Master in Sustainable Development & Corporate Social Responsibility

ANALYSING THE ENVIRONMENTAL AND SOCIAL IMPACTS OF H&M´S SUPPLY CHAIN THROUGH ITS ORGANIC COTTON COLLECTION

Recommendations for a more sustainable company

(2009)

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I. INTRODUCTION

"Imagine a world in which all the things we make, use, and consume provide nutrition for nature and industry—a world in which growth is good and human activity generates a delightful, restorative ecological footprint." (Braungart & McDonough 2002, "Cradle to cradle, Remaking the way we make things").

Living in a world where economic and social systems are not just efficient, but essentially waste free, where human industry is modeled upon nature's processes and materials are viewed as nutrients circulating in healthy and safe metabolisms, consists of a concept and a global strategy to create a future without the massive destruction of nature our current consumption leads to. It refers to a cradle to cradle theory of closed loop systems, which entails production processes with efficient use of water, renewable energy generation and energy efficiency associated with instituting strategies for social responsibility.

Focused on the textile industry and in particular on *H&M´s* organic cotton clothing, the aim of this report is to provide recommendations for a transition to a more socially and environmentally sustainable company. A company that minimizes its dependence upon natural resources eliminates its environmental impact and establishes high standards for labour conditions and high product quality. Using innovative fabrics, promoting reusing and recycling for a product life prolongation, increasing the use of renewable energies, encouraging appropriate policy responses from governments and effective international partnership among various natural fibers industries are some of the most useful tools for a move towards sustainability.

This move will be made by gaining a general knowledge of the cotton industry, including significant aspects of conventional and organic cotton, the differences that arise during farming and manufacturing and their consequences, as well as H&M´s position/placement in the market in relation with the competition.

Textile industry remains one of the most exploitative in the world, both to people and the environment because of its direct relationship to manufacturing procedures and labour conditions with numerous severe social and environmental impacts, such as poverty, energy and water consumption and environmental pollution. The industry is characterized by the volume required for various unit operations, but also by the variety of chemicals used for various processes. Factors such as fashion trends, textile production technology, logistics, trade agreements and trade barriers consistently influence the patterns of textile consumption through time.

Therefore labour code of conduct, basic policies and guidelines that assure a standard quality of working conditions, organic cotton´s farming processes, certification organizations, eco-labeling, fair trade and transparency play a crucial role in organic cotton production and will be analyzed thoroughly.

Looking at the market there are some new companies that have integrated sustainability practices and paradigms of social responsibility. *Innocent* is a U.K socially responsible company that produces fresh drinks, smoothies and juices made of fresh, organic fruit picked by people who are paid a reasonable wage without being exploited and in the mean time it tries to follow production procedures that minimize the environmental impact. Another important example is found in *Starbucks Coffee Company,* a company with a philosophy based on offering customers good quality of coffee while assisting and contributing in the improved quality of life of coffee farmers, improving communities and at the same time protecting the environment.

H&M´s long term goals regarding profit, people and planet are divided in human rights, taking into account the International Labour Organization principles and in respect for the environment as an integral part of its supply chain's business practices. A presentation of a large Swedish multinational´s supply chain will give specific details on the conditions under which each step takes place. Raw material harvesting, manufacturing, packaging, transportation, distribution, marketing, sales, final disposal, research and development and all environmental and social impacts caused by each one of these actions, such as water and energy waste, air and soil pollution, carbon emissions and health problems will be stressed.

This project looks to primarily raise awareness for the tremendous social and environmental impacts that textile industry and conventional cotton farming and production causes. Furthermore, it aims to contribute to the creation of a sustainable agenda including strategies based on the three principles of reducing, reusing and recycling, which will turn H&M into an ecologically intelligent company that battles the major environmental problems our planet is facing today, enhances the economic, social and environmental success in communities and serves as a paradigm of social responsibility and sustainability in the textile industry.

II. EXTERNAL ANALYSIS

A. Understanding the Industry: Organic Cotton Worldwide

1. Conventional and organic cotton production

Cotton is considered a natural fabric and the most comfortable and softest of all the fibers. Its fibers used in textiles around the world come from the seed hairs of a plant known as *Gossypium hirsutum*. Cotton, which is cultivated on five continents, develops in closed green capsules known as bolls that burst open when ripe, revealing the white, fluffy fibers. However conventional or traditional cotton is the most pesticide-dependent crop in the world, accounting for 25% of all pesticide use[1] and conventional cotton-growing is one of the most chemically intensive farming operations.

Every year producers all around the world use some of the most hazardous and poisonous pesticides, such as metan sodium (used to sterilize soil before cotton plantation), aldicarb, phorate, methamidophos, and endosulfan to spray the plant around 30 times in a season through to harvest. "Of the total amount of cotton pesticides used worldwide, it is estimated that 35% are applied to cotton fields in the United States. In California, cotton is the crop with the third-heaviest pesticide use. Close to $3 billion worth of pesticides are used on cotton worldwide each year, according to the Pesticide Action Network, and sales and uses of the product are increasing. Worldwide, cotton plays a vital role in the economies of several dozen countries."[2]

An extreme example of how cotton production can become "dirty cotton" can be found is Uzbekistan[3], the second largest exporter of cotton -white gold as it is called- in the world. Uzbekistan produces approximately 800.000 tons per year and generates more than 1 billion US$, which is vital to the country´s economy, but revenues are monopolized by the government that controls the Uzbek population because of the corrupt system.

Environmental research has shown that the extensive and intensive use of synthetic fertilizers, soil additives, defoliants and other substances used to produce conventional cotton wreaks serious havoc on soil, water, and air. It harms beneficial insects and soil micro-organisms, wildlife and in general the environment. Even worse is the fact that some of the most toxic pesticides may also enter indirectly in the human food chain through cottonseeds oil (that come from livestock feed) when this is contained in meat and other dairy processed food products. As such it contaminates foods and in the long run it harms people´s health when consuming these products. As a reference, In 1994, Australian beef was found to be contaminated with the cotton insecticide Helix® (chlorfluazuron), most likely because cattle had been fed contaminated cotton straw.

Farmers in many developing countries work in cotton fields with few if any safety precautions to be protected from pesticides. According to the UN Food and Agriculture Organization, usually farmers in many developing countries use dangerous pesticide application equipment that results in spills and poisonings. Concerns about costs and the detrimental effects on health and the environment of the high usage of these synthetic pesticides on conventional cotton have led many small-scale farmers to seek alternatives where opportunities exist. The establishment of verified policies and regulations for organic production such as the IFOAM[4] Basic Standards,

[1] Eartheasy, organic cotton clothing. http://www.eartheasy.com/wear_orgcot_clo.htm
[2] Portland Business Journal, "Purchasing organic goods cuts the toll taken by pesticides." By Brian J.Back (12/25/00) http://www.bizjournals.com/portland/stories/2000/12/25/smallb2.html
[3] White gold, the true cost of cotton http://www.ejfoundation.org/pdf/white_gold_the_true_cost_of_cotton.pdf
[4] IFOAM: Basic standards are internationally adopted, they reflect the current state of organic production & processing methods http://www.ifoam.org/about_ifoam/standards/norms.html

a keystone of the organic movement, has stimulated the interest in developing projects in many countries.

Organic cotton production started in the early 1990s in Turkey´s[5] eastern Mediterranean region Kahramanmaras and expanded in Salihli (Manisa), in the Aegean Sea region with a project executed by the German company *Rapunzel*. Throughout the last decade other projects followed in China, U.S, India, Peru, Uganda, Tanzania, Egypt, Senegal, Israel, Greece, Benin and Brazil. In 2000-2001, international production was approximately 6,368 metric tons (slightly more than 14 million pounds), which represents about a 0.03% of the worldwide cotton production, according to data provided by the "*Pesticide Action Network of the United Kingdom*" (PANUK) and the "*Organic Trade Association"* (OTA). Surprisingly, according to the "*Organic Cotton Farm and Fiber Report 2008"* released by *Organic Exchange*[6], the California based non-profit organization, which promotes organic cotton agriculture and consumption globally, during the 2007-2008 crop year organic cotton production worldwide reached 145,872 metric tons (MT), grown on 161,000 hectares in 22 countries.

Organic cotton is the alternative. It is grown in fields for organic crop production, where the soil has been free of synthetic pesticides and artificial irrigation systems at least for three consecutive years and where methods and materials that are being used have a low impact on the environment. Organic farmers rely on natural materials and methods without synthetically produced pesticides, such as organic fertilizers, manual crop rotation and integrated pest management. Natural materials help them protect their soil and water and keep it usable for longer time periods as well as to reduce the risk of chemical leaching from irrigation systems to rivers and lakes. Beneficial insects are allowed to flourish to keep pest insects in check and pest-eating insects are used to control crop damage in a natural way. Weed management is accomplished by a combination of cultivation, flame weeding and other cultural practices, while it is controlled with precision tillage and the old fashioned hoe and is removed with hoes and tractors but also manually. Since no chemicals are being used during organic cotton´s procession, the cotton is either left natural dyed with low impact environmental dyes or dyed with natural colorants such as clay.

In particular, the differences between conventional and organic cotton production lie in the following areas:

a) Seeds

Before planting, conventional cotton´s seeds are treated with fungicides and insecticides in order to become pest-resistant, thus they are called Genetically Modified Organism (GMO) seeds. There are three main kinds of Genetically Modified[7] (GM) cotton, the first one is herbicide tolerant (tolerant to glyphosate and bromoxynil), the second is insect resistant (with the *Bacillus thuringiensis -Bt-* toxin genes inserted) and the third is a combination of the two previous. Additionally GM seed is more expensive than the conventional because of a "technology fee" that is included in its price. On the other hand, organic cotton´s seeds are non-GM; they are untreated and they include no chemical fertilizers. Instead, they only contain natural ingredients, such as pyrethrin that comes from chrysanthemums.

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http://www.ifoam.org/about_ifoam/standards/norms.html

[5] International Cotton Advisory Committee, "Limitaciones a la producción de algodón orgánico", March 2003. http://alida-algodon.org/cotton_info/tis/organic_cotton/documents/2003/s_march.pdf

[6] *Organic Exchange*, http://www.organicexchange.org/

[7] INEX Wikipedia, the cotton plant. Article 36842, http://infao5501.ag5.mpi-sb.mpg.de:8080/topx/archive?link=Wikipedia-Lip6-2/36842.xml&style

b) Soil and water

Apart from the seeds another point that differentiates conventional and organic cotton farming lies in the soil´s quality. Conventional cotton is planted in a mono-crop culture soil. This means that the soil is cultivated intensively and synthetic fertilizers are overused in order to strengthen it. As a result the soil lacks the organic material, capable to retain water and necessary to obtain a good and stable fertility, which leads to intensive irrigation and consequently to water waste. Organic cotton on the contrary, is planted in soil of annual crop rotation; therefore this soil is rich in organic material, so there is no need of additional fertilizers and intensive irrigation. Organic matter is of crucial importance for a soil's fertility and water retention capacity, because it ensures a good porosity, good infiltration of water, it keeps the soil moist for a long time and its particles retain essential nutrients for plants and host numerous beneficial organisms that improve the soil´s quality.

c) Weed removal

Weed should definitely be removed of the plant, since it may destroy it. However there are various ways of removing it. The traditional method has to do with a chemical procedure, where weed germination is inhibited by treating the soil with herbicides (it usually requires several treatments to be effective in order to remove or destroy the weed), whereas organic cotton farming involves physical and not chemical weed elimination. It is controlled exclusively through cultivation and hand hoeing.

d) Pest control

In conventional cotton production the primary method of controlling pest is through insecticides´ use. Nine of the most widely used insecticides are highly toxic and five of them are possibly carcinogenic. Furthermore aerial spraying is a frequent method of transmitting and diffusing the chemicals from farms to residence and other areas. On the contrary, in organic cotton farms a balance is kept between pests and their natural predators through the maintenance of healthy soil and the use of beneficial insects to control pests instead of using insecticides.

e) Defoliation

Before harvesting the cotton crop, leaves must be removed. This process is known as defoliation. In conventional cotton farming farmers remove the leaves through the use of toxic chemicals, whereas in organic cotton farming, farmers mostly rely on the seasonal freeze for leaf removal. In case the season proves to be unreliable, organic farmers might turn water management as a defoliation stimulant, thereby avoiding the use of heavy machinery that function with petroleum and emit tons of carbon dioxide.

Despite the advantages of organic cotton farming, there are some negative points found when it is compared to conventional cotton and those have mainly to do with its price. Yet it's more expensive to grow organic cotton basically because *costs are increased in the processing stage since the cotton gin must be stopped and cleaned of contaminants before the organic cotton is produced.* Additionally organic systems produce less than conventional systems, but of course this is compensated through savings on inputs, payment of premiums, and

perceived improvements in health for people, their animals and their environment. Finally, in the absence of institutional support and infrastructure, organic growers are not able to circulate it as easily as the conventional growers do. However, in most of the organic cotton projects that involve small-scale farmers there has been significant support of private companies, development cooperation agencies and NGOs to motivate farmers (especially the small ones), whose motivation seems to be determined mainly by economic reasons.

Transitioning from conventional to organic crop production is not an easy process not only because it involves much more effort, intensive and innovative management but also because it is time consuming. It requires the absence of chemical fertilizers or pesticides use for at least three consecutive years so that the soil can be clean and appropriate for the organic cotton cultivation. Only then, the fields can be certified as organic.

2. Conventional and organic cotton clothing

During the conversion of conventional cotton into clothing, numerous toxic chemicals are added at each stage, such as silicone waxes, harsh petroleum scours, softeners, brighteners, heavy metals, flame and soil retardants, ammonia and formaldehyde. The cotton that is grown in conventional ways is compromised and weakened by the chemicals used in growing, processing and dying of the cotton. All these break the fiber down and create a weaker and inferior cotton quality garment.

From a health perspective, there are no approved studies demonstrating that organic cotton has any health benefits over conventional cotton, but nowadays it is widely embraced by holistic practitioners (such as acupuncturists, macrobiotic teachers and energy therapists) as having positive energy, which can benefit people and especially those who suffer from illnesses. More demonstrable is organic cotton's ability to be worn by people with dermatological sensitivities who are unable to wear conventional cotton because of allergic reactions to the dyes and chemical traces. Organic cotton is pure, natural, softer and more breathable for delicate skin and thanks to its natural composition it lasts longer.

Conventional cotton, as one of the most widely traded commodity (almost half of all textile produced), leads to massive environmental and health problems. The Environmental Protection Agency (U.S based) considers the following pesticides, acephate, dichloropropene, diuron, fluometuron, pendimethalin, tribufos, and trifluralin as 7 of the top 15 pesticides used in cotton in 2000 in the United States as "possible," "likely," "probable," or "known" human carcinogens. (EPA) Cotton uses approximately 25% of the world's insecticides and more than 10% of the pesticides (including herbicides, insecticides, and defoliants). Chemically treated clothing diapers the natural balance of the skin by trapping heat and preventing it from “breathing,” (i.e. absorbing adequate moisture), synthetic poisons can be absorbed into the bloodstream by contact with the user's skin and as a result it often causes rashes and eczema on sensitive babies’ skin.

3. The organic label certification

As already explained, organic agriculture strictly prohibits the artificial fertilizers and toxic persistent chemical pesticides use, as well as the genetically modified organisms in the cotton growing process. Instead, it seeks to build biologically diverse agricultural systems, replenish and maintain soil fertility and promote a healthy environment. In order to add credibility to the final product and assure customers of its organic status, several sets of processing standards,

like SKAL[8], that certify farms and cotton as organic have been nationally and internationally established by numerous certification agencies worldwide. Some examples are the *International Federation of Organic Agriculture Movements (IFOAM)* and the *International Organic Accreditation Service (IOAS)*.

Furthermore, the *International Working Group on Global Organic Textile Standard* has set the Global Organic Textile Standards (GOTS) and all certifying organizations use the same standards for controlling and inspecting the organic textile production. The goal of this standard is to define the requirements that ensure the organic status of textiles, from harvesting of the raw materials up to labeling through environmentally and socially responsible manufacturing in order to provide a credible assurance to the end consumer. GOTS standards aim to maintain the integrity of the organic nature of the fiber and this is achieved by using as much organic material as possible and by adopting alternative chemicals and processing practices that minimize the environmental impact and protect consumers' health. An example is the *Oeko-Tex Standard 100 Mark*, which will be analyzed below.

Certification of organic cotton assures the buyer of the organic status of the product and raises his reliability. As a consequence it encourages the payment of premium prices that support farmers, who engage in organic practices and at the same time it gives motivation to conventional farmers, who are trying to convert to organic practices.

Certified organic farms fields and facilities undergo the process of regular inspections and they are supposed to maintain comprehensive records of their production methods. Periodic soil and water testing ensure that growers or handlers are meeting all the standards that have been established. Although there are general underlying concepts (ex. GOTS), certification programs and standards vary, especially in response to regional differences. However, most organic cotton certifications ensure two basic facts, firstly that all fibers must be natural and grown organically and secondly that every step in cotton´s production process (spinning, weaving, washing, etc.) has to meet certain criteria of environmental responsibility.

When certification organizations (independent state or private organizations) verify that organic producers use only methods and materials allowed in organic production, the company earns the organic label for certified organic cotton. Generally eco-labels usually cover a wide range of environmental impacts across the lifetime of a product, from production and use till the disposal.

a) Label grading

There are close to 100 different labels in the textile industry addressing to environmental, social sustainability, or consumers' health. These labels have been developed by public institutions (national or supra-national), private certification agencies, NGOs, industry federations, or by retailers themselves. Two of the most common Eco-Labels which can be found in Europe are the *Oeko-Tex standard 100 mark*, which is now mandatory in several European countries and looks particularly at health standards and the *European Eco-Label for Textile Products*, which looks particularly at reducing water pollution in the textiles´ supply chain. This standard assesses the chemical use and handling, water use and disposal, exhaust air production, dust and noise generation, energy consumption and general workplace conditions and it requires an environmental management system to be in place.

