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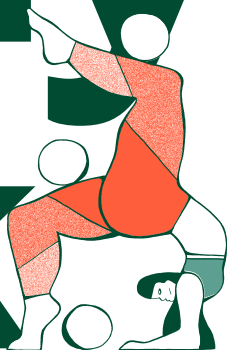
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WHAT
IMPACTS DO
MY CLOTHES
AND
SHOES
HAVE
ON THE
PLANET?

of my



Look



The textile industry in a few figures

More than **100 billion** articles of clothing are sold around the world. Production doubled between 2000–2014¹.

In France, the clothing sector generates **150 billion** euros and accounts for 1 million jobs².

In France, **600,000 tons** of clothing are put on the market (2.5 billion articles). **Today, 210,000 tons** are collected and sorted (9.2 kg per person, of which 3.2 kg collected and sorted)³.

Every year, the fashion sector emits **1.2 tons** of greenhouse gases⁴. Its impact is greater than that of international flights and maritime traffic combined⁵.

Making a t-shirt uses in water the equivalent of **70 showers**. A pair of blue jeans, **285 showers**⁶. Washing our synthetics by machine releases an estimated **500,000 tons**

of plastic micro-particles yearly—the equivalent of over 50 million plastic bottles⁷.

On average, people buy **60% more** clothes than 15 years ago, and keep them half as long⁸.

Nowadays, less than **1%** of the fabrics in our clothing is recycled to make new clothes⁹.

4% of the world's available drinkable water* is used to make our clothing¹⁰.

1 Source: *Timeout for fast fashion*, Greenpeace, 2014.

2 Source: IFM, 2017.

3 Source: Éco TLC, 2016.

4 Source: Ellen MacArthur Foundation, *A New textiles economy. Redesigning fashion's future*, 2016 and *Circular Fibres Initiatives Analysis*, 2016.

5 Source: International Energy Agency, *Energy Climate Change and Environment*, 2016.

6 Respectively 2,700 and between 7,000 and 11,000 liters of water. Source: *Fashion Revolution*, 2017.

7 Source: Ellen MacArthur Foundation, *A New textiles economy. Redesigning fashion's future*, 2016.

8 McKinsey & Co, *Style that's Sustainable: A new fast fashion formula*, Nathalie Remy, Eveline Speelman & Steven Swartz, 2016.

9 *Fast Fashion is creating an environmental crisis*, Newsweek, 2016.

10 Source: Ellen MacArthur Foundation, *A New textiles economy. Redesigning fashion's future*, 2016 and *Circular Fibres Initiatives Analysis*, 2016.



Since ancient times, clothing has been worn for protection against the cold and heat. With the expansion of trade in the 14th century, it became an adornment as well, and has since taken on great importance in our lives.

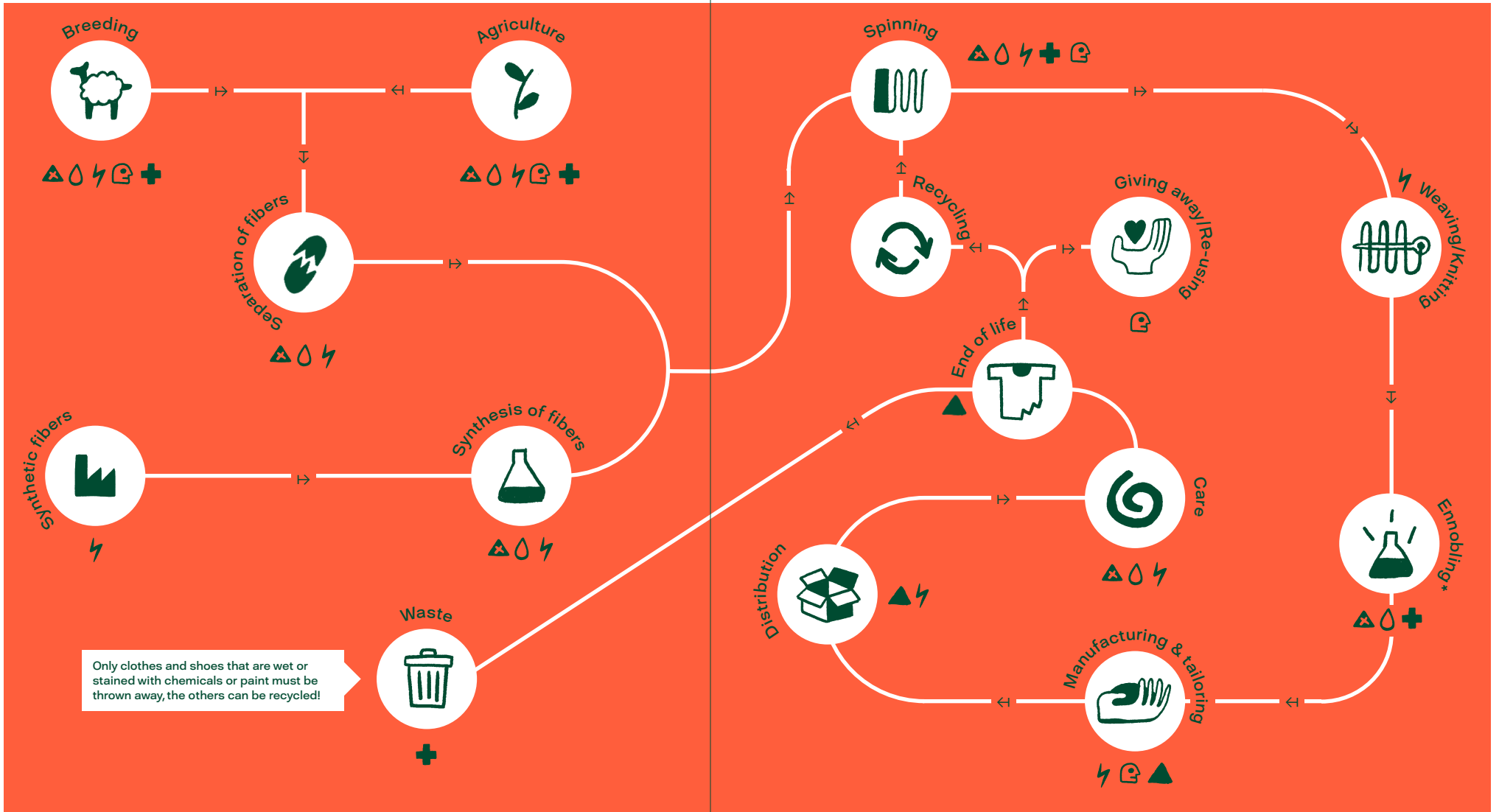
Nowadays, big international companies offer clothes in the latest fashion at competitive prices. The manufacture of those clothes involves a number of phases and procedures that can be harmful to the environment and to the people who wear them.

