

Upcycled

Upcycled products are any products made with items that would have otherwise gone unused and eventually make its way to your local landfills. Upcycled products can be made using vintage items, secondhand fashions, remnants, dead stock fabrics or reclaimed materials. Given the sizable contribution the fashion industry makes to landfills every day, upcycling is an easy eco shopping solution that creates zero demand for new production. That means not only does up-cycling deduct from the amount of waste that gets tossed but it also stops the demand for more production of items that will potentially meet the same landfill fate.

FAST CONSUMPTION'S IMPACT ON THE ENVIRONMENT

Our modern society thrives on the consumption of new goods at an ever rapid rate. We purchase the latest and greatest in all consumer goods generally without a second thought as to the effects our purchases have. With every purchase, we consume more then we can replenish and create a huge impact on the environment faster.

Unfortunately, because of the drive for lower prices, industries of all shapes and sizes have responded by producing cheap, poorly constructed, resources consuming products. The industry responds by increasing their production at any cost to spin the money wheel and give the consumers more of what they demand. These may be more affordable, but in the long run they wear out and break quickly. Consumers find themselves replacing their goods more frequently. The substitution of quality, for cheap production in the end requires even more of our natural resources. Cheap production drives the need for cheap labor and as a result fair labor practises suffer and in some cases to go out the window all together.

This kind of fast-paced buy-use-dispose mentality has had huge consequences for our planet and all of us who share it. A quick review of the state of our environment will help to illustrate this point.

CLIMATE CHANGE FROM OVER CONSUMPTION OF FOSSIL FUELS

Perhaps the biggest concern with our environment today is that of climate change. We know with confidence that humans are contributing to climate change by burning fossil fuels – things like natural gas, oil, and coal – all of which contribute global warming emissions that trap solar heat in our atmosphere. Why is this issue important?

- **Point of no return:** Many scientists believe we are already past the point of no return – that we have already pumped more greenhouse gas emissions into the environment that our atmosphere will be permanently changed. We're already seeing the results of climate change, which backs up this viewpoint. Things like increased droughts, more violent and unpredictable weather events, ocean acidification, species extinctions, sea level rises, increases in vector-borne diseases, and significant human health problems are all on the rise.ⁱ
- **Consumer's inaction:** Though globally we have recognized that climate change is real, most of us fail to realize that we can do small things to contribute to the bigger picture of change. While we may believe that it take great steps to create changes that will be worthwhile, even little things like using one less napkin a day could save more than a billion

Upcycled

pounds of napkins from landfills each year. It's a global effort and every action adds up or deducts from the footprint we leave.

- **Consensus on climate change:** Today, 97% of all scientists (who regularly research and publish on the subject) agree that climate change is a result of human-caused greenhouse gas emissions (GHGs).ⁱⁱ

The consumption of more and more cheap goods has a huge impact on climate change. That's because manufacturers use a lot of energy to create their products. More energy is consumed to ship products around the world via train, plane, and ships. Even more energy is expended during the life of a consumer product – energy for laundering clothing, energy to run appliances like microwaves and fridges, and energy for powering things like electronics. Our fast consumer culture is therefore partially responsible for the growing climate problem. We can also choose to be a part of the solution. It's all about small changes. Instead of using hot water to launder your clothing, use warm. If we all made this switch we would save enough energy to amount to 100,000 barrels of oil a day.

CONSUMPTION OF NATURAL RESOURCES AND PRODUCTION OF POLLUTION TO FEED THE FAST CONSUMPTION MODEL

Unfortunately the bad news goes further. From the consumption of natural resources to the pollution of soil and water, there are serious problems associated with our consumption habits. Take these examples for instance.

- **Rate of deforestation:** Humans harvest more forest every year than they did 20+ years ago,ⁱⁱⁱ and with deforestation goes biodiversity. We are losing plant, animal, amphibian, and insect species at a rate so fast, that many scientists are calling our current era a mass extinction event. We depend on many species of plant life for pharmaceutical purpose, some of which can only be found in specific regions know for heavy deforestation. There are currently over 400 medicinal plants at risk of extinction due to deforestation and over consumption.
- **Widespread pollution:** Human manufacturing dumps over 4 billion pounds of toxic chemicals in US landscapes and waterways every year, many of which are carcinogenic.^{iv}
- **Growing solid waste problem:** Despite recycling programs, Americans are producing more solid waste that ever before. The human population grew in the US by 65% between 1960 and 2005 while the amount of trash doubled to 4.5 pounds per person daily; indicating that more waste is produced per household today than ever before.