Final products that are labeled as *"Global Organic Textile Standard"* are subdivided into two label-grades:

[8] Skal is the inspection and certification body for organic production in the Netherlands, http://www.skal.nl/English/tabid/103/Default.aspx

The Soil Association is the UK's largest organic certification body that covers the processing and manufacture of organic textiles.

(1) "Organic" or "organic- in conversion"

The cotton that belongs in this category has to be composed of fibers at least 95% or more of organic certified (or in conversion) origin. The remaining 5% may be made of non-organic fibers including regenerated and synthetic materials, but blending or mixing the same fiber in organic and conventional quality in one product is not permitted.

"Organic in conversion" is the cotton produced while converting from conventional farming to organic farming. This is a necessary but difficult stage for any organic farmer, as the cotton may cost more to produce, but cannot be sold at the premium that certified organic cotton can achieve. Some companies have decided to incorporate this cotton into their conventional cotton production, as an indication to consumers of their support for, and understanding of organic issues, and forward thinking business ethics.

(2) Made with x % organic materials" or "Made with x % organic- in conversion materials"

The 70% - 95% or more of the fibers that belong in this category must be of certified organic (or in conversion) origin. The remaining balance up to 30% may be made of non-organic fibers. Regenerated and synthetic fibers are limited up to a 10% (resp. 25% in the US). Again blending is not permitted. Criteria:

- All inputs have to meet basic requirements on toxicity and biodegradability and no toxic heavy metals, formaldehyde, or GMO (Genetically Modified Organism) should be included.
- An Environmental policy is required in manufacturing sites.
- Social criteria are compulsory.
- A dual system of quality assurance consisting of on-side inspection and residue testing is necessary.

When organic cotton fiber is certified as an organic agricultural product by a certification body, which guarantees that the rigorous organic standards have been strictly followed, the certification of cotton fiber as an organic agricultural product is extremely reliable. If a T-shirt´s label claims that it has been made with organic cotton, then its owner can be confident that the

cotton fiber has really been grown organically. There is no need for a logo, the word "organic" is sufficient. However, the word "organic" only refers to a guarantee on the growing stage of the cotton fiber and not on the processing or the manufacturing. It doesn´t mean that labor standards are assured and there is still a long way from the fiber to a T-shirt.

In order to address these processing and manufacturing stages, a handful of organizations, mostly organic certification agencies, have developed their own private voluntary "organic" or "sustainable" standards for textile and are certifying finished products according to those standards. Such organic certification agencies include the *Soil Association* and the *Control Union International*.

Consequently, the "organic T-shirt" as we commonly call in Europe, is a T-shirt made with certified organic cotton fiber, and processed according to the textile processing standards. Its manufacturer is authorized by the certification agency to add its logo (mark, or symbol) on the T-shirt's label. Respecting environmental standards and earning certifications brings numerous benefits to companies, such as winning market shares and playing an increasing role in the international markets.

On the other hand, *Fair-trade* standards associated with these labels cover only the cotton production process and do not provide fair-trade guarantees from a social perspective. However, the label requires a social compliance assessment covering the processing and manufacturing. Processors and manufacturers are required to produce evidence that minimum national and international legislations with respect to labor rights are adhered.

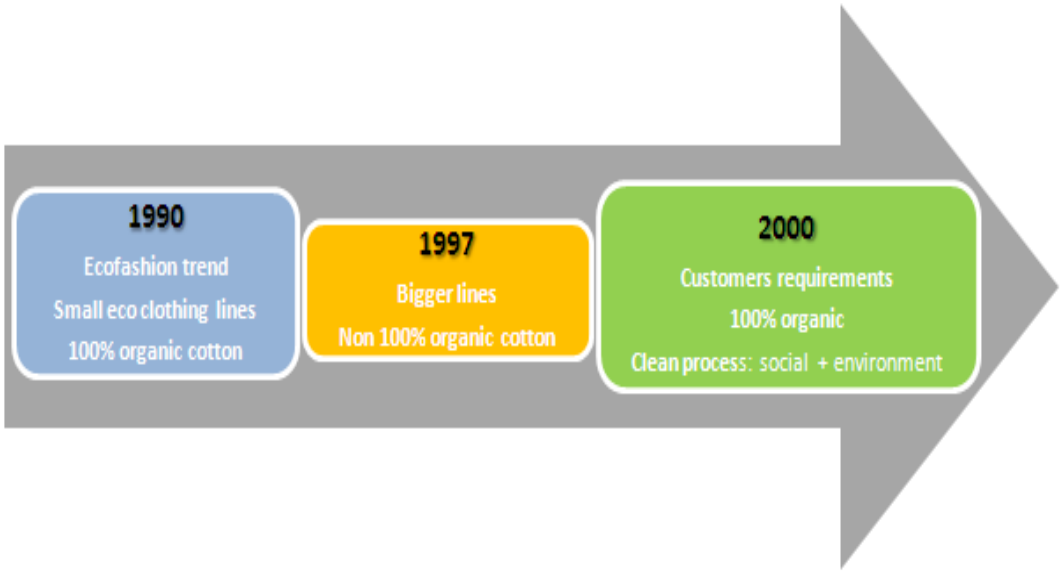
If a piece of clothing carries the *Fair-trade Mark*, it means that it was made of at least 50% fair-trade-certified materials (non-cotton materials such as accessories or elastic fibers do not have to be fair-trade). Currently there is no fair-trade label which covers the whole garment production process from start to finish, although the Fair Trade Labeling Organization[9] is working to develop this.

[9] Fair Trade Labeling Organization, http://www.fairtrade.net/

B. The Organic Cotton Sector: "H&M and its Competitors"

This section provides an assessment of the primary competitors of H&M in the organic cotton market. It is interesting to note that the usual - direct competitors of H&M (which operate almost in the same market – quality – price) are not always competitors in the specific organic cotton field. Indeed many small to medium companies are more ahead in all the issues related to organic cotton. Then huge apparel companies have sometimes a lot to learn from more specialized and knowledgeable SMEs.

1. A bit of history



These big companies began to support different environmental issues in the early 1990s with the ecofashion trend. Then companies like Esprit or Levi´s introduced "eco" clothing lines. But they encountered many issues: first the cost of organic cotton (more expensive then basic cotton, customers reluctant to pay a premium price), second by promoting organic cotton they were making their conventional cotton items looking bad, finally the supply of the organic cotton needed was unsure because the industry was too new[10]. As a consequence many companies went out of the organic cotton business.

Less than 10 years later, the largest apparel manufacturers of cotton, started again buying organic cotton and this time in huge amounts (In 1997 Levi´s purchased over one million pounds of organic cotton, Nike and Gap Inc purchased half a million pounds each). This change has been possible thanks to a new approach. Then instead of trying to sell pure organic cotton lines, they are asking their mills to blend organic cotton into the conventional cotton process:"We tried to offer an organic line, but it was costly to make, and consumer acceptance was poor. This is a more modest approach, but the net effect is the same," explains Clarence Grebey, spokesperson for Levi's, in 1997.

A new approach from the consumer's point of view appeared around the year 2000. This new interest for organic cotton has to be linked to the massive and global interest of the public for the issues related to environment. Nowadays, even people who do not live a perfect green lifestyle are aware of them. The idea is now that it is not only about wearing something organic next to your skin but wanting to contribute to a clean process. Then nowadays every big apparel manufacturers come back to pure organic cotton based items and try to achieve a global 100%

[10] Ecomail.com – "Organic cotton clothing industry booming" – Jane McConnell - 1997

organic cotton policy. The fact that organic fibers can be found more easily than years ago facilitates this type of policy for the most popular manufacturers.

2. Panoramic view of the main players in the organic cotton industry

First of all it is important to note that organic clothing varies in price from moderate to high price[11]. Then even high fashion designers have decided to create clothes with organic cotton. For example Oscar de la Renta and Diane von Furstenberg have launched various organic cotton lines. Stella McCartney has decided to produce 100% organic cotton. Another interesting example is the singer Bono, from the rock band U2; he began selling organic cotton fashion lines (organic knits and jeans, hemp jackets, organic cotton tops) in 2005 at Barneys in New-York, under the label of Edun at Saks, at unaffordable prices…[12] Edun is a for profit business, it is founded on the premise of trade not aid and promotes sustainable communities. By encouraging business in Africa, it fosters financial growth that helps more Africans become self sufficient and less dependent on aid. All Edun's t-shirts are made from 100% organic cotton coming on 22% from Africa. Company's mission is to create beautiful clothing, while fostering sustainable employment in developing areas of the world, in particular Africa.

Recently Edun has teamed up with ONE to launch their special edition ONE tee shirt. ONE's message is that we can beat global AIDS, poverty and bring trade and jobs to Africa. Edun works with many other organizations such as OXFAM, Verité, Global Business Coalition, Organic Exchange, ALAFA (Apparel Lesotho Alliance to Fight AIDS), and ComMark (a non-profit Southern African pro-poor regional development organization). Major retailers are also interested in organic high street fashion.

It is important to note that different level of commitment exist from one brand to another. Also most of the big apparel brands are at the early stage, with the addition of organic cotton to its collections or the creation of a 100 % organic cotton line[13]. It is basically the case of H&M with the development since 2007 of a 100% organic cotton line.

For a best understanding of the organic cotton market the industry is to be analyzed as follow. First, the commitment of the main direct competitors of H&M for organic cotton (the big players: Zara-Europe, Uniqlo-Asia, and Gap-USA). Second, the other multinational companies selling organic cotton (Nike, Wal-Mart, Patagonia, American Apparel, M&S, Timberland) and, finally, the SMEs specialized in the organic cotton sector (People Tree, Ideo, Fibrethik).

[11] www.associatedcontent.com – "Organic clothing the new trend" – Linda StCyr – 28 May 2008
[12] The New York Post - Rock Star Bono Sells World's Most Expensive Organic Cotton Clothing – Danica Lo 16 March 2005
[13] Chicago Tribune online – "Organic clothes not just for hippies now" – Kelly Kennedy – 10 February 2007

a) H&M direct competitors ´commitment for organic cotton

GAP Inc: Is a member of the Better Cotton Initiative since 2005. Gap has joined the Clothes for a change campaign from the Organic consumers Association in order to eliminate genetically engineered cotton from its clothing products. The brand began to explore the use of organic cotton for some product offerings. For example in 2007, select Gap stores introduced Men´s T-shirts and tanks made with 100% organic cotton.

Zara: Has launched its first T-shirts women's collection of organic cotton in 2006. Since then the chain has sold more than 11 million garments made from organic cotton. Last summer Zara introduced a new collection of jeans made from organic cotton. Zara is, according to the Organic cotton market report 2007-2008 released by the organic Exchange, part of the top ten organic cotton-using brands and retailers (with Wal-Mart, H&M and Nike).

Uniqlo: Has launched its first organic cotton line back in march 2009, thanks to a collaboration with a brand called Guilded Age (specialized in the design of organic clothes).

b) The big players: other multinational companies interested in organic cotton

Nike: Is famous for the perpetual innovation of the brand. It has held an instrumental role in embracing organic cotton (Nike is co-founder of the Organic Exchange)[14]. Taking an early interest in organics, Nike began exploring organic cotton options as early as 1996 and began selling its first organic line in 1998. After purchasing an initial 250,000 pounds of organic cotton for its first organic products and producing blended garments along with a small volume of 100% organic cotton products (since 2002, Nike organics), Nike has continued to increase its commitments and raise the selection for environmentally conscious retailers. Currently blending 5% of organic cotton into more than 50% of their garments worldwide, Nike is aiming to hit a 5% organic-cotton blend ratio in 100% of its cotton garments by the year 2010.

Spokeswoman Morgan Shaw said in 2007: *"Since 1997, when we purchased 250,000 pounds of certified organic cotton for use in our fall 1998 products, we have steadily increased our reliance on organic cotton. Our best estimates for 2003 show that more than 2.5 percent of the cotton we used globally was organic, representing approximately 3,000,000 pounds of organic cotton fiber. Our goal is to blend a minimum of 5 percent organic cotton into all of our cotton-containing materials by 2010, while steadily expanding our offering of 100 percent certified organic cotton products. Nike works with the Organic Exchange and the Organic Trade Association to develop the organic cotton market."*

[14] www.textileworld.com - Organic Exchange Report Shows Global Organic Cotton Market Hits New High – 7 *April 2009*

Also, as explained in the figure below, Nike is leading the way in Reuse and recycling innovation. The old shoes are reuse (Reuse-A-Shoe program) and turn into Nike Grind, a material used in sports surfaces, playgrounds and even recycle to get new Nike products.

Wal-Mart: Entered the organic sphere in 2004, Wal-Mart introduced a line of 100% organic yoga wear through its Sam's Club stores. The initial 190,000 garments have been sold out in just ten weeks. Then, identifying the opportunity, Wal-Mart purchased 6,800 metric tons, making the mass retailer the largest buyer of organic cotton to date. Selling over 5 million units of organic women's wear in the last few years, the decision to move into organic appears to be paying off for Wal-Mart. The sustainability goal of Wal-Mart is to provide customers with access to quality products at affordable prices.[15] It is exactly what is happening with the organic jeans at 20$ or the T-shirts at 10$[16]. Somehow, Wal-Mart has "democratized" the organic cotton. Lending support to the organic cotton industry and providing security for farmers. Wal-Mart has made a five-year verbal commitment to purchase high volumes of organic cotton and is continuously working in partnership with the organic exchange.[17]

M&S: In 2003 Marks & Spencer launched its first 100 % organic cotton collection under the banner of its exclusive sportswear brand *View From*. As part of their strategy they have converted 10% of the cotton they use to fair-trade, organic, or both. They are also supporting the Better Cotton Initiative to define good social and environmental standards, to encourage mainstream cotton growers across the world, to improve their practices. They were the first major UK clothing retailer to launch organic wool and linen garments and sold a total of 750,000 garments made from organic cotton, wool and linen during 2007.

American Apparel: Has been founded on strong environmental business principles and focuses on creating affordable organic options for consumers. American Apparel entered organics in 2003 with a single line of T-shirts (Combining traditional cotton with organic cotton). It is

[15] Wal-Mart CSR Report 2008
[16] www.azcentral.com – "Green is the new black: Eco-fashion goes mainstream" – Marcelle Hopkinks – 29 November 2006
[17] www.money.cnn.com – "Organic for everyone, the Wal-Mart way" - Marc Gunther – 31 July 2006

estimated that organic garment sales have increased by 40% mainly because organic clothes have the same price as traditional cotton apparel. Erika Martinez, American Apparel's organic programs development liaison, reports that the store spends an extra dollar on each organic garment produced. She explains, *"We want people to know that they have an option and to know that the option can be affordable"*. American Apparel attempting to integrate more organic cotton into its inventory in a cost-effective way. Ultimately the company hopes to convert to 100% organic apparel offerings.

c) The good students

(1) Patagonia: the fore-runner in organic cotton conversion

Patagonia is an atypical clothing retailer with a progressive culture of environmentalism. Patagonia sells outdoor wear which is made to resist exceptionally tough weather conditions when climbing, rafting, skiing, hiking, etc. Usually this involves sophisticated synthetic fibers. Cotton use is limited to a minor percentage of overall fiber use – only an estimated 20% of total. As long ago as 1994, after a detailed environmental audit, Patagonia decided to commit to the use of organic cotton. The company staff concluded that Patagonia should either use 100% organic cotton or carry no cotton items at all. This decision increased the cost of Patagonia's fabric by three to four times. The entire cotton line also had to be reduced, from 91 to 66 styles.

After converting to 100% organic cotton use, Patagonia has remained very active in informing and inspiring other companies to do the same. It is one of the founding members of the organic cotton business network Organic Exchange. Patagonia is dedicated to societal change. It is one of the drivers of the initiative 'One Percent for the Planet', in which companies set aside 1% of annual profits for donations to non-governmental organizations (NGOs) and societal groups that are in the forefront of nature conservation and awareness-raising about environment and health, including organizations promoting organic cotton.

(2) Timberland: an organic cotton conversion delayed but now ahead.

Timberland has developed since the 1970s from a leather-boot-selling United States company into an international brand selling a range of clothing and footwear all over the world. Timberland's involvement in organic cotton dates from 2003, when it started to blend organic cotton fiber into its products. Since then, 50,000 T-shirts used for promotional events have been made from 100% organic cotton. Timberland also introduced a line of 100% organic cotton products. In 2005, the goal was to convert 5% of its cotton usage (540,000 pounds or almost 250 tons) to organic cotton, but this was not accomplished. Usage was only 100 tons (227,000 pounds), or 2.1% of total cotton supply, but still represented a 36% increase in overall organic cotton use.

Timberland's Cotton Club, which is an internal team of merchandizing, apparel design, environmental stewardship, and marketing employees, made the following work plan in order to reach its 5% organic cotton commitment in 2006:

A) Blend organic cotton into all of our organic apparel. This does not affect the price point of products.
B) Establish hang-tags and point-of-purchase communication for organic cotton apparel to consumers about the benefits of organic cotton.
C) Develop educational materials to train retail store associates on the benefits of organic cotton.
D) Analyze additional opportunities for sale of organic merchandise, apart from sale

in the company's own retail stores.