The textile industry is one of the most polluting industries in the world. To make a pair of blue jeans, for example, the cotton is first cultivated in India or Africa, causing a number of sociological and ecological impacts—then dyed in another country—then sent back to Asia to be cut and sewn, and finally sold in France and all over the world. A pair of jeans can thus travel from one end of the planet to the other. In each country and at each phase of its life cycle, the garment has heavy ecological and social consequences.

In this booklet, you'll discover the underside of your look—you'll learn to better choose your clothing and accessories (shoes and bags), to buy clothes made of organic cotton and labeled products (European Ecolabel, GOTS or Oeko-Tex®), to prefer committed brand names and/or secondhand clothes, how to take care of clothing, to think of repairing, transforming and recycling clothes when they're worn out.

It's up to us to act in order to limit the impacts of fashion on the planet!

The Life Cycle of Textile Products



▲	Use of chemical products
💧	Water consumption and pollution
⚡	Energy consumption and carbon emissions
+	Health issues
👤	Social issues
▲	Waste
→	Transport

Main Environmental Impacts
Depletion of water resources*
Water pollution*
Soil pollution
Greenhouse gas emissions (GGE)
Degradation of ecosystems* and biodiversity
Energy use due to transport

Most commercialized raw materials

11% (wool, silk, linen, etc.)

26% cotton

63%
chemical
materials

Source: Circular Fibres Initiatives Analysis, 2016.

To make an article of clothing, a pair of shoes or a handbag, we need raw materials. To obtain them, we breed animals (animal material), grow plants (natural material) or we make the material ourselves, using different chemical processes (synthetic and artificial materials). There are also secondary raw materials: recycled materials, which can be produced through mechanical or chemical processes. Producing raw materials is the first step in the manufacturing line.

Table of raw materials used in the textile industry

Table of raw materials used in the textile industry			
Examples of natural materials	Animal materials	Skins (leather)	Leather from cows, sheep, lamb, pig, etc.
		Hair (wool)	Wool from sheep, rabbit, yack, alpaca, camel, etc.
		Secretions (silk)	Silkworms on mulberry trees produce silk from their saliva to make a cocoon. The silk thread can be 300-1500 meters long.
	Plant-based materials	Grains	Cotton.
		Leaves	Raffia.
		Stems	Linen. Fibers are located in the stem.
		Sap	Natural latex. The sap is harvested by grooving the bark of the hevea tree. This will make rubber sheets that can be used, for example, to make shoe soles in natural latex.
Examples of chemical materials	Synthetic materials	A synthetic material is obtained through the synthesis of chemical components coming from petroleum (acrylic, elastane, Lycra®, etc.).	
	Artificial materials	An artificial material is obtained through the chemical synthesis of a natural element such as wood cellulose (bamboo, viscose, Tencel®). Fabrics can also be made from milk, crab shell, soy, etc.	



Our clothes can be made of animal materials from sheep, goats, alpacas, merinos for wool, cows for leather, mulberry silkworms for silk, rabbits or minks for fur. What are the impacts of these materials and how can we reduce them?

PROBLEMS

The Buriganda River in Bangladesh has become one of the most toxic because of the products used in the surrounding tanneries.

Animals bred for the textile, leather and fur industries most often live in difficult conditions, in small spaces, poorly fed and sometimes mistreated.