WATER CRISIS BECAUSE OF OVERCONSUMPTION OF THIS NON-RENEWABLE RESOURCE

Perhaps one of our most precious resources is fresh water. Yet water systems worldwide are in crisis.

Upcycled

- **Waterway health in the US:** Of those assessed in the US, 44% of rivers, 64% of lakes, and 30% of estuaries are impaired. The most common pollutants found in these waterways include chemicals from industrial agriculture, mercury (primarily from coal power plants), PCBs, and pathogens the most common pollutants.^v Human health is seriously compromised by such polluted waters, and millions of Americans are exposed to water contaminants every year.^{vi}
- **Ocean acidification:** Water problems also exist in our oceans. The most serious is that of ocean acidification – the slow rise of acidity of these waters because of climate change. Today, our oceans are already 30% more acidic and most predictions say it double by 2100. More acidic oceans have significant adverse impacts on fishing, coral health, tourism, and more.^{vii} Due to Acidification our great coral reefs are dying. While the reefs only occupy less than 0.1% of the world's oceans they are responsible for provide homes to 25% of all marine species. If we lose our reefs we will throw the entire marine ecosphere into a domino effect of disaster.
- **Plastic islands in oceans:** Scientists estimate that there are now five plastic oceanic gyres worldwide - giant swirling masses of plastic waste. The most well-known is the Pacific Ocean Garbage Patch which contains 46,000 pieces of plastic litter per square mile of ocean which means six pounds of marine litter for every single pound of plankton.^{viii} Every year, 100,000s of sea birds, sea turtles, whales, and other marine mammals die from consuming or being strangled by this plastic trash.^{ix}

This quick survey of the health of the environment should give you an idea that our world is in crisis and needs our help. Many systems are in serious threat of completely collapsing, with profound impacts for the survival of humanity and for human health in general. We are built on a system of reliance and if we fail to care about even the tiniest of matters we fail to care about the future we are creating for ourselves and our future generations who will inherit our choices.

FAST FASHION AND A GROWING WASTE PROBLEM

The fast fashion industry has a big part to play in many of the environmental problems we see in our modern world. Today's fast fashion trends make it easy for consumers to buy cheap fashion, wear it for a short time, and then dispose for the next latest trend. Since disposable fashion is often of very poor quality, it's no surprise that so much of it lands in the trash heap after only a few wears. The desire for a constant flow of fresh, new looks also drives today's consumers to throw away more old clothing than any other generation.

- **Textile waste per person:** Most Americans throw away 70 pounds of clothing and textiles every year, but most of that (95% in fact) is recyclable.^x The export of used American clothing has tripled from 1989 to 2003 to 7 billion pounds every year due largely to the throw-away fashion trend.^{xi} There are many ways that our old fashions can be reused. If you're crafty enough clothing can be up-cycled into new fashions, wearable for many more seasons. For the not so crafty your old apparel can as be donated to a textile recycler like [Wearable Collections](#), or to your local thrift shop. Many thrift stores use clothing as a tool to create more good in your local communities. Take for example Goodwill, who through

Upcycled

second hand goods create job opportunities for people with disabilities, or economic disadvantage.

- **Purchase rates:** Every year worldwide, consumers purchase 1 billion garments made in China, which is equivalent to four pieces of clothing consumed by every US citizen.^{xii} Try instead supporting USA made, or manufactures that support fair labor practices. The World Fair trade Organization is a great resource in finding other companies like Hearts who support fair labor and environmental business practices.
- **Percent of solid waste stream:** In 2010, 8% of the solid waste collected in the US was old clothing, leather, rubber, and other textiles.^{xiii} In the UK, textile waste was only 7% of the solid waste stream, but only five years later it's now 30%!^{xiv}
- **Recycling rates for textiles:** Unfortunately, only 15% of all textiles discarded in the US are recycled annually.^{xv}
- **Factory waste:** There is significant textile waste in the fashion industry. Consider that most manufacturers throw away between 8% and 15% of all the fabric they consume as offcuts, surplus, or incorrect material.^{xvi} The average apparel factory tosses 60,000 pounds of perfectly usable, pre-consumer textiles every single week.^{xvii}
- **Rising spending, falling prices:** Consumers increasingly want more variety for their fashion but want to pay less and less. In one survey, consumers' spending increased by 21% in just four years, while the prices of their fashion purchases dropped by 14%.^{xviii} With current economic situations here in the USA and abroad, the need for cheaper alternatives in fashion has risen. We should as consumers shop smarter. Instead of investing in cheaper production practices, we can invest in clothing that is quality and will translate into many seasons. There are also second hand stores which have many name brand labels for ¼ of the cost of regular retail prices.