Now Timberland is ahead with the commitment in 2006 for "nutritional labels" (Instead of calories, carbs and saturated fats, the label will have three sections: manufactured, environmental impact and community impact) and the commitment for carbon neutral by 2010 (See the visual of the label in the paragraph dedicated to packaging).

d) SMEs focused on organic cotton

Many SMEs are leaders in sustainable practices. It is interesting to look at the number of small to medium companies selling organic cotton clothes. Here are some examples:

Ideo: a French company which only uses organic fair-trade cotton within its range of clothes.[18]
Fibrethik: a cooperative of solidarity based in Quebec whose goal is to import and promote fair-trade and organic cotton[19].
People Tree: the first to develop a fair-trade and organic cotton supply chain (certified through Global Organic Textile Standards) in the developing world. They work closely with Agrocel and Assisi Garments in India to improve the quality of the cotton fiber and fabric and via the media and public events they campaign internationally for organic fair Trade cotton[i]. People tree became really famous in 2006 by collaborate with Topshop (UK high street designer) on a fair-trade organic cotton line of products. Safia Minney, Founder and Director of People Tree, said: "Fair-Trade Fashion has arrived on the high street this season, and it's here to stay. People Tree's concession in Topshop proves that fair-trade fashion has broken all the stereotypes and is at the cutting edge of fashion retail. It marks the beginning of a big change in the fashion industry, and to the unfair structures that currently have such a detrimental effect on millions of workers."[20]

[18] http://www.ideocollection.com/
[19] http://www.fibrethik.org/index-text.htm
[20] http://www.peopletree.co.uk/

C. The Consumer of the XXI Century: "The Green Consumer"

Environmental issues are in the public spotlight as never seen before. Concern over climate change, the degradation of our ecosystems, and rising levels of pollution is at an all time high. In response, many are advocating government policy changes, tighter regulatory controls and more environmentally friendly products and production processes. Overall, the number of people becoming more active and promoting change is also on the rise.

However, this need of change and general sense of responsibility towards the environment has not always been this way. Today's green consumer movement is part of a trend that got popularity during the early 1990s, when the term "sustainable development", coined by the Brundtland Commission in 1987, was gaining currency and global environmental issues moved to the front pages of newspapers around the world.

Actually, many marketers will remember the 'green boom' in the 90s which saw a great swathe of environmentally friendly products and services sweep onto the market. In line with the CSR Europe's Sustainable Marketing Guide, acid rain, deforestation and the hole in the ozone layer were key concerns at that time.[21]

On the other hand, many skeptics argue that the cyclical nature of markets and consumer interests means that this latest focus on the environment is just the most recent turning of the wheel and that the bubble will soon burst and consumers will again stop worrying about the impacts that their lifestyles are having on the environment.[22]

However, this time the difference is that the risks to life and lifestyle are now far greater and far more immediate than before. This is fuelling a growing sense of urgency in the drive to find solutions. Far from being a problem for other countries, it's becoming almost impossible for consumers anywhere in the world to ignore the changes brought about by climate change and environmental degradation.

On the other side are business leaders, who are also concerned about their own families, lifestyles and professional legacies. That is why they are acting to ensure that this is no passing trend. Moreover, looking at the bright side, it can be assumed that marketers have learned a lot from both the mistakes and the triumphs of that 90s brush with mass market environmentalism, and those lessons will have placed profession in good stead for the challenges ahead.

As evidences show, customer expectations are changing since they are increasingly looking for companies and brands they feel have genuine commitments to environmental and social issues. As it has been mentioned in the Europe's Sustainable Marketing Guide *"customers are voting with their wallets"* [23]. This sentence clearly reflects how important for companies is to attend to the new demand of their customers, to the new patterns of today's consumerism.

According to a recent report from the Cooperative Bank, the current value of ethical spending in the UK has grown 9 per cent in 2008, to £32.3billion.[24] Although it is a small proportion of total household spending, the growth in the ethical sector is enduring despite tougher economic forecasts and a squeeze on household's disposable incomes, indicating that consumers are increasingly putting their values before price.

Another clear example to illustrate such a fact is the sales concerning fair-trade products in the UK. They have grown by 81% from 2006 to 2007[25], which is another indicator of consumers' desire to "do the right thing".

[21] and [22] Emma Williams. CSR Europe's Sustainable Marketing Guide. CSR Europe. Brussels, 2008

[23] Emma Williams. CSR Europe's Sustainable Marketing Guide. CSR Europe. Brussels, 2008
[24] Ethical Consumerism Report 2007
[25] Fair Trade Foundation, Feb. 2008

As a matter of fact, in Europe, favorable attitudes towards sustainable purchasing are also becoming widespread. Figure 1 shows the percentage of individuals from EU member states that consider sustainability to be in their purchasing decisions. Approximately 1/3 of Italians and French and 22% of Germans and Spanish take environmental aspects of products into account when shopping.[26]

Figure 1

Again, fair-trade is another relevant barometer of consumer attitudes towards sustainability. Figure 2 demonstrates that average per capita consumption of fair-trade products in Europe is becoming economically significant. Austria's fair-trade consumption per citizen for example, is of 2.4 €, while the Netherlands is in fifth place with a fair-trade market of 2.2 € per capita. Furthermore, according to the European Fair Trade Association, the Austrian fair-trade market is estimated to represent 32% of the Austrian population.

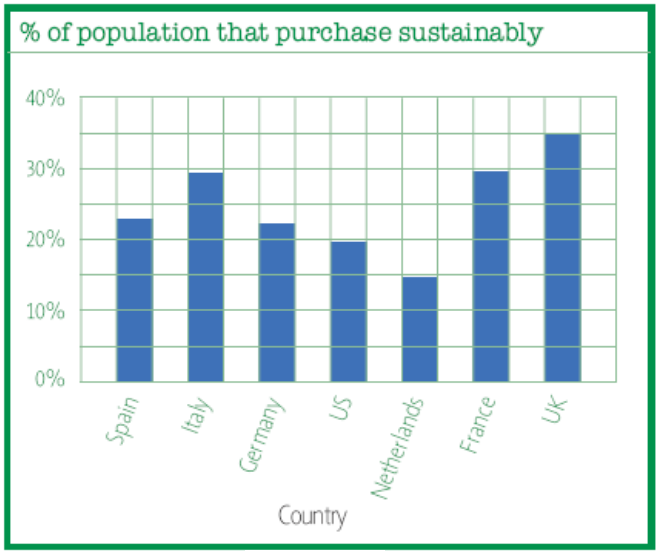


Figure 2

Indeed, this previously mentioned steady increase over the past decades on consumer's ethical spending is shown by data. As Fugure 3 illustarates, in 1999 ethical consumers spent a total of

[26] GMI Consumer Polls, 2005

£9.6 billion pounds. By 2006, this had grown to £32.3 billion. Interestingly, even during the years of economic 'slow down' (2000-2001), sales of ethical products continued to rise[27].

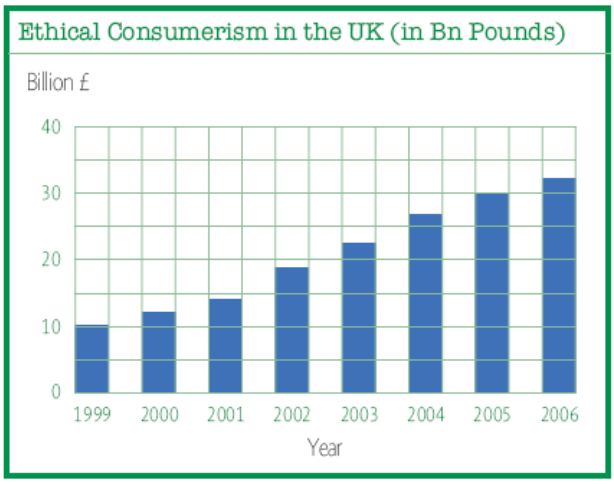


Figure 3

In conclusion, almost three decades after the coined "green boom", green consumerism has become a day to day reality. An increasing number of people are choosing to buy products and services that have positive environmental and social impacts. As a result, there has been an expansion in the products and services that identify themselves as "sustainable" and the choices available for recycled, organic or environmentally friendly goods has become wider and easier to make.

Today, the green customer is conscious of the main challenges that humanity is facing today in terms of environment, such as climate change or global warming. Consequently, his main concerns are: water pollution, hazardous waste, waste disposal, ozone depletion, air pollution, soil degradation, contaminated land, harmful emissions, smog, resource recovery, chemicals and pesticides, rain forest destruction and energy waste.

This increased public awareness and concern about the largest problems now affecting the world has lead to many customers to make a difference in their purchasing choices. For that reason, the "green consumer" prefers to buy recycled paper products, selects biodegradable dishwashing soap, purchases organic food and clothing, acquires solar panels or heat pumps as renewable energy sources for his home or buys fuel-efficient cars[28].

Nevertheless, the "green consumer" not only takes environmentally issues into account, but also social ones. That is why, more and more this kind of customers is demanding good social performance from companies. Issues such as child labour, human rights, labour conditions, disable people, community support, corruption, fair-trade, diversity in the workforce or health and safety at workplace are the main social concerns of those who support good practices with their purchasing decisions.

From this perspective, "the green consumer" is the one that is putting pressure on companies so they put codes of conduct into place, support the community where they operate, comply with the highest labour standards, respect their employees' human rights as well as pay a living wage to them.

Overall, the power of green spending is considerable. These mentioned individual purchasing decisions are strengthened by numbers and in turn influence the marketplace. As a matter of

[27] Ethical Consumerism Report 2007, The Co-Operative Bank
[28] "Can Green Consumers Make a Difference?" at http://www.globe-net.com/search/display.cfm?NID=2731&CID=2 - 1 june2009

fact, a survey conducted by *Environics Research Group*[29] showed that two-thirds of Canadians consumers would switch their spending to companies that have demonstrated a commitment to green policies[30]. Such study shows how consumers have begun to change their minds and therefore how companies must react to these changes and adapt their products to the new needs of the market if they want to survive. Companies that do not listen to their customers will no longer succeed.

Finally, it is interesting to point out the main features that "the green consumers" have in common. Those are the following:

- Well-informed
- Conscious of the environmental and social main challenges of today's humanity
- Aware of the term "sustainability" and what this represents
- Sensitive to bad practices from companies or governments
- Not sensitive to prices
- Reward the "good citizens" due to their purchasing decisions
- Put pressure on policy-makers and business leaders

[29] Environics Research Group: Canada's marketing and social survey research consultancies. Available at: http://erg.environics.net/about_us/
[30] http://www.globe-net.com/

III. INTERNAL ANALYSIS

A. General overview of the Company

1. H&M in brief

H&M was established in Västerås, Sweden in 1947 by Erling Persson. Today, the multinational sells clothes, cosmetics, accessories and footwear around 1.700 stores worldwide, where offers fashion for women, men, teenagers and children.

Regarding facts and figures, H&M is one of the biggest fashion retailers in the world with a turnover of SEK 104,041 million in 2008. Nowadays, the Sweden company employees 73,000 people and work across 34 countries (see Figure 1). Its three biggest markets are Germany, UK and Sweden, although it has demonstrated to have a great potential for expansion and growth year by year.

Linked to this idea of expansion is its growth target. According to company's data, H&M *"is to increase the number of stores by 10–15 percent per year, but also to increase sales at existing stores"*[31]. But in that rate of expansion, they also take into account other factors such as the availability of attractive business locations. In line with this, 193 new stores were opened and 16 were closed.

However, its business concept is better summarized by its slogan: "H&M offers fashion and quality at the best price". This sentence widely shows how the company works. Basically the idea is to offer fashion at affordable price for the majority of the people. According to the company, ensuring the best price means *"to have few middlemen, buy large volumes, have a broad, in-depth knowledge of design, fashion and textiles, buy the right products from the right market, be cost-conscious at every stage and have efficient distribution"*.[32]

Moreover, this business concept includes the notion of quality in a double sense. On the one hand, quality at the product through continuous quality controls and, on the other hand, quality at the production side which means to minimize the environmental impact and to ensure good working conditions.

One important aspect to point out about the business model of H&M is the location of the stores. It always places its stores in the best business location, whether in a big city or a shopping centre. H&M stores can for example be found on Fifth Avenue in New York, on Regent Street in London, on Corso Vittorio Emanuele in Milan and on Queen's Road in Hong Kong.

Another essential feature of the way H&M works is its horizontal integration. Instead of producing in-house as much as possible like other competitors such as Zara do, the Swiss multinational prefers to outsource. That is why it approximately has 800 independent suppliers and around 2700 production units, mainly in Asia and Europe.

[31] H&M: "About H&M" [on line] (cited 15 May 2009) Available at http://www.hm.com/gb/abouthm/factsabouthm/ourbusinessconcept__ourphilo.nhtml

[32] H&M: "Our Business Concept" [on line] (cited 15 May 2009) Available at http://www.hm.com/gb/abouthm/factsabouthm/ourbusinessconcept__ourphilo.nhtml

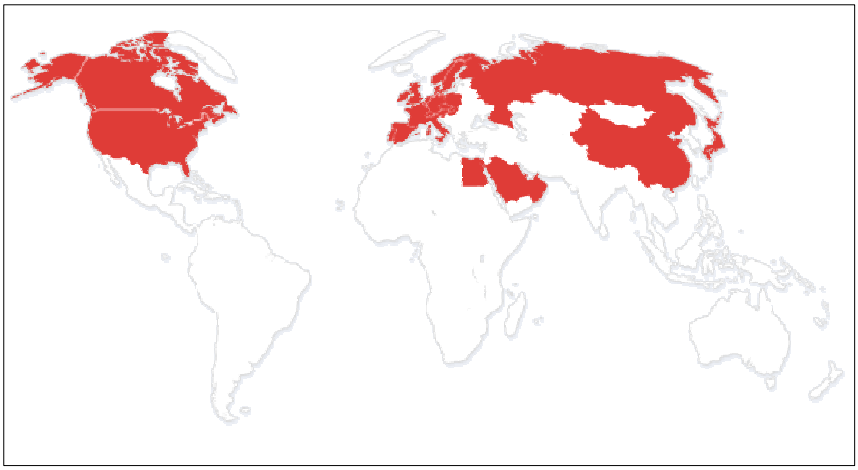


Figure 1. "The World of H&M"

2. Sustainability at H&M

Sustainability has become one of the biggest issues of the 21st century. It represents the promise of societal evolution towards a more equitable and wealthy world in which the natural environment and our cultural achievements are preserved for generations to come[33]. Although there has been extensive work among the three areas of sustainability (social, environmental and economic), it was only the 1992 Earth Summit in Rio when the term gained the acceptance among politicians, NGOs and business leaders who, at that point, recognized that none of the three problems can be solved without solving the other two.

Concerning the development of the term sustainable at the firm level, it is important to state that most managers have adopted it as a precondition for doing business ever since. The clearest example to illustrate such statement was the creation of the World Business Council for Sustainable Development formed by a group of business leaders in order to facilitate the dialogue with politicians regarding how to achieve sustainability.

Today 150 international companies committed to sustainable development have joint the WBCSD, promoting the role of eco-efficiency, innovation and corporate social responsibility as a result. Regarding the textile sector, neither H&M nor its main competitors are part of this international organism. However, many of them have made important attempts to really integrate sustainability at the core of their business. As a matter of fact, today it is rarely seen any company that do not publish a sustainability report annually.

In fact, according to Göteborg University, one of the companies most committed to sustainability criteria due to a strong CSR strategy within the textile sector is H&M[34]. Actually, the Sweden Company has been publishing an annual sustainability report for some years already, and year by year it is trying to make its commitment with sustainable development clearer and stronger. As it is mentioned on its report of 2008:

"Taking responsibility for how our operations affect people and the environment is key for H&M's continued profitability and growth. We are committed to integrating social and environmental concerns into all our business operations and investing in the communities where we work."

Sustainability Report of H&M, 2008

[33] T. Dyllick and K. Hockerts, *Beyond the business case for corporate sustainability* in "Business Strategy and the Environment", 2002 at www. Interscience.wiley.com.
[34] http://gupea.ub.gu.se/dspace/bitstream/2077/1434/1/06-39.pdf

This statement points out the kind of commitment towards sustainable development, in general and towards its stakeholders, in particular that the multinational has made for future to come. Thus H&M shows that environmental and social issues are as important as economic profits for the company so they have to really care about those issues if the company wants to succeed in the next years. That is why; H&M has developed an ambitious sustainability strategy which aims to face the main challenges that appear when it operates around the world; taking into account not only its environmental impacts, but also its social effects. Such strategy is developed further below.

Another important point that reflects H&M's commitment to sustainability criteria is its partnership with different nongovernmental organizations. Through these partnerships the Sweden Company pretends not only address environmental issues but also social challenges. As it has mentioned before, on the one hand, H&M is member of the Better Cotton Initiative in order to help to give a response to the current impacts of cotton production worldwide.

On the other hand, since 2005 H&M is a member of the Fair Labour Association (FLA), an organization whose aim is *to improve working conditions in factories around the world*[35]. In order to do so, the FLA has developed a Workplace Code of Conduct, based on International Labour Organization (ILO) standards, and it has created a practical monitoring, remediation and verification process to achieve those standards. As it has been stated by *Henrik Lampa*, environmental manager at H&M in an interview made on May of 2009, *"This means that the FLA makes unannounced independent external monitoring visits to some of H&M's suppliers' factories in China. The independent monitoring conducted by FLA is not a substitute for our own audit programme, however; it supplements it".*[36]

Actually, the FLA just monitors H&M's suppliers in China. So, the rest of the factories located in other regions but suppliers of H&M, do not have any external control system by a third party. Nevertheless, the FLA has carried out in 2006 a Labour Compliance Program based on the internal Code of Conduct if H&M. [37](To see results go to Annex 1

a) Sustainability strategy

H&M's Sustainability Strategy guides the company to get its aim which is to become an economically, environmentally and socially sustainable corporation. Based on the concept of shared responsibility, the strategy aspires to move from having a CSR Department that coordinates the sustainability activity to a CSR support department that advises and guides other departments within the company.