Sheep are sometimes raised in countries that are too warm for their skin. This can cause painful infections.

Chrome and chemical products are often used to tan leather. These toxic substances are found in the untreated sewage water* and in the rivers. These chemical products are toxic to human beings and to the fauna and flora of the rivers.

- ↳ As far as fur is concerned, some breeders are committing to better procedures. Animals are raised in a suitable environment free from mistreatment (prefer the logo OA-Origin Assured, for instance).
- ↳ Try committed brands. A number of ethical fashion* blogs provide all the necessary information.

SOLUTIONS

Prefer recycled or synthetic furs.

Prefer shoes with the European Ecolabel or made of recycled materials.



Cotton, linen, rubber, etc. are natural materials that can be obtained from plants. Flowers are used to make cotton, stems are used to make linen, and rubber comes from sap.

One quarter of the global production of textile fibers comes from cotton. Growing cotton requires a lot of water, sun and pesticides*.

This causes agricultural pollution and represents a risk to the farmer's health.

Water* is a rare resource in some countries. When rainwater isn't enough, water is diverted from rivers, lakes and ground water tables so as to irrigate the fields.

Due to this practice, the Aral Sea lost three quarters of its surface in 2005, which heightened its salt concentration and killed most of the forms of life present in it.

PROBLEMS

SOLUTIONS

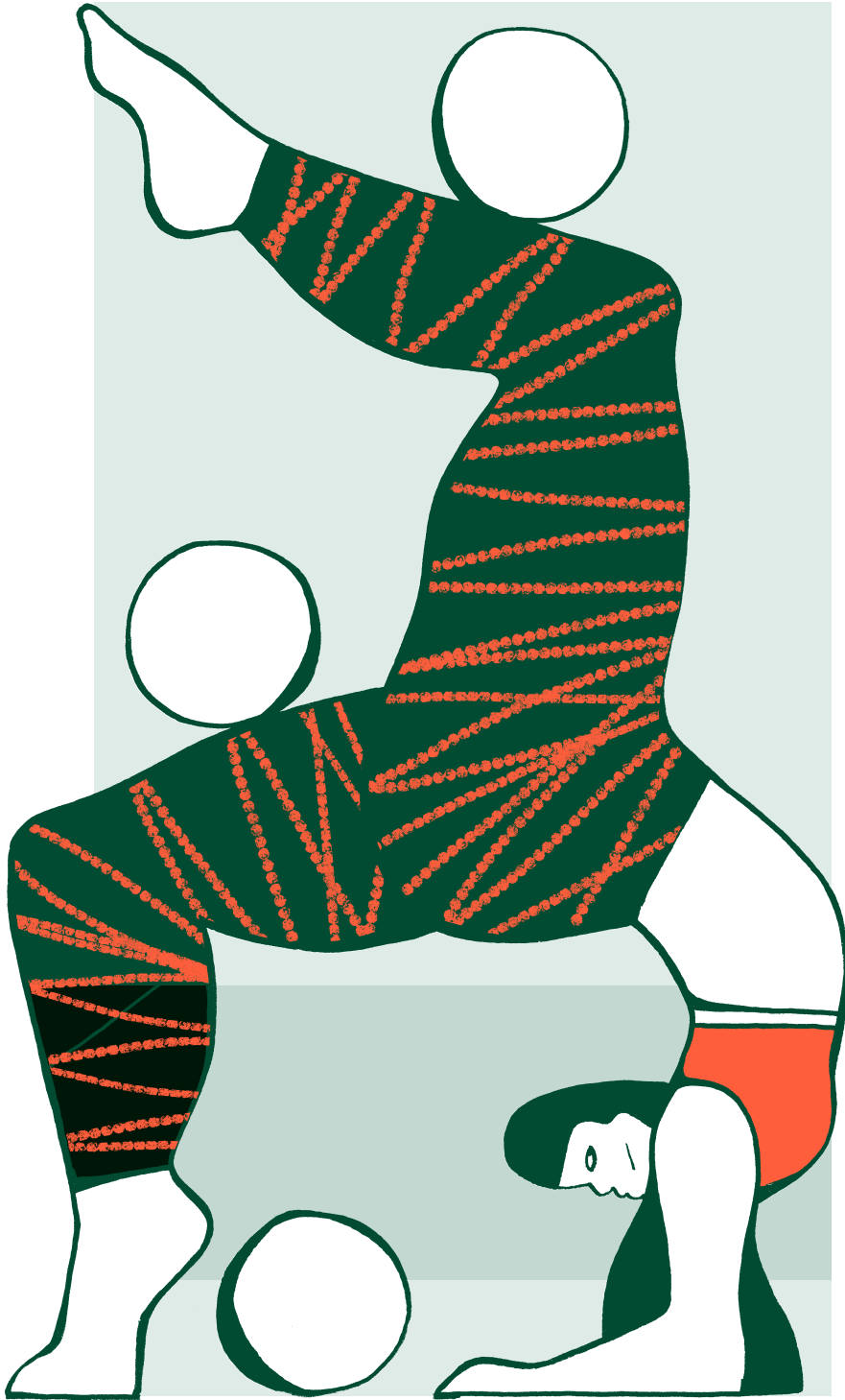
Since 2006, the Aral Sea has been protected in order to preserve the area, as well as the fishermen. A dam has been built, allowing part of the sea to replenish itself.