Discarded textiles take up landfill space and they contribute to climate change. When organic materials, like cotton, wool, and leather, break down in the oxygen-starved landfill environment, they generate a greenhouse gas emission known as methane (CH₄), a gas that's 21 times more potent than carbon dioxide at trapping heat on our planet.

Synthetics textiles are no better because of the ultra-slow rate at which they break down in a landfill. Made of petroleum-byproducts, these synthetic textiles represent a huge waste of resources. As they decompose, they release dangerous toxins into soil and water.

THE POTENTIAL FOR UPCYCLING TO REVERSE FAST FASHION'S ECO PROBLEMS

The upcycling industry puts into practice the cradle to cradle philosophy of William McDonough and Michael Braungart. In this philosophy, secondhand products are not seen as waste materials, but rather resources for creating something new. Instead of items going from the manufacture, to consumer use, and ending in a landfill or incinerator which will be their ultimate resting place for

Upcycled

thousands of years. Up-cycled products can be cycled from one new beginning to another – or from cradle to cradle.

Upcycling takes virtually any form. The act of upcycling is essentially to take a waste product, and without altering it chemically or mechanically, transforming it into something new. This can include anything from converting old wool blankets into handbags to transforming old wood from a demolished house into jewelry you can wear.

BENEFITS OF THE UPCYCLING OF WASTE MATERIALS

There are many advantages to upcycling old materials into new products or usable items. Like recycling, upcycling keeps resources out of landfills, saves energy, reduces toxicity, and helps to stimulate local economies and jobs:

- **Stimulate local jobs and economy:** The reuse industry generates more than \$14.1 billion in revenue every year, and an annual payroll of \$2.7 billion. This provides almost 170,000 jobs throughout the country, which helps to generate local income and stimulate local economies.^{xix}
- **Save landfill space:** Products that could be reused are often sent to landfills where they cost society and take up valuable land. Upcycling helps divert resources from landfills and incinerators into upcycling industries. Choosing to recycle your old clothes and buying recycled-content clothing, for instance, helps to clear up 5% of landfill space.^{xx}
- **Save energy:** Upcycling materials rather than creating new products from virgin resources always saves energy and reduces the climate impact of those products. Take recycling glass instead of creating from new resources. Recycling one glass container saves enough energy to light a 100-watt light bulb for 4 hours.^{xxi}
- **Save resources:** Our forests, mountains, and oceans need to be protected from being over-harvested for their natural resources. Upcycling helps to accomplish this by reusing materials that are already part of the value chain rather than harvesting new resources.

There are far more benefits to upcycling – many of which are also found in the recycling industry, but these statistics should give you an idea of the tremendous potential upcycling has to reverse some of our world's biggest environmental problems.

UPCYCLING IN THE ETHICAL FASHION INDUSTRY

Upcycling is a huge trend in the ethical fashion industry. What is upcycled fashion? The upcycling fashion movement centers on the creative reuse of discarded materials, including factory textile waste, vintage clothing and jewelry, and other reclaimed materials. This refashioning results in unique, one of a kind products that are sustainable.

Let's start by distinguishing upcycling from recycling. It's easiest to understand the difference when you consider the four ways clothing can be reused or recycled:

Upcycled

- **Immediate reuse (i.e. thrift store purchases):** You likely know this type of recycling as secondhand, thrift store, or consignment shop fashion. Though no actual recycling takes place, this is a type of recycled fashion since it involves taking someone's cast-off fashion and "re-cycling" or "re-using" it into your own wardrobe. Believe it or not, 70% of the world's population wears secondhand clothing.^{xxii}
- **Mechanical textile recycling:** As we've already explained, this is a much more complex process that involves shredding discarded textiles, spinning the fibers into new threads, and using those threads to make new recycled fabrics. The finished fabrics are then used to create brand new clothing and fashion that looks nothing like the original fashion from which it was made.
- **Upcycling fashion through modification:** Think of this as a conversion process. It involves taking an existing piece of fashion and revamping it into something new. For instance, you might add a floral patch to cover a hole on a sweater, or reposition seams on a wedding dress to restyle it, or turn a pair of jeans into a handbag. The finished product often has a striking resemblance to the original.
- **Upcycling fashion with remnants:** In this process, rather than modifying a complete, existing garment or accessory, our artisans will take waste from the fashion industry – things like textile remnants, bits of leftover leather, and other components – and upcycle them into a brand new piece of fashion.

The real beauty of upcycling is that it can take something out of trend, and turn it into something completely amazing. The refashion movement is one of the most creative, innovative in the eco fashion industry.