At this point, it is important to point out that the H&M's Sustainability Strategy covers the three P's: People, Planet and Profit. What is to say, the three types of capital that Dyllick and Hockerts established in 2002 while defining Corporate Sustainability or "The triple bottom line"; the social, the economic and the natural; which must all be considered in relation to each other.[38]

Moreover, such strategy is based on three key elements that ensure sustainability integration into all processes and activities at H&M.

[35] http://www.fairlabor.org/aboutus.html
[36] Interview made to Henrik Lampa by Candela Aldao, Clemence David and Eliza Panagiotidou on the 18th of June of 2009
[37] Fair Labour Association Annual report, 2007 at http://www.fairlabor.org/images/WhatWeDo/2007_annualpublicreport.pdf
[38] T. Dyllick and K. Hockerts, *Beyond the business case for corporate sustainability* in "Business Strategy and the Environment", 2002 at www. Interscience.wiley.com

These are the following:

(1) Sustainability Vision

H&M's Sustainability vision is based on the concept of 'Sustainable Development' that was established in the 1987 report of the United Nations World Commission on Environment and Development – the Brundtland Commission –, namely *Our Common Future*. So for the retailer, "sustainable" means to fulfill the needs of both present and future generations. That is why H&M is clearly oriented to make its business operations in a way which is economically, socially and environmentally sustainable.

(2) Sustainability Policy

According to H&M, the company included the term of quality in its slogan with a double purpose. On the one hand, it is referred to the quality of the garment. But on the other hand, it is considered to be a basic requirement regarding conditions at the all stages of the process of manufacturing, transporting, selling and so forth.

From this perspective, H&M is committed to ensure that human rights are not violated during the whole process; high environmental standards are put in place (substitution of hazardous chemicals, minimize waste due to the efficient use of resources, reduce the environmental footprint through improved production processes and the right choice of materials, etc.) and that goals and strategies are continuously reviewed to reduce the climate impact of the company.

Last but not least, H&M is also interested in stakeholder engagement through dialogue and meetings on a regular basis. According to H&M, getting feedback from its stakeholders enables the company to be focused on issues that really can make a difference.

(3) Long-Term CSR Goals

H&M's long-term goals are based on the concept of sharing responsibilities and the interconnection of the three P's: planet, people and profit. However, it is important to point out that these long-term goals are mainly divided in two big groups. One related to the respect of human rights, taking into account the International Labour Organization principles. And another that includes the respect for the environment as an integral part of H&M's and its supply chain's business practices (raw materials, energy, pollution prevention, etc).

3. H&M and organic cotton

One of the main achievements of H&M's strategy towards sustainable development has been the use of organic materials in its production. This kind of changes has allowed the company to reduce its environmental impact. In addition, the company has met the needs of its most environment concerned customers, as it has been stated by the company, *"The message from our customers is clear: they want products that are more environmentally friendly"*.[39]

That is why, the Sweden Company started to use organic cotton in 2004 as the first organic material. However, today new sustainable materials have been tested in addition to the organic cotton range, which was extended in 2008 to include: organic wool recycled wool and recycled polyester.[40]

As a matter of fact, H&M is membership of two of the most important organizations committed to expanding organic agriculture: Organic exchange and Better Cotton Initiative. Those memberships help to the company not only to be constantly updated about the sector, but also to act as a support of the cotton growers during the crossover period from conventional to organic cotton.

However, according to H&M, its strategy on organic cotton is divided in three different parts which all together aim to improve conventional cotton growing by collaborating with others, to promote organic cotton growing by contributing to increased demand and to source cotton from farmers in transition from conventional to organic cotton.[41]

Nevertheless, this commitment to organic cotton has passed different stages. In 2004, H&M included 5 % organically grown cotton in certain baby and children's garments from mainly Turkey but also some from India. During 2005 and 2006, H&M sold garments containing more than 40 tones organic cotton yearly. And finally in the beginning of 2007, it launched a new collection made with 100 % organic cotton which included products for women, teenagers, children and babies.

According to what *Henrik Lampa* stated, environmental manager at H&M supply chain, *"In line with company's objectives, our intention is to gradually use more cotton that has been grown organically for the next years. Specifically, the target set for 2009 is to use around 3,000 tons of organic cotton as well as to begin to mix organic cotton into more garments. While for the next five years the aim is to increase volumes by at least 50 percent per year"*.[42]

As well as investing in organic cotton, the Sweden Company has also working to improve conventional cotton growing through the Better Cotton Initiative (BCI). The aim of the project is to measurably reduce the negative social and environmental effects of traditional cotton growing.[43]

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[39] http://www.organicexchange.org/intro.php

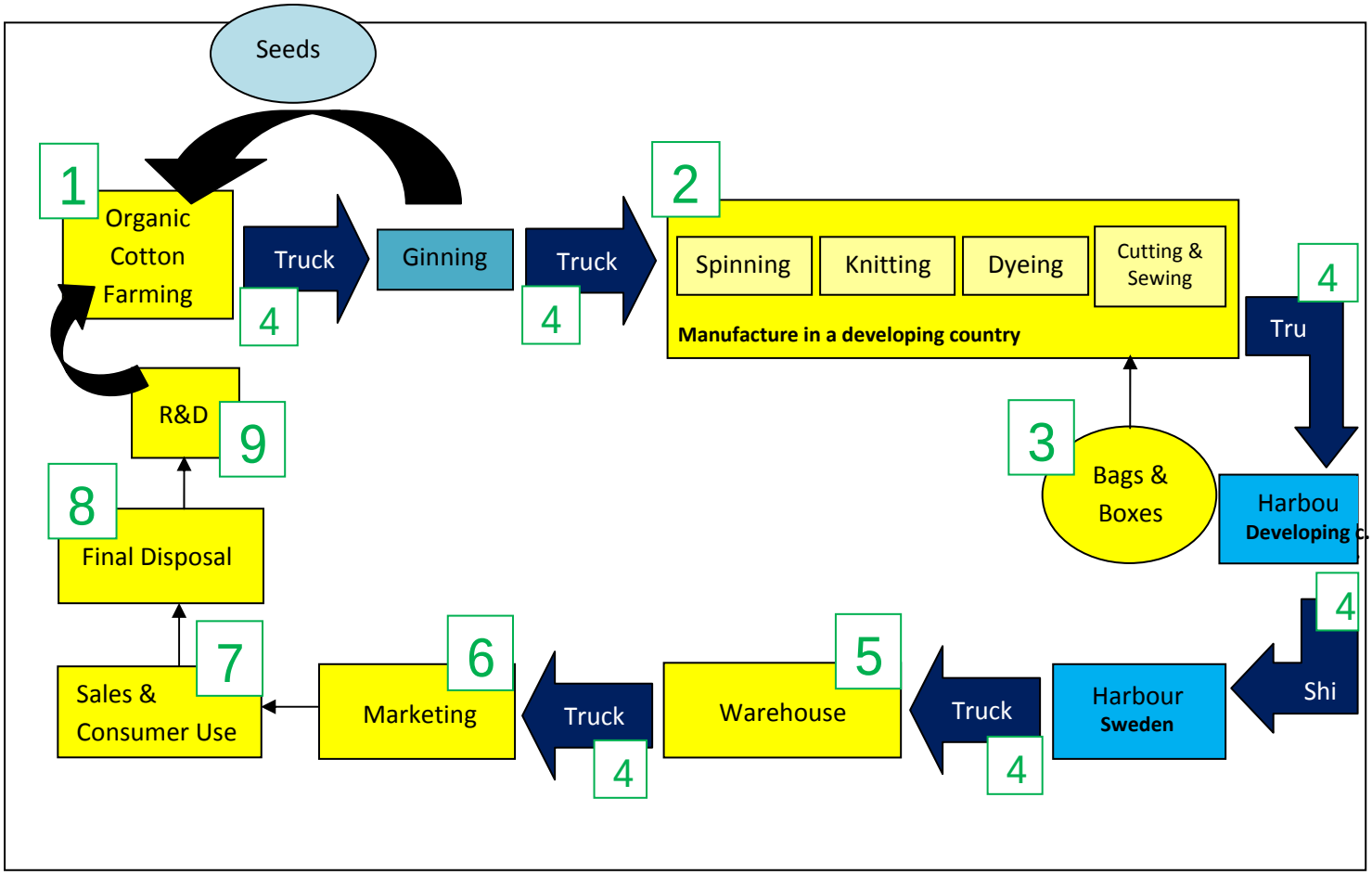
[40] http://www.hm.com/gb/corporateresponsibility/environment/focusoncottonandtheenvironment__envworkarticle3.nhtml

[41] http://www.organicexchange.org/intro.php

[42] Interview made to Henrik Lampa by Candela Aldao, Clemence David and Eliza Panagiotidou on the 18th of June of 2009

[43] http://www.bettercotton.org/

B. The Supply Chain at H&M



1. Raw Material Harvesting

2. Manufacturing

3. Packaging

4. Transportation

5. Distribution

6. Sales and Consumer Use

7. Marketing

8. Final Disposal

9. Research and Development

Textiles production and processing implies chemical intensive applications, which unfortunately are associated with social and environmental concerns, such as the increasing industrial pollution, the industrial waste disposal problems and the economic and social health of farmers and industrial workers. All these consequences are due to the unawareness of environmental sustainability both of individuals and businesses. Therefore a transition to sustainable and responsible environmentally and socially businesses is absolutely necessary, and for this to happen we need to take incremental steps in the supply chain process.

In this section there is a thorough analysis of the entire organic cotton´s supply chain in social and environmental terms, starting with the extraction of raw material and moving step by step to manufacturing, packaging, transportation, distribution, marketing, sales, final disposal and research and development.

1. Raw material harvesting

Raw material harvesting is the starting point of the cotton production process. In the raw material harvesting stage the key stakeholders are the organic cotton market and their willingness to plant organic cotton determines supply. However, other stakeholders need to be included to ensure a productive market. Consumers, brands and retailers are an essential part of the process and their demand will not only determine the expansion of the organic cotton, but also the transition from conventional cotton to the organic cotton.

In fact, according to Organic Exchange, a charitable organization committed to expanding organic agriculture, the gap between supply and demand is very tight as reflected in the known levels of stock of 2008[44]. Moreover, this initiative is confident that stocks are sufficient for meeting any short-term needs. On the other hand, they consider that it is being vital for brands to look at long-term strategies and to make long-term commitments with farmers to ensure future supply.

Fortunately, for organic cotton producers, the largest retailers worldwide have been participating in the organic fiber marketplace for many years already, increasing their demand year by year. Among them, it is H&M that has committed to supporting organic cotton growth through different organizations such as the Organic Exchange whose aim is to *"catalyze market forces to deliver sustained environmental, economic and social benefits through expansion of organic fiber agriculture"*[45].

However, despite this optimistic overview where companies participate globally to promote organic cotton and support organizations specialized in the issue, there are other aspects to consider. These mostly refer to social and environmental challenges that farmers have to face in order to supply those giants retailers such as H&M. Such challenges as well as the main actions taken by H&M in order to solve them are going to be analyzed in this part.

[44] *"Organic Cotton, Farm and Fiber"*. Organic Exchange, 2008.
[45] http://www.organicexchange.org/mission.php

a) Social aspects

(1) Actors involved

(a) Farmers

According to the organization Organic Exchange, although more than 20 countries were producing cotton from 2007 to 2008, the top ten producing countries were: India (51%), Syria (19%), Turkey (17%), China (5%), Tanzania (2%), USA, Uganda, Peru, Egypt and Burkina Faso (Table 1)[46]. Looking at numbers, together, the first five countries account for 94% of world production and India reports for more than half of the production worldwide.

2006 / 2007	2007 / 2008
Turkey	India
India	Syria
China	Turkey
Syria	China
Peru	Tanzania
USA	USA
Uganda	Uganda
Tanzania	Peru
Israel	Egypt
Pakistan	Burkina Faso

Table 1: Top Ten Organic Cotton producing Nations, 2006/07-2007/08

Overall, in line with Organic Exchange data, organic cotton production has grown to an estimated 0.55 % of global cotton production. Mainly, that figure is the result of an increased activity in the market and strategic planning from brands and retailers such as H&M.

However, not all regions have undergone such a growth. While India has accounted to be the region where the largest and fastest production growth is and, therefore, where more organic cotton farmers are located, other regions such as Latin America have recorded a fall due to farmers slowly adopting organic cotton as a crop as well as poor climatic conditions in Peru, in comparison with previous years (Table 2)[47].

[46] and [47] *"Organic Cotton, Farm and Fiber"*. Organic Exchange, 2008.

Having clarified these differences in growth among regions as producers, there is necessary to explain which are the main opportunities and barriers to growth in fiber production from the farm-gate perspective.

The growing demand for organic cotton continues to provide an incentive for production to expand.

REGION	OPENING STOCK (FIBER) AUGUST 1, 2007	FIBER PRODUCTION (2007/08)	CLOSING STOCK (FIBER) JULY 31, 2008	PERCENT OF GLOBAL PRODUCTION
SE Asia (Pakistan/India)	3,053	73,908	5,000	50.67%
Middle East (Turkey, Syria, Israel)	4,500	52,753	5,000	36.16%
China	505	7,354	1000	5.04%
Africa non-CFA	589	5,455	535	3.74%
North America	0	2,716	200	1.86%
Latin America	158	1,590	335	1.09%
Africa CFA Zone	23	1,069	40	0.73%
North Africa	0	761	0	0.52%
Central Asia (CIS)	150	194	30	0.13%
EU, Central Europe	59	72	10	0.05%
TOTAL (MT)	9,037	145,872	12,150	100%
TOTAL (BALES)	41,420	668,581	55,688	100%

Table 2: 2007/08 Organic Cotton Fiber production by region – opening and closing stocks and percentages of global production (MT)

However, there remain concerns about the lack of contracts and the delay in payment that farmers experience. That is why the main points raised by producers and farm groups as essential for maintaining growth and progress with global organic cotton production are the following[48]:

1. Security in planning production: farmers need to receive information in advance regarding volume demand and fiber quality requirements; some form of guarantee of commitments through contracts or partnerships; forecasting systems on market demand;

[48] *"Organic Cotton, Farm and Fiber"*. Organic Exchange, 2008

access to capital to improve productivity as well as to finance project's growth as businesses.

In fact, according to Andy Salm, manager at Organic Exchange, *"In order for fiber production to expand, greater levels of contracted purchasing prior to planting are needed"*[49], also he added, *"significant work must be done to increase the amount and type of technical, financial and business development assistance available to organic farming projects, particularly those in the developing world and those in the transition process"*.

2. Transparency: it means trust and confidence between buyers and farmers and is vital to sustaining long-term relationships between producers, traders, and others further up the supply chain. However, many farmers are unaware of the true value of cotton once it leaves the farm gate.

   Andy Salm adds, *"One of the most important issues for farmers is to understand the relationship between the production and the price of seed-cotton and to see how costs are built into the fiber value"*.

3. Pricing and price setting: price are not only set by the cost of producing seeds but they also cover other costs related to ginning, transport or certification. Linked to the transparency issue, many farmers have expressed the need to better understand the costs causing the difference in the value of seed-cotton and the traded fiber value, therefore, to better see how the costs add up from where they leave the farmer's plot to the spinning mill.

4. Contract security: farmers need to be able to plan for increased demand and production and need consistent approaches to demand, contracts and price.

5. Market diversity: many farmers would like to have access to the market, more ability to participate in value addition to against sharing the risks of trade and more participation in negotiations in the value chain.

6. Farmer support/training: farmer support and training must be in place in order to maximize productivity and returns to farmers. The growth in organic cotton production must not only be quantitative, but also qualitative which means that farmers must be trained to ensure that the conditions of production (soil fertility, insects and pest management) are properly addressed.
   In addition to this, Andy Salm, stated that *"the organic cotton farming system is very different from the conventional cotton system in that it relies on strong support and training structures, which are not currently provided by the state or private sectors"*. That is why it is so important for farmers to create models with price structures and income distribution covering the costs of internal control systems, training and education.

7. Communication: a Code of Conduct needs to be put into place in order for producers to explain the best practice relationship among all stakeholders involved in the process.
   According to Andy Salm, *"Communication is essential to make farmers aware of the importance their practices have to get a real sustainable agriculture of organic cotton. That is why Organic Exchange is developing different projects in several regions such*

[49] Interview made by Candela, Eliza and Clemence.

as India or South Africa where we give technical advice to farmers as well as personal support".

Moreover, the member of Organic exchange explained that *"During this communication process, there are different problems we have to deal with such as the fact that most of the farmers that grow organic cotton are illiterate, which make the learning process much more difficult than usual"*. He also explained that, *"In order to overcome such obstacles we use training tools or communication channels that allow us to teach farmers and to educate them"*.

The communication channels that Andy was referred to were, for instance, videos, drawings, pictures or any other visual material explicit enough to show how the process of sustainable agriculture works.

Although these currently are the most important issues on a worldwide scale concerning farmers or producers, there are other issues that vary from one region to another.

For instance, take India as an example, there are critical challenges affecting its market. While remaining the world leader in production of organic cotton, they are challenged with the lack of scientific research and development, the unavailability of non-treated seeds, shortages of organic fertilizers, disorganized dissemination of information, difficulty in providing advance payments, and the lack of adequate information-sharing and communication down the supply chain are the main issues to address in the country.

Other regions, contrarily, take advantage of financial support from their governments. That is the case of some states in the USA, where some farmers receive subsidies which makes their products more competitive since part of the costs is covered by the government. As a result some developing countries (or even regions within countries as in the states), with no governmental support are more vulnerable in the global marketplace.