- ↳ Prefer clothes made of organic cotton, or clothes that have an ecolabel. The European Ecolabel guarantees 95% organic cotton in clothing for children under the age of three.
- ↳ Prefer recycled fibers. Cotton can come from the recycling of used jeans, for example.
- ↳ Prefer fibers that need less water* and pesticides*, like linen, which has the advantage of not needing much water or fertilizer to grow. France is the world's largest producer of linen.

Prefer clothes made of



Careful! A new label—Better Cotton Initiative—has recently appeared and is widely used by distributors. This label is easy to obtain and is less rigorous than the other labels presented on this page. It does not mean your clothes are made of organic cotton.



To make our clothing, we can use synthetic materials such as nylon, polyester or elastane, made from petroleum. Viscose or lyocell are artificial fibers obtained from natural resources such as wood cellulose (bamboo, eucalyptus, beech, etc.), soy or even corn, by using chemical processes. Synthetic fibers can sometimes originate from the recycling of plastic bottles used in the manufacture of fleece textiles.

PROBLEMS

Nowadays, 70% of the synthetic fibers produced worldwide come from petroleum.

The production of wood, which makes possible the creation of artificial fibers, impacts biodiversity.* Cultivating a single species continually draws the same nutrients from the soil and depletes it.

- ↳ Save resources by choosing fabrics such as polar fleece made from the recycling of polyesters and plastic bottles.
- ↳ Prefer materials made from natural resources.

SOLUTIONS

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synthetic
 materials
 that
 contain
 recycled
 polyester.
 clothing
 with
 the
 European
 Ecolabel.



The transformation of thread into fabric requires the use of many chemical products (grease, wax, spinning oil), ticks (plant particles added to cotton fibers to strengthen them), sizing products/compounds, etc. Each of these products has an impact on the environment.

PROBLEMS

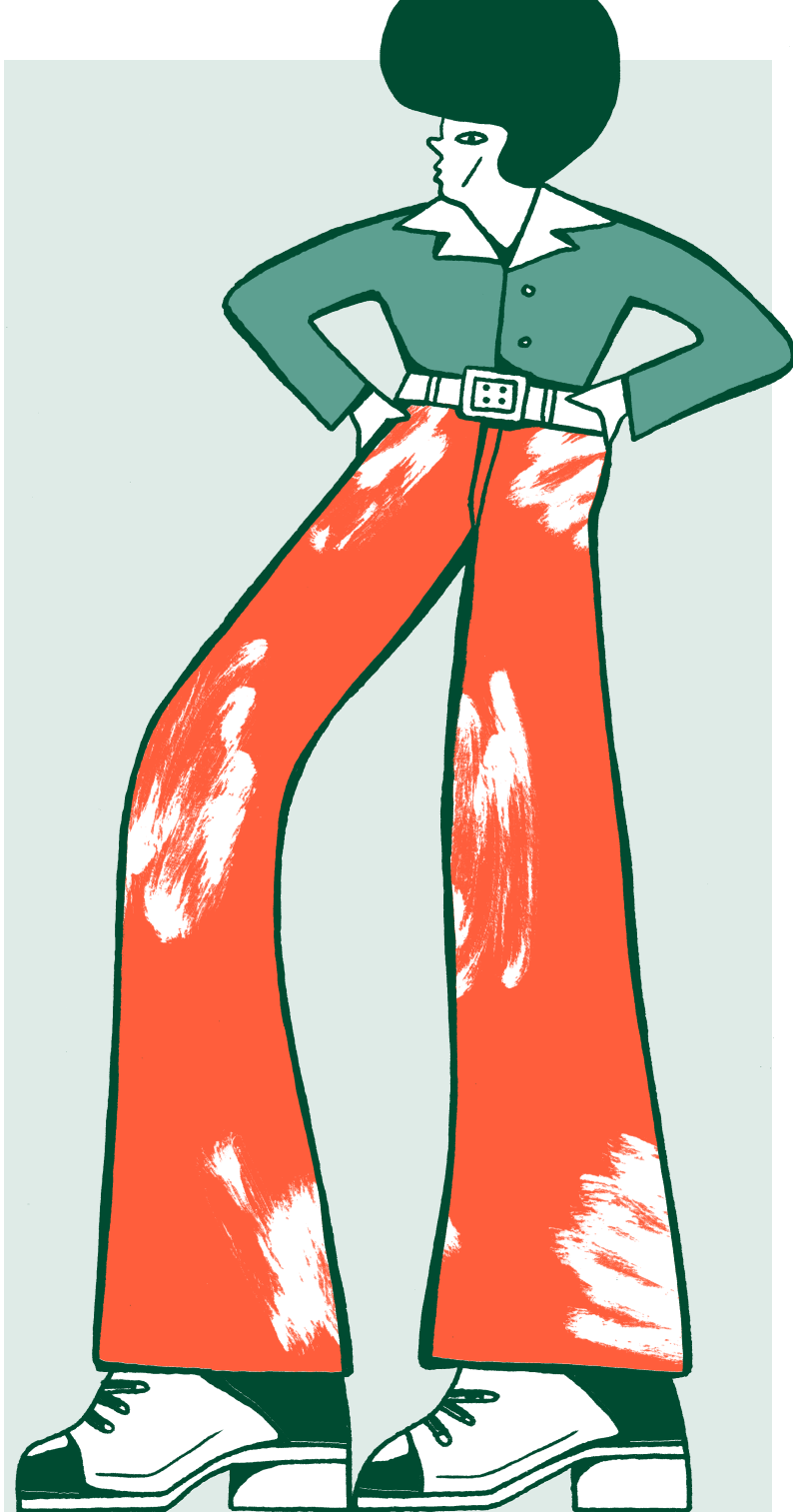
Manufacturers coat the threads with grease or wax to make them more resistant. This makes the threads less liable to break in industrial machinery. After weaving, the fabric is washed so as to rid it of these products. This phase is very polluting, as it discharges toxic substances into the sewage water*, which destroys our ecosystems*, particularly when the water isn't treated prior to being absorbed by nature. As a result, it is harmful to biodiversity* and to human health.

