized natural pineapple resources into natural fibers and fabrics through mass production. This is a niche market, but production costs are high, and the raw material supply is not readily available. Furthermore, weaving and dyeing eco-friendly fabrics is not easy. Mastering the entire pineapple fiber production process in Vietnam will give Vietnamese clothing and fashion brands a competitive advantage in building and strengthening their eco-friendly brands, a goal the world is striving for. Vietnamese eco-friendly textile producers will also gain more advantages in business when interacting with foreign companies (Dave Quach, 2020).

The creation of Ananas fibers could pave the way for individuals and organizations nurturing sustainable fashion projects. From here, these entities can consider expanding the production of fabrics from green hemp, hemp, coffee grounds, oyster shells, eucalyptus pulp, oak, algae, etc. Previously, in 2022, the idea of transforming mango peels into plant-based leather, which is already a sustainable development trend, emerged. Mango peels are boiled, compressed, and dried, then mixed with additives, poured into molds, and shaped into mango leather pieces the size of A4 or A5 paper. Mango leather is now available in many colors and is completely natural. The "mango leather" product meets environmentally friendly criteria, with "three zeros" - no waste, no wastewater, and no air emissions. Mango leather is sewn into various types of wallets, business card holders, keychains, glasses cases, etc. Mango peels, a byproduct that was once thought to be discarded, are now being processed into imitation leather with similar properties to real leather, minimizing environmental impact. Mango peels, a seemingly discarded byproduct, are now being processed into leather. Artificial materials have similar properties to real leather, minimizing environmental impact.

As one of the pioneering companies in researching and applying new materials in the textile industry, Faslink has used fibers from coffee grounds, pineapple fibers, lotus fibers,

corn husks, oyster shells, etc., as raw materials for producing fabrics and garments. Oil-extracted coffee grounds are ground and mixed with plastic granules from plastic bottles to create fabrics with high elasticity and breathability. Lotus fabric, made from powdered lotus leaves, stems, and seeds, is soft, smooth, and cool when used in underwear, shirts, and scarves. Fabric made from oyster shells – often discarded on beaches and in restaurants – is processed into a smooth, beautiful fabric that can help reduce the temperature by 2 degrees Celsius when worn…

Currently, nettle (or hemp) has emerged as a new factor. Hemp fiber has many advantages, such as being longer than other materials and having 7-8 times higher durability than cotton and silk fibers. Hemp fiber fabrics have properties such as easy dyeing, antibacterial properties, natural stain resistance, and resistance to hot water during washing. An Phuoc - Viramie has invested 628 billion VND in building a yarn factory in Cam Thuy district, Thanh Hoa province. Currently, the area planted with AP1 green hemp in Vietnam is only 1,400 hectares, while An Phuoc - Viramie needs a raw material area of up to 6,300 hectares. Thanh Hoa province has approved a project to develop a 3,000-hectare green hemp raw material area, using land converted from less efficient food crop and vegetable growing areas. The area can be expanded to 6,500 hectares. The An Phuoc Viramie hemp yarn factory has a capacity of 10,000 spindles/year, equivalent to 1,700 tons of hemp yarn/year and 1,400 tons of hemp cotton/year.

In addition, Vietnamese designers are now paying considerable attention to sustainable fashion. For example, instead of conventional fabrics, designers are using materials made from fermented vinegar. The continuous search by designers for sustainable, natural materials in clothing has enriched the market, increased customer choices, and introduced Vietnamese creativity in the fashion industry to the international community.

Vietnam is actively promoting its commitment to reducing emissions at COP 26. In the textile manufacturing sector, many startups have succeeded from the idea stage, raising investment capital very effectively because this is considered a "trendy" field. However, businesses say there are still many barriers from the domestic market. Among them, consumer awareness and willingness to "pay" for environmentally friendly products are still limited. For instance, Ecosoi's domestic market share is currently less than 10%, while its products reach Europe and many other countries worldwide. Therefore, it can be said that simultaneously reducing pollution and lowering costs is almost impossible. Consumer habits, and the willingness to pay more for green products, are crucial in the long term. Therefore, those in the fashion industry need to find optimal solutions to optimize the production process of recycled fashion materials to reduce product costs, meet the needs of all consumer segments, and promote their widespread use.

CONCLUSION

In brief, the trend of sustainable lifestyles, especially in the fashion industry today, is a topic receiving much attention from consumers. "Sustainability" in the fashion industry doesn't just come from the methods, processes, or packaging of products, but fundamentally stems from the source of raw materials. Recycled fabrics are one of the sustainable products that protect the environment and conserve natural resources. As smart consumers, we can make a significant contribution to sustainable fashion by buying and using clothing made from recycled fabrics.

REFERENCES

1. United Nations, 2015. SDGs
2. Zaza Gigauri, Valentin Vasilev, Valentin Vasilev, 2025. Sustainable Consumption Approaches in the Fashion Industry: Case Studies From Women's Enterprises. DOI: 10.4018/979-8-3693-8694-1.ch005
3. Zivile Stankeviciute, Leva Jarmalaviciute, 2025. The perspectives of women on sustainable fashion consumption: Comparative study of university teachers and students. PLOS One 20(2). DOI: 10.1371/journal.pone.0314532
4. Deepak Khagokpam, Avi Sharma, Radhey Sharma, Mishra Vandana. Corporate Social Responsibility: A Pathway to Sustainability in the Fashion Industry, 2025. DOI: 10.1007/978-3-031-93091-1_14. In book: Circular Economy and Environmental Resilience
5. Pinki Rani, Khyati Kochhar, Priyanka Rana, Kanika Gupta. Sustainable Fashion and University Students: A Behavioral Insight, 2025. DOI: 10.1007/978-3-031-97609-4_37. In book: Integrating Big Data and IoT for Enhanced Decision-Making Systems in Business
6. WGSN, 2025. Fashion trends for 2026 and beyond. Website: https://mlp.wgsn.com/
7. Apparel Industry 2025. Website: https://www.reportlinker.com/market-report/
8. The State of Fashion 2026: When the rules change. Websites: https://www.mckinsey.com/industries/retail/our-insights/state-of-fashion