According to Dosi Alvarez, organic cotton farmer from La Union, Nuevo Mexico, who stated in 2007, *"Agriculture and farmers are suffering around the world. Trade agreements, subsidies and a changing climate affect corn farmers in Mexico, rice farmers in South Korea and cotton farmers in the southwestern United States"*.[50]

In conclusion, to make a real sustainable expansion in the global organic cotton fiber supply, it is important for farmers and projects to implement innovative and effective business models that ensure financial security, fair pricing, and profit and distribution to cover the costs associated with the infrastructure and business development needed at the farm gate. On the other hand, assistance with know-how would support them as well.

(b) Corporation: H&M case

On the other side of the market are large retailers such as H&M. Due to their increasing demand on organic cotton every year, the growth of the sector has been considerable over the past five years. However, virtually none of them buy directly to farmers. Instead, they make contracts with several suppliers who at the same time are not only responsible of manufacturing the cotton (spinning, knitting, dyeing cutting and weaving), but also of buying the organic cotton to commercial farm groups or to small holder groups.

From this perspective, from the farmer to the final retailer there are many agents involved in between. So in most of the cases companies do not have any contact with local farmers and

[50] http://www.patagonia.com/web/us/patagonia.go?slc=en_US&sct=US&assetid=2390

therefore they cannot contribute to improve life and work conditions of farmers unless they partner with other organizations that act at local level.

As a matter of fact, H&M is a member of two initiatives that deal with cotton farming worldwide. On the one hand, the Swedish company plays a very active role in the Better Cotton Initiative (BCI)[51] and is currently the vice-chair of the BCI steering committee. The BCI aims to promote measurable improvements in the key environmental and social impacts of cotton cultivation worldwide to make it more sustainable.

To achieve this goal, the BCI carries out different projects to improve the livelihoods of millions of farmers and their families that dependent on cotton production (not only organic). Most of them are being developed in developing countries such as India, China or Pakistan; regions that are, together with Paraguay, where H&M gets its organic cotton from. In that way, H&M contributes to promoting more favorable social and environmental conditions that will not only benefit farmers, but will extend throughout their communities.

As said by *Henrik Lampa*, environmental manager at H&M, in an interview, "*As it is usual for large companies, we do not have any direct contact with farmers, but we actively contribute to improve their life and labour conditions through our collaboration with organizations such as the Better Cotton Initiative and the projects they develop year by year"*. [52]

On the other hand, H&M is an active member of the Organic Exchange (OE)[53], an environmental organization committed to expanding organic agriculture, with a specific focus on increasing the production and use of organically grown fibers such as cotton. According to H&M, the use of organic cotton in its garments contributes to promote organic cotton farming worldwide[54]. And due to its partnership with this organization, it indirectly contributes to all projects for farmers that are being developed by the OE.

Another important benefit that H&M gets through its partnership with the Organic Exchange is the organic certification that OE has at different levels of the process. Since certification to the various standards is required for the use of the specific organic labels and/or logos on applicable materials and/or products, H&M has managed to obtain two of the OE certifications. Those are explained further below according to Organic Exchange.

Beforehand, it is important to remark that certification is the procedure by which an independent third party gives written assurance that a clearly identified process production or processing system has been methodically assessed, and that adequate confidence is provided that specified products conform to organic requirements[55]. In the case being analyzed about H&M, the third party corresponds to the company Control Union, an international group of companies specializing in independent cargo surveying, super-intending and certification who collaborate with Organic Exchange to make sure OE standards comply with all requirements.

[51] http://www.bettercotton.org/
[52] Interview made by Candela Aldao, Clemence David and Eliza Panagiotidou on the 18th of June of 2009.
[53] http://www.organicexchange.org/
[54] and [11] H&M Sustainability Report, 2008.
[55] Philip Torrens. *"Organic Cotton: Growing together"*. Organic Exchange, 2005.

(c) Organic exchange standards obtained by H&M organic cotton

- ✓ **OE 100 Standard**

Scope: 95-100% Organic cotton yarn spinning through finished textile product
Intended Reach: Global
Identification on Product: OE 100 logo
Managing Organization: Organic Exchange
Developed in 2007 by Organic Exchange, with the certification advisory committee, this standard applies to textile products that contain from 95%- 100% certified organic cotton. The standard requires that the organic cotton is produced on certified organic farms, and sets criteria for proper handling and tracking of the organic cotton through all steps of textile processing. This standard does not establish criteria for substances used during processing.
Certifiers and accreditation: Organic Exchange licenses certifying agents to inspect manufacturers for compliance to the OE standards. Certifying agents currently licensed for the OE standards (subject to change): Control Union, the Netherlands Institute for Market ecology (IMO), and Germany. [56]

- ✓ **OE Blended Standard**

Scope: 5-95% Organic cotton yarn spinning through finished textile products
Intended Reach: Global
Identification on Product: OE Blended Logo
Managing Organization: Organic Exchange
The current OE Blended Standard was developed in 2007 by Organic Exchange with the input of an advisory committee consisting of global certifying bodies. This standard applies to textile products that use a blend of organic and non-organic cotton or other fibers, and must contain a minimum of 5% organic cotton fiber. The standard requires that the organic cotton is produced on certified organic farms, and sets criteria for proper handling and tracking of the organic cotton through all steps of textile processing. This standard does not establish criteria for substances used during processing.[57]

Overall, those kinds of partnerships respond to the partnership approach that the company has developed during these last years. As it is stated in H&M's Sustainability report, *"our approach to our suppliers is to create long-lasting and meaningful relationships. (…) Partnership working allows our suppliers to plan ahead and invest in improvements in their operations."*[58]

However, there is no data in the report that shows how they allow suppliers to plan and invest in improvements in their operations. Moreover, although there are already a couple of partnerships

[56] http://www.organicexchange.org/certification_info.php
[57] http://www.organicexchange.org/certification_info.php

with two different NGOs, there is a lot more work to do if they really want to engage farmers in their operations and business.

(d) Certifiers

The last of the agents involved in the process of raw material harvesting are the certifiers. Those are the ones that make the necessary inspections to certify to what extent companies are really using organic cotton in their garments.

As it has been mentioned before, in the case of H&M, Organic Exchange in partnership with Control Union is in charge of certifying H&M's organic cotton quality and conditions. Control Union is an international group of companies specializing in independent cargo surveying, super-intending and certification whose network of offices, laboratories and accredited agents make package in logistics, quality and quantity management from the country of origin to the final destination.[59]

b) Environmental aspects

(1) Practices and Processes

There are several steps that farmers and others agents involved in this first part of the process have to follow to get organic cotton. Those are the following:

(a) Farming

According to the information service "Appropriate Technology Transfer for Rural Areas" (ATTRA), growing cotton organically entails using cultural practices, natural fertilizers, and biological controls rather than synthetic fertilizers and pesticides. A systems approach to organic production involves the integration of many practices (cover crops, strip cropping, grazing, crop rotation, etc.) into a larger system. Through good soil and biodiversity management, farms can become increasingly self-sufficient in fertility, while pest problems are diminished, and some pests are even controlled outright. A diverse rotation, using legumes and other cover crops, is at the heart of good humus and biodiversity management in an organic cropping system.[60]

However, in order to market a crop as organic, a grower must be certified through a third party. This process involves several on-farm inspections and paying a certification fee, as Control Union does to Organic exchange.

Another important issue is that organic production begins with organically grown seed. If certified organic seed cannot be located, untreated seed may be used as long as it is not derived from genetically modified plants[61]. However, most certifiers will accept proof that growers have tried unsuccessfully to buy organic material from at least three different suppliers as evidence of unavailability.

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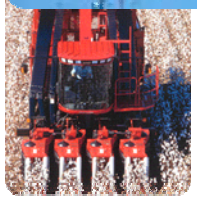
[59] http://certification.controlunion.com/main/default.htm
[60] M. Guerra and P. Sullivan. *"Organic Cotton Production"*. ATTRA, 2003.
[61] M. Guerra and P. Sullivan. *"Organic Cotton Production"*. ATTRA, 2003.

(b) Ginning

From the field, seed cotton moves to nearby gins for separation of lint and seed. The cotton first goes through dryers to reduce moisture content and then through cleaning equipment to remove foreign matter. These operations facilitate processing and improve fiber quality. The cotton is then air conveyed to gin stands where revolving circular saws pull the lint through closely spaced ribs that prevent the seed from passing through. The lint is removed from the saw teeth by air blasts or rotating brushes, and then compressed into bales weighing approximately 500 pounds. Cotton is then moved to a warehouse for storage until it is shipped to a textile mill for use.

However, it is important to highlight that organic cotton must be processed separately from conventional cotton, and the machines must be cleaned in advance to avoid any contamination. The seed is used as animal feed or pressed into oils for processed foods.



Then, it will be transported to a cotton mill, a factory that houses spinning and weaving machinery.

(2) Energy Consumption

According to the company Carbon Trust, whose aim is to accelerate the move to a low carbon economy now and develop commercial low carbon technologies for the future, "the main sources of carbon emissions in the supply chain of a textile company take place during farming and spinning phases"[62]

Having stated this, it is important to highlight that this amount of emissions are provoked by several factors during this first phase: farming. Those are the following:

- Machinery used during farming
- Transportation of the cotton from the crops to the manufacture
- Machinery used during ginning

Nevertheless, it is essential to mention that depending on the regions where the cotton comes from, the emissions will greatly vary. While in USA farmers use heavy machinery to collect and to transport the raw material, other regions such as India or China may use rudimentary machinery or even collecting and transporting it with farmers' hands. In such cases their emissions will be less.

(3) Water Pollution and Consumption

Water Consumption and water pollution are issues to take into account when analyzing this part of the process, farming. According to the previously mentioned organization Organic Exchange, while conventional cotton requires intensive irrigation for its cultivation, "far less water runs off

[62] Carbon Trust. *"Working with Continental Clothing. Product carbon footprinting in practice"*. 2008, UK.

organic fields" [63]. Instead, organic cotton retains water more efficiently thanks to increased organic matter in the soil.

As a matter of fact, the vast majority of cotton used by H&M is conventional cotton, and cotton supply faces some serious challenges and has many associated impacts. From a growing perspective, climate change, water scarcity and rising prices for inputs such as fertilizers will influence future cotton supply. From an environmental perspective, cotton is a high-impact crop.[64]

According to WWF research cotton needs an average of 8,500 liters of water to grow one kilo of cotton lint, equivalent to one pair of jeans. From a social point of view, improvements for cotton growers are also needed. That is why H&M play its part working with the Better Cotton Initiative, an initiative involving leading retailers and WWF.

Nevertheless, it is important to highlight that H&M has made a commitment to tackle water scarcity issues. In June 2008 H&M signed the CEO Water Mandate, a voluntary initiative from the UN Global Compact[65]. The CEO Water Mandate consists of a group of companies that has committed to work collectively on issues of sustainable water management. Due to this mandate, H&M has committed to improve its own and its suppliers' water efficiency, improve wastewater quality and report transparently on progress.[66]

In addition to this, H&M has made a partnership with the British charity organization that works to give the world's poorest people access to safe water, sanitation and hygiene education, *WaterAid*. H&M started to collaborate with WaterAid in 2002 and each year H&M designs a bikini range with a 10% contribution to WaterAid for each item sold. Since the start of the partnership, H&M has raised more than £1 million (about $1.4 million) for WaterAid's water and sanitation projects, primarily in Bangladesh, where some of H&M's clothing is produced. In this way, H&M's support can have a direct impact on improving the lives of many people in the communities there.

(4) Soil and Air Pollution

(a) Pesticides and Insecticides

According to Organic Exchange, conventionally grown cotton consumes approximately 25% of the insecticides and more than 10% of the pesticides used in the world. Moreover, conventional farming devours roughly a third of a pound of pesticides and fertilizers to just produce enough cotton for a single T-shirt.[67]

As a general rule, farmers that grow conventional cotton use pesticides to deal with unwanted "pests". Those include: insecticides, which target crop-eating insects; fungicides, which target funguses that occur on crop seeds or leaves; herbicides, which target "weeds" that complete with the Crop; and defoliants, which target the cotton crop itself, shriveling up the leaves around the bolls to prevent staining and make harvesting easier.

The use of these products has huge consequences, on the environment in general, and in the human being in particular. Thus, there are serious downsides to many of these chemicals related

[63] Philip Torrens. *"Organic Cotton: Growing together"*. Organic Exchange, 2005.
[64] H&M Sustainability report, 2008.
[65] http://www.unglobalcompact.org/docs/news_events/8.1/Ceo_water_mandate.pdf
[66] H&M Sustainability report, 2008.
[67] Philip Torrens. *"Organic Cotton: Growing together"*. Organic Exchange, 2005.

to human health, including cancer, birth defects, endocrine disruption, and nervous system disorders.[68]

But there are other effects associated to these products. As a matter of fact the soil becomes often nearly sterile because of depletion and because of these highly toxic products.

In addition to this, air is also polluted by growing conventional cotton since it frequently uses aerial spraying, with potential drift onto farm workers, neighboring wildlife and communities.

On the contrary, organic cotton growing makes its pest control maintaining a balance between "pests" and their natural predators through healthy soil. Additionally, it uses beneficial insects, biological and cultural practices to control pests, for instance, it may use "Trap Crops" to lure insects away from the cotton.

Actually, when cotton is the only food available, insects or pests are going to eat cotton. When there is a more diverse farmscape involving many types of plants and animals, the likelihood of severe pest outbreaks diminishes.

However, biological and cultural insect control involves understanding the ecology of the surrounding agricultural systems and the cotton field and making adjustments to production methods that complement the natural system to farmers' benefit. Before farmers realizing the full benefits of a biological approach, they need to move beyond asking how to kill pests and ask the larger question: Why do we have bugs in our cotton fields in the first place?[69]

[68] Philip Torrens. *"Organic Cotton: Growing together"*. Organic Exchange, 2005.
[69] http://attra.ncat.org/attra-pub/PDF/cotton.pdf

2. Manufacturing

a) Social aspects

The climate and economic crisis we are experiencing today make individuals, companies, organizations and governments more and more conscious of the dangers our planet is facing and more aware of the fact that a change in business operations and practices is absolutely necessary. This change refers to the integration of eco-friendly and sustainable processes during the entire supply chain of all types of products and services. In particular, in the organic cotton industry the sustainable supply chain of organic cotton starts with the harvesting of raw material and moves on to production processes with the involvement of manufacturing and social practices.

In terms of social practices there are various parameters that should be considered, such as practices (refer to fair labor conditions) like the "FAIR WEAR FOUNDATION (FWF[70]), good code of conduct and transparency. The FWF´s role is to promote fair labor conditions in the garment industry worldwide. This has been done by issuing the FWF's Code of Labor practices, which all its member companies have undersigned and thereby the company has committed itself to monitor the factories of its suppliers. Furthermore its role is also to verify that the Code of Labor Practices is correctly implemented and respected inside the factories.

H&M´s response towards sustainable and eco-friendly approaches was the introduction of an organic cotton product line in 2007 and also the creation of a *Code of Conduct*[71] that must be implemented by all its suppliers, their suppliers. It refers to policies and guidelines set by the company and implies the commitment of all factories involved in the production processes. An additional initiative taken by the company (as an indication of social sustainability and ethical practices) was the *Full Audit Programme (FAP)*, which goal is to achieve a more efficient dialogue with the suppliers in order to push them to take responsibility for improving the production conditions. Moreover the company is a member of *Better Cotton Initiative*[72], the multi-stakeholder cooperation described previously.

The company has also applied some chemical restrictions to its suppliers concerning safe use and disposal of waste. These environmental requirements are controlled by 110 quality controllers and 30 code of conduct inspectors. These employees also check the quality of the waste water particularly for the factories using wet processes such as bleaching and washing. The extent to which the factories satisfy the environmental requirements is monitored by H&M's environmental policy.

[70] FWF exists to promote fair labor conditions in the textile production worldwide. Available at: http://www.ecofashionworld.com/Organizations/Fair-Wear-Foundation.html

[71] Code of conduct exhibit at the end of the project

[72] Better Cotton Initiative BCI: a multi-stakeholder cooperation with a mission to reduce the main environmental and social impacts of cotton cultivation by defining and enabling the adoption of practical, performance-based standards

b) Environmental aspects

Before examining some environmental aspects of the organic cotton we must agree on a definition: it is the type of fiber harvested and grown without being exposed to chemical fertilizers, pesticides, from plants which are not Genetically Modified (GM). This process is guaranteed by certification schemes and in H&M´s case, as *Henrik Lampa* mentioned: "*regarding the organic origin of fiber we have two certification schemes, one in the agricultural part, which includes an American and an EU standards and one in the supply chain that certifies the integrity of the material and separates the production line of fabrics without mixing the materials."*

The most positive characteristics of organic cotton are: that the ecosystem where it has been produced has not been damaged and that chemicals have not poisoned the farmers and their families. On the contrary, in conventional cotton harvesting (which uses chemical fertilizers) not only the fiber is harmed, but also the soil which becomes full of chemical substances while absorbing water and even the air quality, with the constant spraying, is deteriorated.

As far as manufacturing practices are concerned, during production organic clothing manufacturers use only natural materials that biodegrade easily. For example, natural spinning oils are used to facilitate spinning; potato starch is used for sizing, hydrogen peroxide for bleaching, organic color grown cottons, low-impact dyes and earth clays for coloration and natural vegetable, mineral inks and binders for printing on organic cotton fabric. These natural alternatives reduce and eliminate the toxic consequences found in conventional cotton fabric manufacturing, where petroleum scours, silicon waxes, formaldehyde, anti-wrinkling agents, chlorine bleaches[73], or other unauthentic chemical materials are used. These materials even if they are ordinary, are not innocent, since they can kill bacteria and viruses.