- ↳ Buy clothes with the European Ecolabel, or another environmental logo. To get a label, industrials must commit to limiting their use of toxic materials and allergens, as well as to reducing their impact on the environment and on human health as much as possible.
- ↳ Preserve the know-how of traditional craftsmanship and handmade clothing—thus protecting the environment and the work of many artisans across the globe.

SOLUTIONS

Prefer these logos





Worn-out look, whiter than white , shiny, colorful, with patterns and drawings, etc.—it's called textile ennoblement* and it transforms the appearance and characteristics of a fabric through chemical or mechanical treatments. These procedures also have impacts on the environment and the health of workers.

PROBLEMS

One of the techniques used to fade jeans is sanding. Sand is sprayed at high pressure using canons. Workers doing this job are exposed to silica dust, which enters their body through the ears, nose and mouth. This can cause a disease called silicosis (an incurable lung disease), which can evolve into cancer.

Another technique used to give jeans a faded look is rubbing them with stones. All these methods use a great deal of water and energy, and are extremely harmful the health of workers.

SOLUTIONS

Nowadays, other techniques are used, such as ozone treatment, and light or laser treatment. European factories are obliged to re-treat water and use chemicals that are less harmful to human beings and the environment. The European Ecolabel forbids using manual and mechanical sanding to obtain a worn-out look.

- ↳ Prefer untreated jeans, unwashed.
- ↳ Get information on clothing manufacture procedures. How? By visiting the websites of various brands and by questioning salespeople.

Prefer untreated and unwashed jeans, neither aged, nor with holes.



The purpose of dyeing is to give a fiber or fabric a precise color, different from its natural color. All fibers and fabrics are first bleached before receiving their definitive color. This results in additional impacts.

PROBLEMS

The Li River in Xiantang, once called the "Pearl of China", is now toxic, polluted by the lead and mercury used for dyeing jeans and released during washing. As a result, it is no longer possible to drink the river water, or to fish.

Since the 19th century, the tuning of bleach has made it possible to save time in laundering operations. However, bleaching releases chlorine, which combines with organic molecules in the soil, water* and air.