There are plenty of ways to up-cycle within the fashion industry. The Secondary Materials and Recycled Textiles Association (SMART) estimates that 95% of all textiles can be recycled or reused.^{xxiii}

So what does upcycling in the fashion industry actually look like? Hearts' sustainable fashion designers that specialize in upcycling materials use a variety of techniques. Here are some of the more popular upcycling methods used by today's refashion designers:

- Existing clothing and accessories are refashioned by adding patches and covering over flaws with interesting details.
- Textile offcuts or surpluses (also known as remnants) on the garment factory floor are combined in a unique ways. For instance, denim and jersey remnants can be used to make scarfs, or scraps from the upholstery or car manufacturing industries can be repurposed to create new fashion items.
- Materials that are damaged, out of production or are incorrect for sale (sometimes referred to as dead stock), are used to produce one of a kind item.
- Pieces of glass are cut and formed into jewelry or garment ornaments.

Upcycled

- Used, leftover, or remnant leather is revamped into new accessories and jewelry and the life of an animal is saved.
- Reclaimed and naturally-fallen wood is carved and sanded to create unique accessories.
- Old jewelry, vintage jewelry, and costume jewelry are used as embellishments on clothing or are refreshed to create something modern and stylish.
- Industrial items and computer parts are used to create accessories. Examples include computer memory boards, nuts and bolts, speaker wire, and industrial washers.
- Old tires and rubber is cut and formed into handbags and jewelry.
- Army surplus clothing and military blankets are refreshed with new life in handbags.
- Vintage and secondhand clothing that would otherwise collect dust is regenerated with skillful stitching and sewing or revamped into something currently fashioning.
- Neoprene left over from the wetsuit manufacturing industry is used to create laptop cases and wallets.
- Two pieces of secondhand clothing are combined to create something new.
- A secondhand pair of pants is given new life as a purse, an old T-shirt becomes a scarf, or old sweaters arms are turned into leg warmers.

Upcyclers repurpose clothes in many unique and interesting ways, allowing you to customize your wardrobe anyway you like. There are some challenges with up cycling, though the benefits outweigh the challenges. One of the obstacles of the upcycling fashion movement is that there are often limited quantities of materials available. This results in unique, often one-of-a-kind fashion designs that let you express your inner green fashionista.

Hearts believes the added bonus to up-cycling is the of support slow, handmade fashion principles. Generally handmade fashion principals are also very low impact due to the hands on nature that is necessary in up-cycling. Upcycling requires a lot of labor and detailed work, so it helps to create employment for people who are being resourceful in a world full of waste. Many of our handmade designs have been created with upcycled materials by artisans who do a spectacular job of transforming waste materials into objects of beauty!

GREEN LIVING TIPS FOR UPCYCLING MORE WASTE EVER DAY

- **Buy upcycled:** You can choose upcycled home décor, appliances, fashion, and much more through thrift stores and consignment shops. This is a fabulous way to reduce your impact on the planet and save some money, too.

Upcycled

- **Recycle your used fashion:** When you no longer want to use your old clothing and jewelry, be sure to donate it to a local charity or a textile bank. And don't forget home textiles like curtains, bedding, and even shoes. Whatever you do, don't throw these items in the trash!
- **Choose high quality consumer goods:** When shopping for everything from small appliances to furniture to fashion, be sure to look for high quality items that will last you a long time. This eco shopping will help you save money in the long run and will reduce the total resources you consume as well. Plus, by choosing long-lasting, durable products, you'll have to make fewer trips to donate secondhand goods.
- **Upcycle at home:** Reuse items at home – from yogurt containers to cardboard boxes to paper – to upcycle it and give it a longer lease on life. There are virtually endless ways you can upcycle at home with your kids or on your own to instil in your family the value of resources in your waste bins.
- **Take care of your fashion:** Make your fashion last longer by caring for it well. You can reduce the wear on your clothing, for instance, by washing it less frequently (if unstained and unscented) and using a low temperature setting for the wash cycle. Then hang it to dry to further reduce wear and tear (the heat of the dryer will wear your clothing out much more quickly than line drying).
- **Lease fashion:** If you've got an important function and want a special gown you'll only wear once, lease or rent something rather than buying new. This may be much more economical and will reduce the space you need to store clothing that only gets worn once or twice.
- **Repair before you recycle:** Whether you're looking for ways to extend the life of your fashion or your other consumer goods like small appliances, it's always more eco-friendly to repair before you recycle.