In terms of machinery and production equipment *Henrik Lampa* added that: "All *machinery and techniques used are the same with those of conventional cotton´s production and workers don´t need to have a special expertise."* The stages included in the manufacturing of a cleaner fabric are the following:

1. Spinning the cotton fibers to create yarn
2. Weaving or knitting to create bolts of cotton fabric
3. Dyeing and printing
4. Cutting and sewing of garment for consumers
5. Quality inspection
6. Finishing and packaging

(1) Spinning

Producing better quality fabrics requires either to find the sources that would be consistently able to provide with high-quality woven and knitted fabrics at a reasonable lead time and price, - which is what H&M does since it doesn´t own factories - or to set up its own fabric mills.

H&M cooperates with other factories for garments production. As the manufacturers are based in different locations, H&M has standardized a specific level of quality across the world, in order to ensure that customers always get the same quality when buying the end products.

[73] U.S ENVIRONMENTAL PROTECTION AGENCY, http://www.epa.gov/kidshometour/products/bleach.htm

Initially its production activities were taking place in Sweden, but in the 1960s they were carried out in other Scandinavian countries and in the UK. During the years the production locations were increasing and were being carried out in numerous countries, where in each one of them H&M was setting up a production office. In 2000 it already had 21 production offices, of which 10 were in Europe, 10 in the Far East, and 1 in Africa.

(2) Weaving

The woven fabric is either purchased from external resources or internally produced, when the company owns a factory. Usually it is a highly automated process, with minimal human intervention in order to minimize defects and ensure high quality of the woven fabric.
The knitting process can take place either prior to the dying process (piece dye) or after its completion (yarn dye) depending on the pattern of the knitted fabric.

Organic cotton yarn, www.artistic-license-inc.com

(3) Dyeing and bleaching

The fabric consumes large amounts of energy, water and chemicals and therefore exposes the environment to stress. Generally H&M has no business relationships with dyeing plants and as a result its opportunities to impose demands on them are very limited. Instead the company tries to encourage them to adapt their operations to the environment by offering forty steps as environmental considerations for their activities that provide noticeable results and improve their environmental performance. An example of these requirements is the better insulation of machinery and cables, which goal is to reduce the energy consumption. Through these requirements H&M points out the environmental benefits and then the cost savings linked to the efficient use of resources. This approach is known as *"cleaner production"*. Together with the *Wuppertal Institute*[74], H&M has produced a tool covering around forty measures the dyehouses can choose from. The process involves H&M's auditors visiting the various facilities to assess the potential for improvement and to demonstrate possible action that can be taken. Then the dyehouses draw up action plans stating which changes they have decided to implement and H&M follows up their progress every other month over a one-year period.

For example cleaner Production was implemented at wet processing mills (dyeing and printing) in India and China supplying fabric to H&M´s suppliers**.** The tool was designed for use by the H&M's code of conduct, auditors together with the mill personnel were to evaluate the status and to provide options for improvement related to the mill´s environmental performance. The

[74] The **Wuppertal Institute for Climate, Environment and Energy** is a German research institution that explores and develops models, strategies and instruments to support sustainable development at local, national and international level. Available at http://en.wikipedia.org/wiki/Wuppertal_Institute

project focused on energy, water and chemical improvements, since these constitute the most important environmental aspects in the garment production process.

(4) Cutting and sewing

At this step the fabric is already provided with some characteristics such as softness, dimensional stability and durability. Also with other special qualities such as hand feel. And with certain surface characteristics like stain resistance or wrinkle free. This process is customized according to customers requirements. And it is at this stage that a big amount of scrap waste occurs of cutting. Usually, the textile scrap is not reused neither recycled, but ends up in the landfills resulting in environmental pollution.

(5) Quality inspection

After production is completed, the fabric goes through a 100% inspection in order to record all quality problems. Then designated quality-control groups go to work with the production people to identify the source of each problem and determine ways to eliminate the defects. This method has proven to be very successful, as it results in substantial and sustainable improvements in the quality of fabric.

(6) Finishing and packaging

Finishing ensures the smooth surface of the garment. It includes ironing, folding or hanging, attachment of various accessories such as hand tags and all the accessories required (including buttons, care labels, wrapping tissue, collar bands, hangers, and poly-bags).

(7) Chemical restrictions

Many stages are required to process cotton from fibers to fabrics. The fibers are cleaned, carded (combed), spun into yarn, coated with starches or chemicals, woven into fabric (or knitted in the case of a T-shirt), cleaned up from their coating and their natural wax, bleached, immersed in concentrated caustic soda, dyed or printed, and chemically treated for easy care and other properties. All these stages require a large number of chemicals of various toxicity and hazards. Some of these chemicals threaten the workers' health, and can cause environmental pollution. Finally, these chemicals are found as residues in the finished product, and can affect consumers' health.

With a mind-set and vision of sustainable environment that enables the quality garments production, both companies and workers can benefit from the results of continuous simultaneous growth of the environmental protection, the corporate social responsibility, and the health and safety improvements. This goal will be reached through implementing modern industrial engineering and management techniques (improved productivity through better production planning, material flow, and better line balancing) and adjusting piece-rate response to maximize worker output (and as a consequence, workers earnings), under safe and ethical working conditions for the factory staff.

3. Packaging

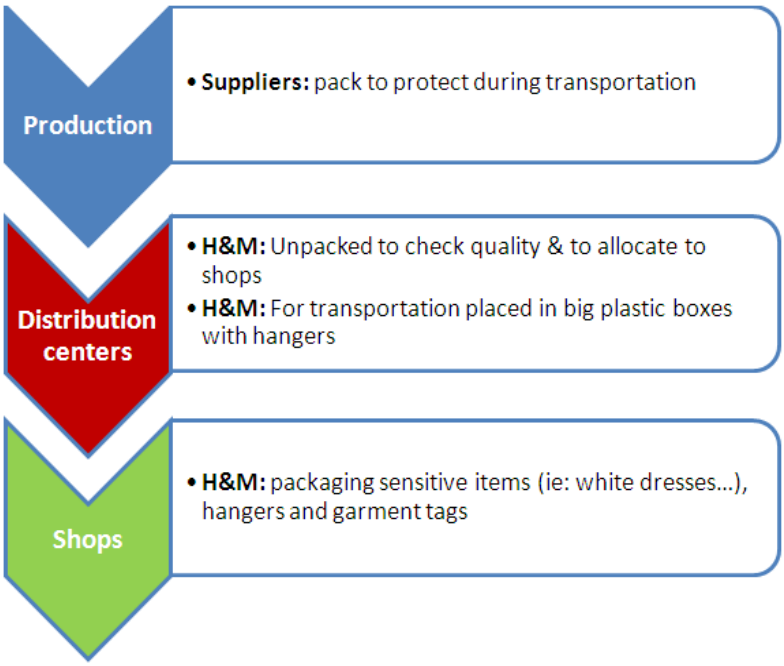
A process at its early stage with some interesting measures

Packaging is, thanks to its utility (protection of the garments) and because of its potential negative impact on the environment (waste generation), a key element of the supply chain. It is important to note that, whether H&M is producing organic or non organic garments, there is no difference in the packaging process. At H&M there are 2 different kinds of packaging: the packaging produced by the suppliers (manufacturers) and the packaging produced directly by H&M.

a) Social aspects

(1) Actors involved and actions taken

The figure below describes the different stages implying the use of packaging:



First stage, at the end of the production process, the suppliers have to pack the garments in order to protect them during transportation. Second stage, when the garments arrive from the transit terminal to the distribution centers, H&M has to unpack the clothes sent by the suppliers and to pack them again for transportation until the shops. Finally, in H&M shops the packaging consists in a protection for some delicate items (it is very rare), hangers and garment tags.

b) Environmental aspects

(1) Practices and processes

(a) Packaging produced by suppliers

H&M supplies the fabrication of its clothes, and then its suppliers are in charge of packaging the clothes to protect them during the transportation from the fabrication plants to the distribution centers. H&M gives details and monitors the process by specifying on its code of conduct (section dedicated to environmental requirements for suppliers) how and which material to use to pack the garments. For example they prohibit the use of polyethylene, because it is not considered as biodegradable as it takes several centuries until it is efficiently degraded.[75] Below is an extract from the part of the code of conduct of H&M dedicated to environment.

7. ENVIRONMENT

The environment is of increasing concern globally and H&M expects its suppliers to act responsibly in this respect. Our suppliers must comply with all applicable environmental laws and regulations in the country of operation.

According to the H&M Chemical Restrictions, we do not allow use of solvents or other hazardous chemicals in the production of our garments. All suppliers must sign the H&M Chemical Restriction Commitment, confirming that no prohibited chemical substances will be used in the production.

8. MONITORING AND ENFORCEMENT

8.1 The principle of trust and co-operation

H&M expects all its suppliers to respect the above Code of Conduct and to actively do their utmost to achieve our standards. We trust our own staff to take a lot of responsibility in their work, and we expect from our suppliers that they do the same. We believe in co-operation and we are willing to work with our suppliers to achieve workable solutions in each individual case.

We are willing to take into consideration cultural differences and other factors which may vary from country to country, but we will not compromise on our basic requirements regarding safety and human rights.

[76]

The goal of H&M, via its audits (checking the right application of national laws and code of conduct) and trainings policies is to monitor the use of packaging by its suppliers and to help them to reduce the amounts.

[75] http://en.wikipedia.org/wiki/Polyethylene#Environmental_issues
[76] H&M code of conduct (See appendix)

(b) Packaging produced by H&M

Three types of packaging are going to be analyzed: first, H&M "inherits" the packaging produced by its suppliers, second H&M has to pack the garments for transportation from the distribution centers to the shops and finally H&M has to pack specific clothes in the shops.

Treatment of the packaging coming from the suppliers

The volume of packaging coming from the suppliers is very important. Then to comply with European law, H&M has to pay a tax. A European law covers all the packaging issues and specifically the question of the responsibility of every packaging producer (paper, metallic packaging…). The European community first introduced measures on management of packaging waste in the early 1980´s. A directive of 1994 required the manufacturers to play an important role in mitigating the post-consumer environmental impacts of products from which they profit. A directive adopted in 2004 formally amends the 1994 packaging directive by establishing a deadline of 2005 for member states to transpose the 2004 packing directive into law. After transposition into national laws, most of the European countries obliged the companies using packaging to pay a "packaging tax", in order to contribute to the public collecting and recycling process realized by the local authorities.[77]

Packaging for transportation from the distribution centers to the shops

H&M tries to reduce as much as possible the use of packaging at this stage. Then H&M ask the transportation companies (suppliers) to use big plastic boxes instead of carton as they did before. Nowadays everything has been replaced by strong plastic boxes and covers protection reusable (provided by schoeller Arca systems – Integra boxes)[78].

H&M tries to raise environmental awareness, concerning packaging, from its transportation suppliers. H&M helps them to minimize the use of packaging and to comply with many environmental requirements, through a code of conduct, trainings and regular audits. The audits are leaded one time a year by a quality assurance team, which works closely to the suppliers to ensure that safety and quality standards are met. During the audits they verify the compliance with the local environmental legislation and H&M code of conduct. The auditors focus on four main areas: governmental permits, chemicals (production & safety), water treatment and waste management.[79] H&M is particularly involved in the application by its suppliers of the REACH directive (European chemical legislation), which seeks to reduce exposure to harmful chemicals and to register the substances produced or imported into the EU. H&M is a member of the Apparel and Footwear International Restricted Substance List Management Working Group[80].

[77] www.ec.europa.eu – *"Packaging and packaging waste: environment"*
[78] www.schoellerarcasystems.com
[79] H&M CSR report 2008
[80] www.apparelandfootwear.org

AFIRM´s mission is to reduce the use and impact of harmful substances in the apparel and footwear supply chain. This is achieved by organizing seminars for suppliers, so they can learn how to reduce the use of hazardous chemicals.

Packaging in shops

H&M tries to minimize "shop packaging" as much as possible. This type of packaging is composed of: first the protection of delicate items (for example white dresses), second the protection of the socks, tights, make-up and finally the hangers.

H&M is not making any specific effort on packaging reduction for the socks, tights and make-up. The hangers are more of a concern for them, for example in 2008, 76% of the hangers purchased were recycled and most of them are reused in stores.[81]

As a precursor in this field we can comment the commitment taken by Tesco to reduce packaging on both branded and its own-brand products of 25% by 2010. Tesco was one of the original signatories to the Courtauld commitment agreeing to work with WRAP [82](a UK based private company that helps companies to reduce waste and recycle more) to achieve an overall reduction in packaging waste. Packaging at Tesco also carries information on its constituent parts and how, and if, it can be reused, recycled or composted.[83] Another important action has been taken at the beginning of 2009 with the opportunity for customers to dump the excess of plastic and paper packaging from the products they buy, before leaving the Tesco shops.[84] The material collected is analyzed to identify any trends (what packaging is deemed unnecessary) and help Tesco to redesign its packaging. The paper is recycled under a contract with Caerphilly-based Severnside, and the plastic is recycled under a deal with Leicestershire-based J&A Young.[85]

Another interesting initiative is the early commitment of Timberland for the labeling on each footwear box. Timberland sees packaging as an education; products are labeled with information on their origin, environmental and community impacts. The "nutritional labels" (label found on food and beverage products) give data on: two aspects of Timberland´s environmental impact – the energy used to produce the pair of shoes and the percentage of renewable energies in production – and on three aspects of community impacts – the number of audits in the factories and number of factories assessed through labor rights & code of conduct. In 2006, Timberland began putting labels on 30 million footwear boxes. Later on they have created a whole line of "environmentally friendly" boots with a specific label called *Earthkeepers* (design criteria around recycled, organic and renewable material content, solvent-free adhesives and reduced climate impact)[86]. Taking one step further in 2007, they have implemented a "Green Index Rating" ("Green Index" hangtag) in order to provide specific information about the environmental impacts of the products (climate, chemical use, material) with a scale of 0 (best) to 10 (worst). The goal is to have this rating on all their shoes boxes by

[81] H&M CSR report 2008
[82] www.wrap.org.uk
[83] www.edie.net - "Tesco to slash own brand packaging" – Sam Bond - 24 April 2007
[84] www.brandrepublic.com - "Tesco allows consumers to dump packaging in-store" - James Quitter - April 2009
[85] www.lwtsrecycle.com – "Tesco to allow customers to leave excess packaging behind" – April 2009
[86] www.timberland.com

2010. In 2007, five pairs of shoes have been introduced with the rating.[87]Below is a copy of the label and the Green Rating Index available on Timberland´s footwear boxes:

Our Footprint Notre Empreinte

Environmental Impact Impact sur l'environnement

Energy to Produce: (per pair)*	2kWh
Énergie utilisée (par paire)*	2kWh
Renewable energy (Timberland-owned facilities):	5%
L'énergie renouvelable (sites appartenant à Timberland) :	5%

Community Impact Impact sur la communauté

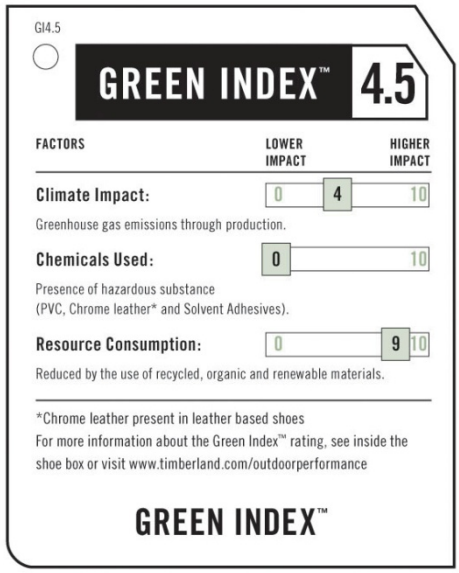
Hours served in our communities:	119,776
Nombre total d'heures données :	119,776
% of factories assessed against code of conduct:*	100%
% d'usines évaluées pour leur conformité au code de conduite :*	100%
Child labor:*	0%
Main-d'oeuvre enfantine :*	0%

Manufactured Fabriqué à

Shingtak, China Shingtak, Chine

* metrics based on global footwear production for 2005
* informations fondées sur production totale de chaussures en 2005

FOR MORE INFORMATION VISIT WWW.TIMBERLAND.COM/CSRREPORT
POUR PLUS D'INFORMATIONS : WWW.TIMBERLAND.COM/CSRREPORT



GI4.5

GREEN INDEX™ 4.5

FACTORS	LOWER IMPACT	HIGHER IMPACT
Climate Impact:	0 **4**	10
Chemicals Used:	**0**	10
Resource Consumption:	0	**9** 10

Greenhouse gas emissions through production.

Presence of hazardous substance (PVC, Chrome leather* and Solvent Adhesives).

Reduced by the use of recycled, organic and renewable materials.