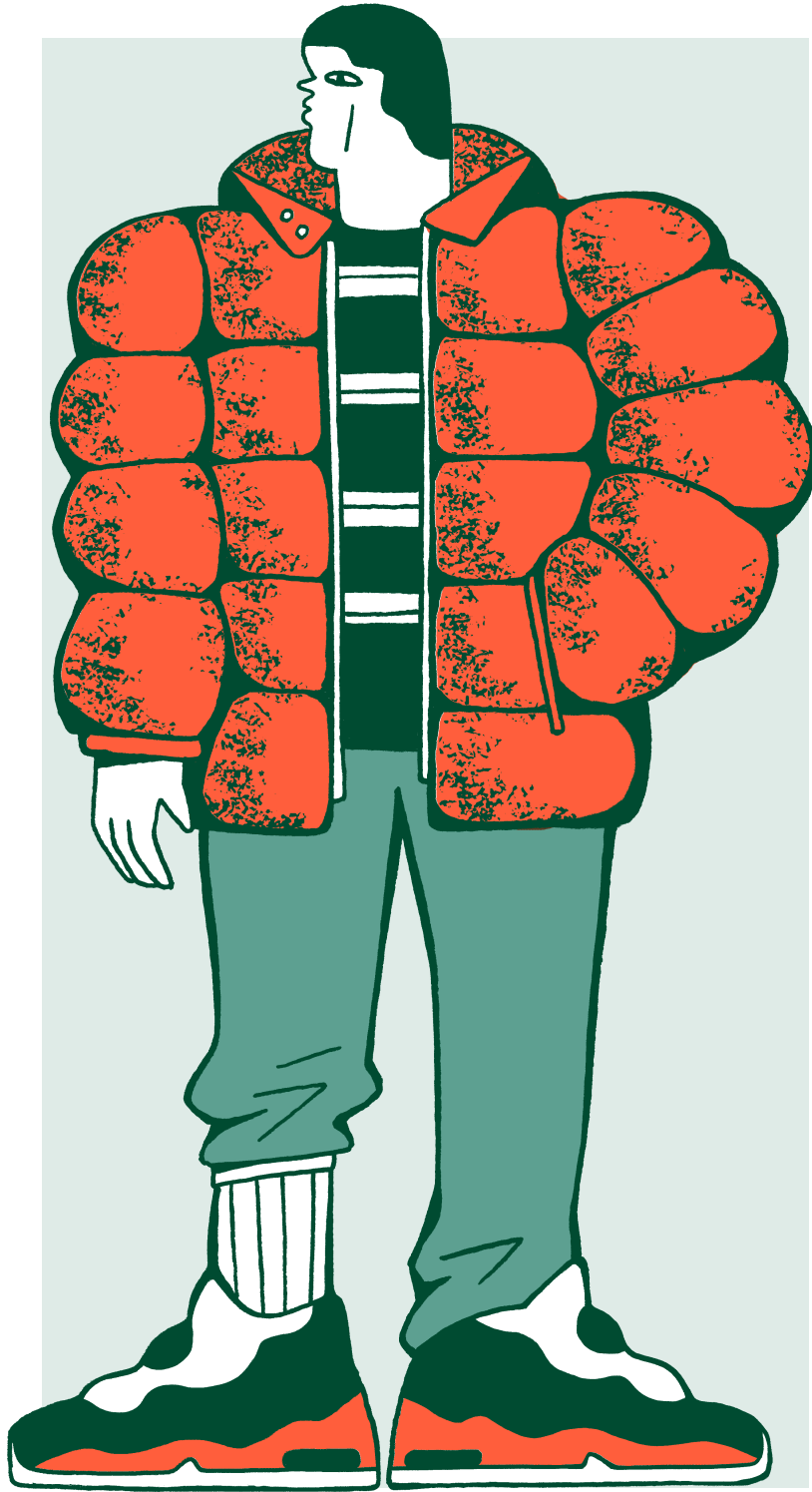
Chlorine is insoluble in water, and only slightly biodegradable*. As a result, it is absorbed by plants, then by animals, and once into the food chain, by human beings.

This is also true for all chemical products and coloring agents used during the dyeing phase (heavy metals in pigments, chlorinated solvents, acids, etc.).

- ↳ Remember to wash a piece of clothing before wearing it for the first time. Chemical products remain present on dyed fabrics. If the clothes are not washed, they can cause allergies when they come into contact with the skin. By choosing the European Ecolabel, you can be sure that no dangerous substance used for dyeing is present on the article when sold.
- ↳ Prefer clothes that have not been dyed: there are varieties of cotton with natural colors—ochre, pale green, ecru, brown, etc.
- ↳ Try to choose clothing dyed with plants.

SOLUTIONS

natural colors,
Prefer
clothing and handbags dyed
with
plant-based **dyes.**



Once the fabric is ready, it will be cut and sewn to become an item of clothing ready to be worn. This is called tailoring. Clothes are very often tailored in countries where working conditions are poor due to insufficient regulation and protection of workers. Wages are also lower.

PROBLEMS

Clothing manufacture requires the work of a lot of people since machines do not replace human know-how. The globalization of the textile industry has created competition between companies, all trying to reduce production costs. As a result, textile workers often operate under harsh working conditions*. They often have no social protection, no union, and are paid below the living wage*. Such factories are known as "sweatshops".

- ↳ Show your commitment by buying clothes with a logo—for example, Max Havelaar, which promotes respect for fair trade* or the European Ecolabel, which conforms to criteria for fair pay, worker security, and prohibition of child labor.
- ↳ Follow the international movement "Fashion Revolution" (*fashion-revolution.org*) by asking your favorite brands—who made my clothes? how? under what conditions?
- ↳ Go to the site of Ethique sur l'étiquette, an association that has contributed to negotiations on the law on a company's "duty of care" and that defends living wages* for textile workers (*ethique-sur-etiquette.org*).
- ↳ Be informed about ILO* agreements defining international labor norms, the fight against inequalities, forced labor and respect for a minimum working age.

SOLUTIONS

Buy with an awareness

of the respect for human rights and working conditions worldwide.



Because clothes, handbags and shoes are often made at the other end of the world so as to make them rapidly available to shops and keep up with the hectic rhythm of changes in collections, transport must be constant and rapid.

<p>PROBLEMS</p>	<p>Some Asian countries specialize in the manufacture of textiles and clothing at very competitive prices. For distributors and brands it is cheaper to pay for the fuel needed to transport clothes than to have them made in Europe.</p> <p>Since the airplane is the fastest, it is often the most used means of transport. But it also emits greenhouse gases, responsible for climate change.</p>
<ul style="list-style-type: none"> ↳ Read labels to know where clothing is manufactured. However, the indication on the label may only concern the last phase of manufacture. ↳ Clothes labeled <i>France Terre Textile</i> and labels like <i>Origine France Garantie</i>, promote the "Made in France" label. ↳ Buy secondhand clothes in neighborhood associations and garage sales. ↳ Buy clothes directly from local creators. 	<p>SOLUTIONS</p>

Read labels to know where your clothes were made.

