

Sustainability in the Fashion Industry

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In today's world the idea of sustainable fashion has been one of the biggest topics being discussed. People today have become more aware of what they consume and put into their bodies as well as what items are being used to create their clothing. Most of the time when we shop we usually go for what catches our attention and what we think looks good on us without always checking the tag on the item. This has recently begun to change and consumers are caring more about whether or not the clothing items they shop for are recycled or made out of sustainable fabrics. It is no doubt that the textiles industry has always occupied a large amount of water even more so than the meat industry which is concerning and damaging to our planet. With the creation of synthetic fibers and the use of petroleum, it has contributed to the growth of pollution and contamination of our air quality. Although this is the reality of the industry, there has been a good amount of research on how to change the way things are done by trying to find ways on how to cut down on water usage, recycling old garments to create new ones and finding ways to naturally dye fibers. The talk and awareness of sustainability has been huge over the past years and this is getting the attention of various fashion houses, designers as well as some fashion retailers in order to create a change in the production of garments and clothing.

The textile industry and garment industry overall take part of wasting large amounts of water in order to dye fabrics and wash them out after. According to the Water Footprint Network, "creating a single pair of jeans requires about 2,866 gallons of water" which is mostly used in the "wet processing" and dyeing of fibers. One of the most famous denim and casual apparel brands, Wrangler has been using different sustainability practices for years. Wrangler has recently celebrated their milestone of saving three billion liters of water since 2007 and they have announced a new goal to "reduce their water usage in their facilities by 20 percent in the year

2020.” They have been using the method of recycling water by carefully measuring out the amount of detergent used and then running the used water through a filtration process which helps reduce the amount of water used for washing the denim , seen on figure 1. This method has helped the company reduce the amount of water used by up to 28 percent (Wrangler, 2016). Not only does Wrangler have its water recycling program but also its sustainable fiber program in order to “promote responsible cotton growing practices concerning the use of water, pesticides and fertilizers.” Water recycling is one of the many things fashion companies are doing in order to minimize environmental impact while still creating top quality garments.

Donating or selling clothing items and accessories you no longer have a need for is something that has been becoming popular throughout the years as well but there is also another way in order to make the industry more environmentally friendly. A different type of sustainable practice in the apparel industry would be the recycling of old garments in order to create new ones. According to Levi Strauss & Co, each year in the United States about 13.1 million tons of textile waste is created with 11 million tons ending up in landfills. That is a large amount of waste thrown away when it could be used to make something totally new, which is exactly what the company did in partnership with Evrnu. Evrnu and Levi Strauss & Co. created the world’s first jeans made from regenerated post-consumer cotton waste, as seen on figure 2 (Levi Strauss & Co. 2016). They created these jeans by approximately using 5 used cotton t-shirts which according to Evrnu data, the production for these jeans used 98 percent less water than creating new garments from virgin cotton. The method they used is called the “patent-pending” recycling technology which is used to turn consumer waste into renewable fiber. Although reusing cotton can weaken its quality and durability, Evrnu’s technology created a possibility where the used

cotton can be turned into a new cotton-like fiber (Levi Strauss & Co. 2016). Their creating a new pair of 511 jeans from used cotton opened a brand new door not only to the company but to the textile and fashion industry as well. This is a huge step in proving that they can create new garments while reducing textile and water waste as well as creating a more sustainable world.

Eco-friendly fibers have been taking over the textile industry as more companies are becoming aware of the condition of the earth from the waste of water to cutting down of trees, plants and animal cruelty to create fibers. Designer Stella McCartney is one of the many that has been changing her brand to be sustainable. One of the company's key materials is viscose, or rayon but they have changed where they get the fiber from. According to Stella McCartney, every year around 150 million trees are cut down to create fabric which is why the company now acquires their fibers from FSC certified forests that are not endangered, in Sweden. The company also has stopped using virgin cashmere to create their sweaters and instead uses reengineered cashmere as well as organic cotton, recycled nylon and polyester and vegetarian leather with many other different ways and materials. Although eco-friendly products are more expensive, it is better to invest in a product that will last you longer even though it is more expensive. This will help the planet and it is better than purchasing from fast fashion companies that usually use synthetic fibers which are more damaging to the planet. Alzon fiber is described as a manufactured fiber made out of any regenerated protein fiber by the FTC and it is recognized as eco-friendly. These fibers are recognized as eco-friendly because their protein substances are the by-products of other manufacturing processes (Markova, 2019). One example of an eco-friendly fiber is soybean fiber since it is made from renewable natural resources. Soybean protein fiber is made from the byproduct leftovers of soybean oil, tofu and soymilk production that will usually