*Chrome leather present in leather based shoes
For more information about the Green Index™ rating, see inside the shoe box or visit www.timberland.com/outdoorperformance

GREEN INDEX™

[87] www.earthkeeper.com – "The evolution of Timberland product labeling" – June 2008

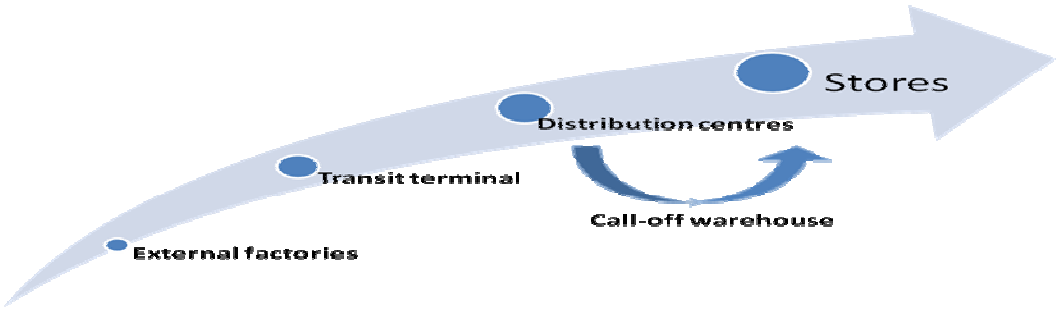
4. Distribution

A process flexible enough to support international growth without heavy initial investment
Because H&M is an international company which has to supply its entire stores minimum two times a week, logistics have to be perfectly organized. Then, distribution is a key element for H&M – a competitive advantage - especially when Zara leader in the field defined itself as a "distributor of fashion".[88] This part is going to cover the usual distribution process at H&M, as it is the one followed by the organic cotton items.

a) Social aspects

(1) Actors involved

The right product has to arrive at the right place, at the right time and at the right cost.[89] It is a challenge for H&M, that is the reason why according to the situation, they operate through two different models of supply chain: the first one is cost orientated, with manufacturing based in Asia, the second one, is more reactivity orientated and is Europe based (used for: fashion-sensitive garments - high demand in a short period of time, then production is closer to the market demand) and is Europe based. But in both cases the distribution process is similar: finished products (manufactured by suppliers) are shipped from the external factories (H&M works with around 2700 production units mainly in Asia or Europe)[90], to the central warehouse of H&M based in Hamburg- Germany (considered as the transit terminal). This terminal receives all the goods from all suppliers across the world. Later on, the garments are sent to the different distribution centers, and finally arrived to the shops.



Logistics (import, stock management, distribution) is managed centrally from the headquarters in Stockholm, through a logistics department with 3200 people. In most of the countries in which H&M operates a distribution center is set up. H&M has got 13 distribution centers in Europe & Asia (Examples: 2007 at Poznan, Poland for northern Europe & 2008 at Ghlin-Baudour, Belgium for southern Europe) and one distribution center in the US.

[88] http://www.inditex.com/es/quienes_somos/nuestro_grupo - *"Inditex es uno de los principales distribuidores de moda del mundo)"*.

[89] H&M Green Logistics 2009 – www.hm.com
[90] H&M CSR report 2008

When H&M decides to enter into a new market, it does not immediately set up a distribution centers in the specific country, but it uses the one from the closest country. (For example, for the expansion to Portugal, the Spanish distribution facilities have been used, or for Italy the facilities located in Switzerland etc...). This method helps H&M to avoid the initial costs associated to entering new markets. And the old facilities are used until the volume of sales in the new market reaches economy of scale.

(2) Actions taken

When the merchandise arrives from the transit terminal to the distribution centers located in the different sales markets, they are unpacked, checked for quality and depending on the demand, they are either allocated to the different stores, or kept into a warehouse called the call-off warehouse (a centralized room in each distribution center dedicated to stock the merchandise). It is important to mention that the individual stores do not have backup stocks; they are replenished as required from central stockrooms. As soon as a product is sold a request is sent for replenishment.

To facilitate the flow of goods, H&M, in 2006, has developed a new concept: the "regional grouping". It implies for goods to be purchased, allocated and distributed at a regional level (a group of countries), rather than, as before, to each sales country individually. The goods are then split between the different sales countries based on demand in the respective market.[91]

[91] H&M AB – Full year report – 1st December 2005 to 30 November 2006.

b) Environmental aspects

(1) Practices and processes

For the distribution centers to run properly, H&M has to employ many people and to use heavy machinery. At this stage many actions are taken to reduce the risks on the environment. For example the reduction of use of plastic to cover and protect the items during the transportation from the distribution centers to the shops (see the part dedicated to packaging). Or the large use of recycled hangers. Also, the effort made on transport labeling reduction, when they have started in 2008 to change their markings on the side of the delivery boxes. They are changing the size of the paper used for packaging labels to A5 from A4 and only sticking labels on one side of the transport boxes rather than three. The calculations suggest this will reduce paper use for labeling packaging by approximately 80%.[92]

H&M distribution process is quite long compare to its competitors. For example at Zara, the champion in the field, one million items per week pass through the logistics center based in La Coruña (platform of 200 kilometers of wires, on a surface of 400 000 square meters, fully automated). Finally Zara reaches a lead time of 14 days between the initial designing of the product to its final delivery. H&M reaches the same result in about 21 days (Gap inc, 9 months), mainly because of the time consumed with the mandatory transit of the items to Germany (transit terminal) before their final transportation to a more specific geographic area (distribution center).

(2) CO2 emissions

The requirement for suppliers to send clothes to the transit terminal in Germany makes the transportation time longer and thus the CO2 emission rate increases. Moreover as the production is mainly based in Asia and has to transit to Germany, the process is slowed down and the CO2 emissions rate increases.

[92] H&M CSR report 2008

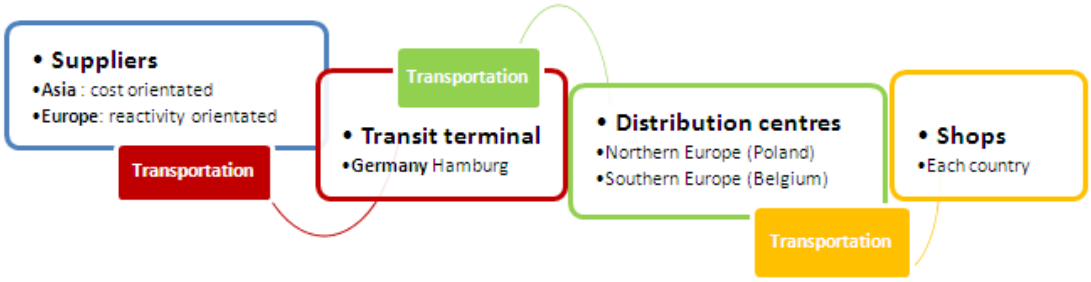
5. Transportation

A good selection of suppliers and some encouraging initiatives
Transportation, because of its potential environmental and social impacts, is one of the main areas of concern of the supply chain. In this part, the usual transportation process at H&M is going to be analyzed, as it is the one followed by organic cotton items.

a) Social aspects

(1) Actors involved and actions taken

The figure below describes the different stages of the transportation process:



H&M is not directly in charge of the transportation process, everything is supplied to different transportation companies. H&M pushes all its suppliers to constantly improve the "eco-suitability" of their operations. For several years now, H&M has evaluated the haulage firms it has used on the basis of a number of environmental factors. Since 2005, for instance, all vehicles purchased must meet some emissions standards requirements, and at least 50 percent of all drivers must have undergone both a theory & practice training course in economical driving. "When we plan new routes, we discuss what the various alternatives would mean in terms of kilograms of carbon dioxide. We have concrete goals that have to be reached, and our trucks must be traceable, which means that we must be able to show afterwards that we have driven exactly as we planned"[93], relates an employee from an H&M transportation supplier.

First step: transportation by ship or by air (when there is a significant and urgent customers demand for new trends), from the factories to the transit terminal in Germany. H&M is in charge of the cost of the transportation. The largest part of the production comes from Asia but the whole garments transit to the global distribution center based in Germany.
Second step: transportation by rail from the transit terminal (Germany) to the distribution centers. According to the requirement of a shop, the garments are sent to a distribution center located in a geographic area (close to the specific shop).
Third step: transportation by truck or rail from the distribution centers to the shops. Distribution centers are located in strategic geographic areas, which make the transportation to the shops easier (For example Poznan in Poland is dedicated to the shops based in Northern Europe or Ghlin-Baudour in Belgium to the shops in southern Europe).

b) Environmental aspects

[93] Inside Lane – "Clothes with short wear-by date" – June 2008

(1) Practices and processes

More than 90 percent of transportation is done via ocean, rail or road. Because of its cost, air transportation is used only in exceptional cases when faster deliveries are required. [94]

When there are particularly large orders from a store, the items are sent directly to this store, and when there are specific demands from a country, the garments are sent directly to the country.

H&M has chosen climate smart methods of transportation such as sending goods by ship (which corresponds to 22 GHG emissions in co2 equivalent g/km)[95] or by rail (with no direct emissions)[96]. Also, H&M monitors the environmental performance of logistics services providers such as shipping and road transport. For example in Sweden, transportation from distribution centers to shops is supplied to a company called Green Cargo fashion logistics. H&M has selected this supplier because of its high consideration on environmental matters. Suppliers for transportation are regularly evaluated according to environmental requirements. For instance since 2005, to become an H&M supplier, it is obligatory for all trucks to comply with Euro 3 or US 98 emission standards and for a minimum 50 % of the truck drivers to receive eco friendly driving trainings.[97] Here is an extract from H&M website concerning the specific detail of their requirements:

"*Since 2001, we evaluate our transport service providers on a variety of environmental factors in order to improve their environmental performance. Our requirements are gradually becoming stricter. From January 2007, the following minimum requirements apply to road transport service providers.*

- *Road transport for H&M must be carried out with vehicles which meet the requirements of Euro 2 or US 94.*
- *All vehicles purchased must meet the requirements of Euro 4 or US 04.*
- *Diesel with maximum sulphur content of 500 ppm (0.050%) for USA and Canada and 350 ppm (0.035%) for other countries.*
- *Instructions to drivers on what fuel quality to use.*
- *At least 75 per cent of all drivers must have received theoretical and practical training on fuel-efficient driving, i.e. eco-driving.*
- *The transport company must have a policy banning idling for more than one minute.*"

Another example is the commitment of H&M to the BSR Clean Cargo initiative. Clean Cargo Working Group (CCWG) is a business to business collaboration (between ocean carriers and their customers) dedicated to integrating environmentally and socially responsible business principles into transportation management.[98] Participants include more than 25 leading

[94] H&M Green Logistics 2009: http://www.hm.com/it/abouthm/factsabouthm/fromideatostore/logisticsanddistribution__fromideatostorelogisticsanddistribution.nhtml
[95] Source: OECD (2001) Good Practice Greenhouse Gas Abatement Policies: Transport
[96] Source: OECD (2001) Good Practice Greenhouse Gas Abatement Policies: Transport
[97] Mobilis – « H&M : des vêtements à date courte » - June 2008 - www.magazine.volvotrucks.com
[98] Introduction to the CCWG – Business for Social Responsibility 2008

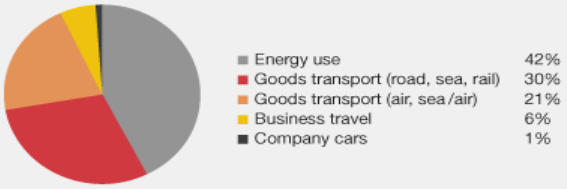
multinational manufacturers, retailers and freight carriers which collectively move nearly 60 percent of global container cargo. This group integrates three components: emission calculation (for greenhouse gases and other air pollutants), environmental performance reporting (EPS Environmental performance survey tool) and environmental performance improvements (goal to promote environmentally friendly practices). Another point is the integration of a code of conduct; this means extending social, environmental and economic criteria to their transport suppliers.

(2) CO2 emissions – Pollution

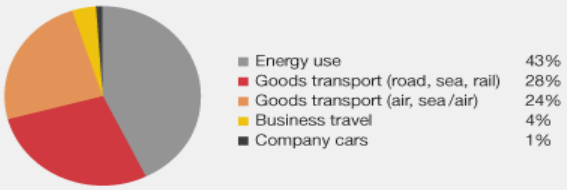
Carbon dioxide emissions 2005-2006

Source of emissions	2006	2005	Change
Energy use	128,075	129,246	-1%
Goods transport (road, sea, rail)	90,682	83,149	9%
Goods transport (air, air/sea)	62,426	71,131	-12%
Business travel	16,691	12,537	31%
Company cars	2,531	2,346	8%
TOTAL	300,405	298,409	1%

Share of total carbon dioxide emissions by emission source 2006



Share of total carbon dioxide emissions by emission source 2005



A large proportion of H&M carbon dioxide emissions derive from transportation of goods. [99] Carbon dioxide emissions caused by the transportation of goods have reduced by a small one per cent in total, from 154,280 to 153,108 tonnes. Emissions from transport by road, sea and rail have increased by nine per cent (which is in line with H&M increase in sales), while emissions from air and sea/air freight have reduced by twelve per cent in absolute terms.[100]

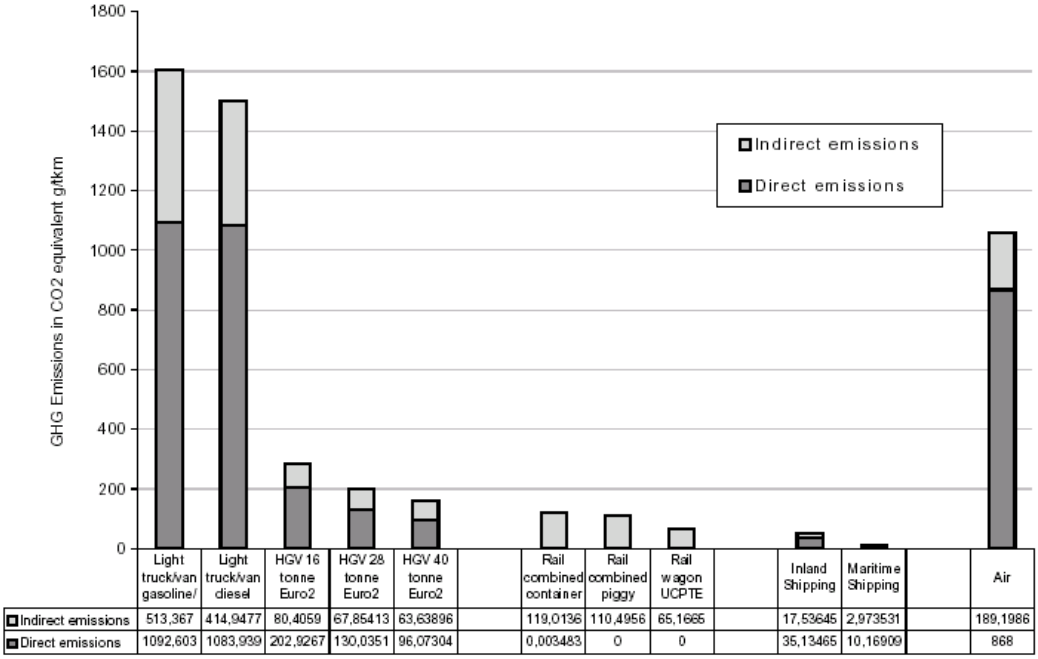
It is important to mention that the airfreight volumes have been halved in just a few years. Goods sent from producers in Asia are shipped almost exclusively by sea in order to minimize costs. Within Europe, H&M's ambition is to increase the share of movements by rail over road.

The figure below shows the amount of direct and indirect emissions emitted by each mode of transport. The less emitting modes of transport are: Ship and rail. The more emitting are: truck (with 868 GHG direct emissions in co2 equivalent g/km) and air (with 520 GHG direct emissions in co2 equivalent g/km). Then this schema comforts the choice of H&M to switch from air to ship and from rail to road.

[99] H&M – Environmental issues : Carbon dioxide emissions 2006 : http://www.hm.com/hu/corporateresponsibility/sustainabilityreporting/carbondioxideemissions2006__csrcarbondioxidemissions2006.nhtml

[100] H&M environmental issues 2006 & H&M CSR Reporting 2006: http://www.hm.com/filearea/corporate/fileobjects/pdf/en/CSR_REPORT_2006_PDF_1211354995094.pdf

Figure 4: **Lifecycle GHG emissions for European freight transport modes**



	Light truck/van gasoline/	Light truck/van diesel	HGV 16 tonne Euro2	HGV 28 tonne Euro2	HGV 40 tonne Euro2		Rail combined container	Rail combined piggy	Rail wagon UCPTE		Inland Shipping	Maritime Shipping		Air
Indirect emissions	513,367	414,9477	80,4059	67,85413	63,63896		119,0136	110,4956	65,1665		17,53645	2,973531		189,1986
Direct emissions	1092,603	1083,939	202,9267	130,0351	96,07304		0,003483	0	0		35,13465	10,16909		868

[101]

[101] Source: OECD (2001) Good Practice Greenhouse Gas Abatement Policies: Transport

6. Marketing

Organic cotton in the marketing process at H&M does not have a different communication line than the rest of the items. Since it is incorporated as a material in every area (women, men, baby, denim…), there is not a special advertising campaign to promote it. That is why the usual marketing process at H&M is going to be analyzed.

The marketing phase at H&M has several aims. It pretends to communicate the brand values, create interest in the different collections that H&M launches every season and drive customers to the stores. Overall, it not only aims to show the diversity of the collections and brand but it also wants to inspire to its customers. However, there is no desire of communicating one specific ideal, but a range of lifestyles and attitudes instead.

At this point, it is important to highlight that the marketing phase is intrinsically connected to the next step, sales. The way H&M communicates can have huge impacts on its sales market. Stating this, it is also necessary to say that the most important medium for advertising at H&M is the store. However, there are other channels used by the company such as the Internet, outdoor media, TV spots, ads in print media, catalogues and events. All the different channels used by H&M follow the International Chamber of Commerce's basic rules for advertising.

As a general rule, H&M advertising campaigns are made in Sweden by the H&M's marketing department in cooperation with creative professionals located in the major fashion nucleus of the world. Nonetheless, the media strategy is adapted to local requirements and conditions.

What is also important to remark, it is the trend that H&M have had in the last decade regarding associations with different characters as well as well-known designers. Through the acquisition of licenses, H&M has associated itself with cartoon characters such as Snoopy or Superman for its collection on pajamas and underwear.