Prefer secondhand clothing and accessories.



Half of environmental impacts are due to how we take care of our clothing. It is here that we can act...

PROBLEMS

We consume a great deal of energy for the washing, drying, and ironing of our clothes.

Washing clothes made of synthetic materials such as nylon, polyester, acrylic and elastane releases micro-particles of plastic into the sewage. These micro-particles are not degraded in water treatment plants and end up in the oceans. This is the main source of ocean pollution before plastic bags.

Detergents can be extremely polluting when they contain fragrances and substances that are not easily biodegradable, such as non-ionic surfactants. The fragrances in detergents and softeners can cause allergies in human beings when the fabric is in contact with the skin.

- ↳ Wash at 30°C or 40°C and you'll save a lot of energy.
- ↳ Use detergents with the European Ecolabel and avoid detergents and softeners with strong fragrances.
- ↳ Avoid dry cleaning, which is very polluting.
- ↳ Wash less—clothing worn for a day is not dirty.
- ↳ Dry laundry in the fresh air as often as possible.
- ↳ Repair clothing, if possible.

SOLUTIONS

Wash at a low temperature. Wash less. Repair. Wash with a detergent that has the European Ecolabel.



30°C



Every French person buys on average 9.2 kg of textiles and shoes per year. Only 3.2 kg are collected and sorted to be re-used and recycled. That's very little.

PROBLEMS

Our consumption habits encourage us to rapidly renew our wardrobe. Some of us wear clothes no more than ten times before getting rid of them. That brings about an increasingly large volume of textile waste that must be treated one way or another. 2.1 billion tons of textile waste are produced worldwide.

source: WWF 2017

- ↳ Reusing: think of secondhand clothing! Take good care of your clothes, repair things so that they last longer. Exchange with friends, buy in secondhand shops, garage sales, etc. That will reduce the use of raw materials and thus the impact on the planet's limited resources. Today it is even possible to subscribe to clothing rental services.
- ↳ Recycling: what about sorting all your textiles and shoes—even used or ruined: they can have a new life! Just bring them to a waste drop-off place: associations, outdoor containers, shops, etc. They should be clean and dry, shoes tied together in a closed bag (textiles and shoes that are damp or stained with chemical products should be thrown out, others can be recycled). They can serve as raw materials for new clothes or accessories. Thus the circle is closed. We speak of a circular economy.

SOLUTIONS

Find the drop-off points closest to you on lafibredutri.fr



All the steps in the manufacture of an article of clothing have repercussions throughout the world—on the environment, on human beings and on the economy. This is true for everything we consume.

We can choose clothes with environmental logos, prefer clothes in organic cotton or labeled fair trade. We can wash clothes less often and use products that are less polluting. It's not always easy and may require a little bit of work—like asking questions and venturing off the beaten track to flee “fast fashion”.

Ethical fashion is becoming more widespread—more and more blogs offer information on responsible brands. And every year on the 24th of April¹ we ask ourselves: who made the clothes we're wearing? how? under what conditions?

Nowadays we should cherish our clothes and wear them for a longer time, require that they should be manufactured to last, and that brands make sure the textiles our clothes are made of contain fewer dangerous substances and can be recycled. We must promote re-use by buying in secondhand shops, garage sales, and others.

Let's mobilize to ensure that our clothes and shoes are manufactured in good working conditions.

In our daily lives we can all act to greatly reduce the impact of our look on the environment. **Simple gestures are all that's needed to change things!**

¹ On April 24th 2013, Rana Plaza, a textile factory in Dacca (Bangladesh) collapsed, killing 1,134 persons and wounding 2,500.

Glossary

Biodegradation is the decomposition of organic matter by micro-organisms such as bacteria, fungi and algae. We call a substance biodegradable if it can decompose into various elements that have no harmful effects on the natural milieu.

Biodiversity refers to the diversity of living organisms (ecosystems*, species, populations, etc.). The pollution of streams, rivers and soils caused by certain stages in the production of clothing (finishing, ennobling*, care, etc.) can impact biodiversity and cause animal and vegetable species to disappear.

An ecosystem is the ensemble composed of an association or community of living beings and its biological, geological, etc. environment. The elements making up an ecosystem develop a network of energy and matter exchanges that make possible the maintenance and development of life.

Environmental impact refers to all qualitative, quantitative and functional changes in the environment. Concerning the textile industry, it is measured in terms of water, air, and soil pollution as well as greenhouse gas emissions.

Ethical/responsible fashion brings together creators who intend to reduce the ecological footprint of their production by using recycled materials or materials issuing from organic agriculture*, by implementing manufacturing procedures that consume less water, energy and transport, with respect for workers.