ⁱ *US Seasonal Drought Outlook*. (2011, February 17). Retrieved February 23, 2011, from National Weather Service: http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

ⁱⁱ William R. L. Anderegg, J. W. (2010, April 9). *Expert credibility in climate change*. Retrieved February 23, 2011, from Proceedings of the National Academy of Scientists: <http://www.pnas.org/content/early/2010/06/04/1003187107.full.pdf+html>

ⁱⁱⁱ *Tropical primary forest loss, 2000-2005*. (n.d.). Retrieved February 23, 2011, from Mongabay: http://rainforests.mongabay.com/primary_alpha.html

^{iv} *Toxic Chemical Releases*. (n.d.). Retrieved February 23, 2011, from Scorecard: The Pollution Information Site: <http://scorecard.goodguide.com/env-releases/us-map.tcl>

^v *The National Water Quality Inventory: Report to Congress for the 2004 Reporting Cycle*. (2004). Retrieved February 23, 2011, from US Environmental Protection Agency: http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2009_01_22_305b_2004report_factsheet2004305b.pdf

Upcycled

- ^{vi} *Drinking water pollution has many sources.* (2009, December). Retrieved February 23, 2011, from Environmental Working Group: <http://www.ewg.org/tap-water/sourcesofwaterpollution>
- ^{vii} *Ocean Acidification: The Other CO2 Problem.* (n.d.). Retrieved February 23, 2011, from Natural Resources Defense Council: <http://www.nrdc.org/oceans/acidification/>
- ^{viii} *Action Urged to Avoid Deep Trouble in the Deep Seas.* (2006, June 16). Retrieved February 9, 2011, from United Nations Environment Programme: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=480&ArticleID=5300&l=en>
- ^{ix} *Carbon Conscious Consumer - Bring Your Own Bag!* (n.d.). Retrieved February 9, 2011, from New American Dream: <http://www.newdream.org/c3/#bag>
- ^x *Issue.* (n.d.). Retrieved April 5, 2012, from Council for Textile Recycling: <http://www.wearonaterecycle.org/>
- ^{xi} *Waste Couture: Environmental Impact of the Clothing Industry.* (2007, September 1). Retrieved April 2, 2012, from Environmental Health Perspectives: <http://ehp03.niehs.nih.gov/article/info%3Adoi%2F10.1289%2Fehp.115-a449>
- ^{xii} (Waste Couture: Environmental Impact of the Clothing Industry, 2007)
- ^{xiii} *Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2010.* (n.d.). Retrieved April 5, 2012, from US Environmental Protection Agency: http://www.epa.gov/osw/nonhaz/municipal/pubs/msw_2010_rev_factsheet.pdf
- ^{xiv} Poulter, S. (2008, November 25). *The Primark effect: Throwaway fashion that cannot be recycled now makes up 30 per cent of the waste in council tips.* Retrieved August 13, 2012, from Daily Mail: <http://www.dailymail.co.uk/news/article-1089094/The-Primark-effect-Throwaway-fashion-recycled-makes-30-cent-waste-council-tips.html>
- ^{xv} (Issue)
- ^{xvi} *The Impact Feature: Repreve.* (n.d.). Retrieved April 5, 2012, from Fibre2Fashion: <http://www.fibre2fashion.com/sustainability/unifi/>
- ^{xvii} Hamlin, S. (2010, February 8). *Is Textile Waste the Next Frontier of Eco-Fashion?* Retrieved August 13, 2012, from Ecouterre: <http://www.ecouterre.com/is-textile-waste-the-next-frontier-of-eco-fashion/2/>
- ^{xviii} *Well dressed? The present and future sustainability of clothing and textiles in the United Kingdom.* (n.d.). Retrieved March 27, 2012, from University of Cambridge Institute for Manufacturing: http://www.ifm.eng.cam.ac.uk/sustainability/projects/mass/uk_textiles.pdf
- ^{xix} *Results of the National REI Study.* (n.d.). Retrieved August 13, 2012, from US Environmental Protection Agency: <http://www.epa.gov/epawaste/conservation/rrr/rmd/rei-rw/result.htm>
- ^{xx} (Issue)
- ^{xxi} *Benefits of Recycling.* (n.d.). Retrieved April 5, 2012, from Californians Against Waste: http://www.cawrecycles.org/living_green/benefits_of_recycling

Upcycled

^{xxii} *Textile recycling information sheet*. (n.d.). Retrieved August 13, 2012, from Waste Online:
<http://dl.dropbox.com/u/21130258/resources/InformationSheets/Textiles.htm>

^{xxiii} *SMART Textiles Recycling Checklist for Communities*. (n.d.). Retrieved April 5, 2012, from Secondary Materials and Recycled Textiles Association:
http://www.smartasn.org/government/SMART_Checklist_rev08-03-11.pdf