be discarded. The use of creating this fiber is to turn waste into useful products and have the production of textiles move away from chemically made products. Some of the pros of this fiber is the fact that it is described as warm, strong, drapeable, comfortable and it takes dye very well. One of the cons of this fiber is that pilling may occur (Fiberlink, 2019). The fiber is described to be similar to cashmere and some of the industries that use soybean fiber are the apparel and automotive industries. Milk fiber is another type of regenerated bio-friendly protein fiber. Milk fiber is made from a chemical substance and the casein protein removed from milk after the butterfat is (Markova, 2019). This fiber originated in Italy and is considered to be relatively new as well as a competitor to wool. The fiber is white and soft, as seen on figure 3 and it is described to be good for sensitive skin. Some of the pros of this fiber is that it contains 17 amino acids, has natural antibacterial properties, has a good dye-ability property and can be blended with almost any other fiber (Allen, 2019). One of the cons of milk fiber is that it easily wrinkles which is not so aesthetically pleasing and needs to be steamed. The usage of milk fiber is mainly used in the apparel industry to make socks, sportswear, underwear and dresses. Some other bio-friendly fibers include potassium-calcium carrageenan fiber, bamboo fiber, aloe vera fiber, banana fiber, corn fiber, hemp and ramie with many others.

Even though most fast fashion companies tend to use synthetic fibers to produce the garments they sell, some fast fashion companies are also becoming aware of what fibers they use and how they can change to become sustainable. One of the most popular fast fashion companies, H&M has recently been practicing the change into becoming a sustainable company. According to a text by a student, Bin Shen in Donghua University in Shanghai, China, H&M cooperates with the World Wide Fund for Nature in order to save water and improve the

management of water resources. H&M also has a goal of not sending any waste to landfill but rather recycling the materials they have. In 2010, the company launched its “H&M conscious collection”, seen in figure 4, which is made from sustainable materials as well as recycled polyester and organic cotton. The company also uses items like recycled polyamide, recycled plastic and recycled wool which helps in saving water and energy as well as lowering the greenhouse gas emission (Shen, 2014). H&M launching its sustainable collection is a good step for fast fashion, this allows for consumers to be able to purchase items that are made from sustainable resources without having to pay such a high price for the garments as well as allowing for other fast fashion brands to start following in their footsteps and possibly create a sustainable collection of their own.

Finally, the idea of sustainability in the fashion industry is expanding and will keep on expanding throughout the years. With the events going on in the world and people becoming more aware of what we can do to save the planet, things are beginning to change. From the food that is being consumed to what we wear, there are many people who are willing to change something in their lifestyle in order to do their part in helping the planet. Using eco-friendly fibers and products as well as recycling clothing items and donating them is a huge part of becoming more sustainable. Fashion companies finding new ways in order to decrease the amount of waste and chemicals they use in production is also becoming more popular since the demand for eco-friendly products is becoming higher and will most likely continue to be like this for the time coming. As the famous fashion designer Stella McCartney says, “sustainability is a la mode.”



**Figure 1.** Wrangler's water protection.  
Wrangler.  
2017.

**Figure 2.** Levi Strauss & Co. + EvrNu create first pair of jeans from post-consumer cotton waste.  
Levi Strauss & Co.  
2016.



**Figure 3.** Milk Fiber.  
Textile Learner.  
2019.



Figure 4.  
H&M Conscious apparel tag.  
H&M  
2018.



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