Fair Trade consists of using trade as a means of boosting development and reducing inequalities by making sure that producers receive fair retribution.

Global warming The greenhouse effect is a natural and useful phenomenon which made possible the ideal conditions for the development of life on our planet. Yet by burning non-renewable fossil energies like oil, human beings release a large amount of CO₂ and increase the process of gas concentration in the atmosphere, which interferes with world climate (drought, heavy rains, etc.).

The ILO (International Labour Organization) groups together government representatives, employers and workers of its 187 Member States to set up international standards, draw up policies and design programs that aim to promote decent working conditions for all men and women worldwide.

LCA (Life Cycle Assessment) is a tool that evaluates the overall environmental and health impacts of the manufacture of a product or a service (standardized method ISO 14040 and ISO 14044) using multiple criteria. All phases of a product's life cycle are taken into account: extraction or production of raw materials, distribution, use, collection and elimination to end-of-life procedures, as well as all transport phases.

The living wage must be sufficient to cover the worker's basic needs and those of his/her family: rent, energy, food, drinking water*, clothing, health, social protection, education, transport, savings, etc.

Organic farming is an agricultural production method based on respect for all living organisms and natural cycles: no chemical fertilizers and no pesticides*, no genetically modified organisms, rotation of crops and possible use of natural fertilizers such as slurry and composting.

Pesticides are chemical substances used to fight organisms considered harmful. It is a generic term that comprises insecticides, fungicides, herbicides and parasiticides. Pesticides attack destructive insects, fungi, “weeds” and parasitic worms.

Sustainable development is a development that satisfies present needs without compromising the possibility for future generations to satisfy their own needs.

Textile ennobling is the phase that consists in taking a textile (in the form of fiber, thread, fabric, knit, etc.) and giving it its final characteristics. The ennobling process can include: stone washing, bleaching, dyeing, printing, finishing.

Water is abundant on the blue planet and indispensable to our survival. However, less than 1% is drinkable because the rest is salty or frozen. One of the big challenges of the 21st century is the preservation of the quality of our reserves of drinking water and ensuring its accessibility to all.

Working conditions are a set of parameters that affect the wellbeing of an employee. They are not only comprised of material factors, but also of relations within the enterprise, the organization of working time, the balance between personal and professional life and stress management. In some countries, working conditions represent a danger (as in sweatshops) due to starvation wages and the violation of basic human rights.

Trustworthy Labels



The European Ecolabel (textile products)

For clothing and household textiles, this logo means that the textile thus produced is composed of high quality durable fibers, the manufacturing procedures are less polluting, the use of certain substances dangerous for human health has been limited or prohibited and the textile respects the standards for working conditions*. For shoes, this logo indicates that the shoes contain fewer substances that are dangerous for human health. During the manufacturing process, water, energy and air pollution have been limited.

ecolabel.eu



Écolabel Nordic

Also named Nordic Swan, it concerns textiles, furs, and leather. This logo indicates that manufacturing processes are less polluting and that water, energy and air pollution were limited during manufacture. The use of substances dangerous for human health have been limited or prohibited. The logo also respects the criteria for working conditions* and the wellbeing of animals.

nordic-ecolabel.org



Fairtrade Max Havelaar

This logo indicates that the fiber is a product of Fair Trade*. The use of chemical pesticides* is limited, and GMOs prohibited.

maxhavelaarfrance.org



Ecocert ESR

This logo indicates that the cotton used comes from organic farming* and fair trade* (North-South and North-North trade, respect for living wages).

Ecocert-Textile

This logo indicates that the use of certain substances dangerous for human health have been limited or prohibited. During the manufacturing process, energy consumption and water pollution have been limited. The logo also respects the criteria for working conditions*.

ecocert.com



Bioré

This logo indicates that the cotton used issues from organic agriculture*. Certain substances dangerous for human health have been limited or prohibited. The logo also respects the criteria for working conditions*.

emei.ch



GOTS

This logo indicates that the textiles used issue from organic* or biodynamic agriculture. Manufacturing procedures are less polluting and the use of certain substances dangerous for human health has been limited.

global-standard.org



OEKO-TEX® Standard 100

This logo aims to guarantee the human-ecological qualities of the textiles—exempt from products that are toxic for the body and the environment. It was created by an independent German association, and in France, it goes under the name Confiance Textile.

oeko-tex.com

Useful links

ADEME	mtaterre.fr ademe.fr
Changer la Mode pour le Climat	changerlamodepourleclimat.fr
Éthique sur l'étiquette	ethique-sur-etiquette.org
Éco TLC	ecotlc.fr
Ellen MacArthur Foundation	ellenmacarthurfoundation.org
Emmaüs Alternatives	emmaus-alternatives.org
Fashion Revolution France	fashionrevolution.org
La Fibre du Tri	lafibredutri.fr
Organisation internationale du Travail	ilo.org
Parley For The Oceans	parley.tv
River Blue (film)	riverbluethemovie.eco
The True Cost (film)	truecostmovie.com
Universal Love	universallove.fr
WWF France	wwf.fr
Zero Waste France	zerowasteFrance.org



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Universal Love