In addition to this, very famous and prestigious designers were contracted by the Swedish company to cooperate in some of its collections. The best examples to illustrate that are the collaboration of Karl Lagerfeld (designer who belongs to Channel) in autumn of 2004, the teamwork with Stella McCartney in winter of 2005, the cooperation with Viktor & Rolf or Roberto Caballi in 2006 and the singers Madonna and Kylie Minogue in 2007. Most recently, this year 2009, the most outstanding collaboration has been with the designer Mathew Williams. In addition to this, the marketing campaigns at H&M frequently use very well-known models and artists as its image to have as much impact as possible in its target.

On the whole, H&M has not made any environmental message in its marketing campaigns up to now. However, this year 2009 they have been launched a special campaign to collaborate to fight AIDS, a very important issue of today's worldwide society. Such campaign shows that H&M is moving towards a communication line more linked to social issues. Nevertheless, a step forward must be done by the Swedish company to add environmental topics in its marketing strategy.

a) Social aspects

(1) Actors involved

(a) Consumers

They are the receptors of the message of the different campaigns of H&M. However, these can be differentiated by several aspects such as age, size, style, and even market. Since they are the audience that must be impacted by H&M messages, many channels has been used, from a TV Spot to a Facebook banner. Mainly, they can be divided by baby, children, teenagers, woman and men. However, what all have in common is the love for clothing but at an affordable price.

Regarding environmental and social issues when analyzing H&M's customer, it is important to highlight the fact that there has been a change in the last decade. Year by year, they are being more and more demanding on aspects never though before. Today, it is equally important for them to get quality in the clothing as in the processes by which the clothing has been made. Aspects such as labour conditions, environmental impacts or fair-trade are having more and more importance for the general public, in general, and for customers, in particular.

From this perspective, customer expectations are changing since they are more and more looking for companies and brands they feel have a real commitment to environmental and social issues. As it has been previously analyzed in part one in the section "The Consumer of the XXI Century: "The Green Consumer", facts and figures are constantly showing that companies must move towards a more sustainable way of doing things. And marketing is one of those.

For instance, in 2007 the growth in clothing boycotts increased equal to 20% [102], the percentage of consumers that not only say they were willing to pay more for ethically produced and environment-friendly products but actually bought these products increased up to 21% [103], the increase in UK household spending in line with ethical values from 2002-2007 went up 81% [104], the percentage of consumers who consider product information on packaging very important when judging companies went up 43% [105] and the number of US consumers that have considered switching brand due to issues of CSR increased up to 66% [106]. Finally, it is interesting to mention that the size of the US market for ecological products in 2007 was the huge figure of $227 billion [107].

All this facts and figures are just examples that show the huge demand of ethical products there is in today's marketplace. So if customers change their needs, companies must be able to meet such needs if they want to succeed in the future. Marketing must therefore adapt itself to the new demands.

[102] Ethical Consumerism Report 2007, Co-Op
[103] Addressing Consumer Concern About Climate Change, The McKingsley Quarterly (March 2008)
[104] Ethical Consumerism Report 2007, The Co-Operative Bank
[105] Accountability, "What assures consumers?", 2006
[106] Let them Eat Cake, WWF report 2004
[107] Let them Eat Cake, WWF report 2004

(b) Marketing department

The marketing department of H&M is placed at the headquarters of the company in Sweden. They work in collaboration with creative professionals located in the biggest nucleus of the world. Its main aim is to build a strong brand with a positive and healthy image, while at the same time convey the company's offering.

(2) Actions taken

The main activities that has been done up to now are the following:

(a) Magazine

Every season H&M publishes a magazine with articles and news about the company and the latest trends, interviews to different interesting people related not only to the fashion industry, but also to the music world, for instance. The range of themes covered depends on every magazine, however, all information is related to the activities that might be interesting for the target (sports, travel, beauty...). Such format allows to H&M not only to promote its new collection, but also to add other values to tha brand. It also gives more credibility for the reader. It also distributed to the staff and available at the website.

(b) Catalogue

A catalogue is also available. This is distributed in shops and other key places such as important streets or by usual mail. As the magazine, it is pubished every season but it only shows pictures to illustrate the new collection and prices.

(c) PR activities

H&M aims to be in close contact with the media in order to showcase its fashion and increase knowledge about the company. In other words, it also communicates continually with the business press and financial markets.

At this point is essential to remark that the Organic Cotton collection get news coverage due to the press releases that are both published in H&M's website and sent to different media by the Communication Department of the company. Thanks to this action, the H&M's Organic Cotton Line has appeared as a new in many media, especially on the Net. (Find in Appendix 1 the latest press release about the organic cotton line published on January last year and in Appendix 2 some examples of news coverage).

(d) Advertising Campaigns

H&M uses different media when it launches an advertising campaign. Those channels usually are: outdoor advertising, TV spot, ads in print media and banners in Internet (Facebook, MySpace among others).

(e) Special advertising campaign: Fashion & AIDS collection

On the 28th of May of 2009 H&M launched a campaign to help fight AIDS and to raise youth awareness in the fight against the disease. The Swedish company contracted some of the biggest celebrities from the world of fashion, music and style such as Katy Perry, Dita Von Teese, N.E.R.D or Yoko Ono, among artists.

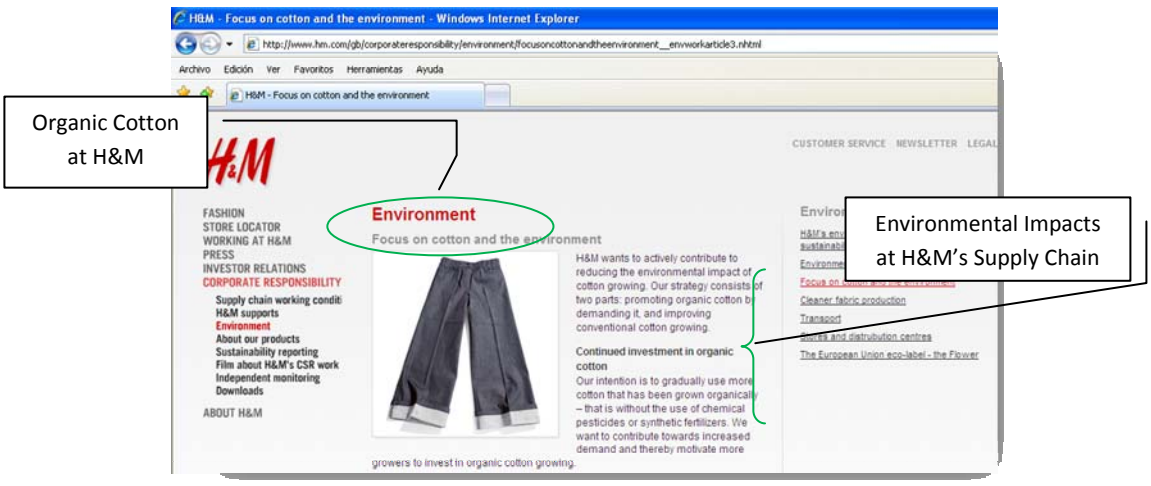
The main collaboration in terms economic terms is that 25% of the sales price is donated to youth HIV/AIDS awareness projects. However, what it is also important is the fact that the collection is made by 100% organic cotton, for both guys and girls in H&M's youth DIVIDED department.

So such initiative has a double value. H&M is not only taclking a huge social problem as it is AIDS nowadays, but it is also promoting good practices towards the environment while using 100% of organic cotton in it.

In that way, organic cotton is being promoted as well through the AIDS campaign.

(f) Website, Press conferences, Shows and Events

H&M also communicates through its own website all information about Organic Cotton. Additionally to the press releases, H&M has information about different issues. Among them, the goals concerning organic cotton, information about the process followed by the garment at H&M's supply chain or information about the actions taken to minimize the environmental impacts of its operations. Some of those issues are shown below in the picture.



b) Environmental aspects

(1) Practices and Processes

Since organic cotton does not have its own advertising campaign, there are no so many issues to take into account when analyzing environmental impacts of this phase. However, as it is indirectly promoted through the usual marketing/advertising campaigns that H&M launches every season, there are several issues to highlight during this phase.

Mainly such issues are the ones related to the production of paper for magazines, catalogues, posters and pictures at the stores and outdoor advertising. Unfortunately, there is no data available to assure if the paper used by H&M in their communication materials is required to have the certification of the Forest Stewardship Council (FSC), an international non-profit, multi-stakeholder organization established in 1993 to promote responsible management of the world's forests.

Additionally, since most of the paper used today entails bleaching the paper with chlorine compounds, which results in paper mills emitting many toxic chemicals that cause health and environmental problems, H&M is probably using this toxic chemical in their communication print materials. If this data could be proved, the Sweden Company would have to rapidly change its policy paper.

Moreover, other environmental impacts are made provided that any other types of communication take place. For instance, during the filming of a TV spot or in an event or show that might require big operational needs.

Also, it is important to remark that as much coverage news H&M gets in print media, as much energy use will be needed as well as waste generation or water consumption

(a) Energy Consumption

Energy consumption is mainly produced by lighting, cooling/heating during filming sports or executing events or shows, by the machinery needed to print paper to create print advertisings, magazines, posters or catalogues or by the fuel/other energy sources needed to transport and delivery them,

(b) Waste Generation

Since a lot of paper is created, huge amounts of waste are generated as a result. That is why from autumn of 2009 the company aims to change the standards poster size and use poster frames that will allow H&M to print on paper instead of board, resulting in a reduction of this material's use and waste of around 50%. Also for 2009, the Swedish company pretends to start to use sales communication material that can be reused for more than one sales campaign.[108]

[108] H&M Sustainability Report, 2008

(c) Water Consumption

Again, to make such amount of communication pieces huge amounts of water are needed, especially for the dying of this material. However, no actions have been taken by H&M up to now in order to decrease water consumption during these processes.

7. Sales

This part of the supply chain process is where customer and company interact among each other. It is also where the product itself is transferred from the company to the customer through the point of sale or store. Indeed, the store is where H&M come into contact with people. That is why aspects such as product communication or design and location of the stores are crucial for H&M to succeed in this phase.

At the end of the financial year of 2008, the H&M Group had 1,738 stores, including 18 franchise stores, 13 COS stores, 17 Monki stores and 8 Weekday stores. All of them distributed among 33 countries around the world.[109]

Nevertheless, it is essential to say that H&M have followed some guidelines to reach this international presence. Before opening new stores or before entering a new market, the Swiss company conducted extensive research on the demographics of the customers, spending power, competition, and other relevant factors that could affect to its success.

In addition to those aspects, there is another element that H&M has always considered to be one of the most important issues to take into account when opening a new point of sale. This is the location of the store itself. Usually, the corporate headquarters analyze the best locations that are available for setting up the stores and wait until the desired location is accessible. What the company understands for "best location" is the best place in the main shopping districts of major cities and towns where it operates.[110]

There are several examples that perfectly illustrate this prerequisite of the company: London, where the two biggest stores are located at Brent Cross Shopping Center and Oxford Street, New York, where H&M has a point of sale in the famous Fifth Avenue, Rue de Rivoli in Paris, Beverley Center in Los Angeles or Puerta del Ángel in Barcelona.

enue

H&M at Oxford Street

London

109

http://www.hm.com/filearea/corporate/fileobjects/pdf/en/ANNUAL_REPORT_ARCHIVE2008__ITEM_3_1237462089192.pdf

110 Inda P. and Vivek G. *"H&M's Supply Chain Management Practices"*. ICMR Center for Management Research, India, 2008.

According to H&M, it is not only important to find primary locations, but it is also essential to decorate the windows in such a way as to attract customers. From this perspective, mannequins display the new collections and the shop windows reflect the seasonal trends. On the other hand, all the stores are self-service stores in order for clients to easily find the products they are looking for. As said by Francoise Sackrider, a retail specialist at the Institut Francais de la Mode, in Paris, "The high level of goods and the sophisticated environment at these stores wiped out any complexes shoppers had about less expensive stores"[111]

Yet, another issue to take into account regarding H&M stores is to ensure a uniformed look for all the stores across the world. In order to do so, H&M has created a special department which works from Sweden to provide guidelines about garment exposure as well as environment creation according to the different seasons, to every store in the world.

However, it is important to highlight that the store is not the only communication channel the company has in order to sell its products. Although, it is not applied at a worldwide scale yet, H&M also offers fashion through Internet and catalogue sales in several countries. Those markets where H&M's products are available on the Net and catalogues are: Sweden, Denmark, Norway, Finland, The Netherlands, Germany and Austria.[112]

Organic cotton in store

Regarding the organic cotton within H&M stores, it is important to point out that this is integrated among all areas of the store. Since it is a material used to produce some of the garment sold in the different sections (woman, baby, men), there is not an especial location to display those products within stores. They just can be recognized by the customer by the label they have.

a) Social aspects

(1) Actors involved

(a) Customer

H&M tries to meet the demand of different types of customer due to the fact that it sells products in different markets and for consumers of all ages, from children to old people. That is why H&M offers many different concepts. Trends and influences are adapted to styles and models that will suit the different range of customers. The themes, colors, fabrics, silhouettes and garment types are decided in order to create the new season's collections.[113]

(b) Staff

Most of the personnel in the stores are recruited locally in order to get a better understanding of every local market. Internally, H&M carries out not only recruitment processes but also staff

[111] Sara Raper Larenaudie, "Inside the H&M Fashion Machine", www.time.com, February 09, 2004.
[112] H&M Annual report, 2008.
[113] http://www.hm.com/no/abouthm/factsabouthm/fromideatostore/ideaanddesign__fromideatostoreideaanddesign.nhtml

training. Such training consists in three-week introduction course, after which each candidate is assigned to a mentor and required to carry out different duties like cash desk, displaying, customer assistance, etc.

Another interesting point to highlight is how H&M corporate culture is inculcated to the staff of every store. Once a new store is opened, experience employees from the company are relocated in the new location to recruit and train the personnel so they can transfer both corporate knowledge and specific skills.[114]

One example of this was the establishment of H&M's first stores in Hong Kong and Shanghai. There the new employees were supported by more than 100 store colleagues, store managers, builders, decorators and others from eight different established H&M countries. Thus, the management team received special training in the Netherlands for three intensive months before the openings.

(c) Customer associations

Although there are large amount of forums regarding H&M issues on the Net, up to now there is not a special customer association regarding organic at H&M. Even though the Swedish company is aware of the fact that their customers are increasingly demanding organic cotton in their collections, they are not an organized movement towards this issue.

However, there are organizations on the Net that can put pro-organic people together such as the Organic Trade Association. It is not specifically for H&M customers, but any of them could claim for organic cotton through this initiative and its several forums. Strictly speaking it is a membership-based business association for the organic industry in North America whose mission is to promote and protect organic trade to benefit the environment, farmers, the public, and the economy.

Nevertheless, it is important to mention again the partnerships that H&M has with several organizations, such as the previously mentioned Organic Exchange, The Fair Labour Association and the Better Cotton Initiative, in order to respond to the different needs of all agents involved in the cotton industry, including therefore, customer associations.

b) Environmental aspects

(1) Practices and Processes

There are several environmental issues to take into account while analyzing the sale phase. But, what is clear is the fact that any of them are related with the operation of the store: deliveries' packing, lighting, cooling, heating, staff water consumption, electricity consumption by tills, elevators, kitchen, etc.

[114] Inda P. and Vivek G. *"H&M's Supply Chain Management Practices"*. ICMR Center for Management Research, India, 2008.

(2) Energy Consumption

The main issues related to energy consumption within stores are: lighting, cooling, heating and electricity for the use of different machines such as tills, elevators and other electronic devices typically used within stores.

According to H&M the energy used in its stores, officers and distribution centers accounts for 37% of its total carbon footprint[115]. However, in accordance with the Retail Declaration on Energy Efficiency and Renewable Energy, within the framework of the European Retail Round Table (ERRT), H&M has committed to:

- ✓ *Reduce energy consumption per square metre of commercial premises by a minimum of 20% by 2020 compared to base year 2007 reference levels*

- ✓ *Work towards exceeding the European Commission's target of sourcing 20% renewable energy by 2020.*[116]

In the same way, H&M is undertaken different initiatives to reduce energy use in the stores and in other sales operations. For instance, when stores are designed the company set targets for energy efficient of the lighting. As said by *Henrik Lampa*, Environmental Supply Chain Manager at H&M, "*Depending on the size and concept of the store, we target either 30 or 40 watts per square metre*"[117].

In addition to these initiatives, there are other proposals that will be implemented for the next year, 2009. According to the member of the corporation, "*During 2009, we will implement default dimming levels for lighting in all new stores, resulting in immediate energy savings.* And as he also said, "*Our goal is to dim spotlights and downlights in new stores by 13% in 2009"*[118].

Nevertheless, some actions have already been taken. For instance, in 2008 H&M installed remote access energy meters in all new stores so that they could better manage and monitor energy us. These measures have already been tested by the company in several countries and the results have proved that *"regular 24-hour monitoring of energy use can help highlight issues that can be corrected"*[119]. Some examples of these possible corrections to make include heating and air conditioning equipment or lighting that runs when not needed either as a result of control failures or incorrect turn-off procedures.

Other energy savings to take into account when analyzing sales are the ones that are made due to the online shop that the company has already implemented in several European countries. The fact that customers can acquire items through the Net makes a real energy saving since it avoids the customer movement from his home to the store.

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[115] and [8] H&M Sustainability Report, 2008.

[117] and [10] Interview made by Candela Aldao, Clemence David and Eliza Panagiotidou to Henrik Lampa on 18th of June of 2009.

[119] H&M Sustainability Report, 2008

(3) Water Consumption

Water is not a big issue to take into account in this part of the process. The water consumption is very low comparing with other phases since it is just needed for the general operation of the store. Thus drink for the personnel, liquid to clean the shop or tap of water for the staff, in kitchen and bathroom, are the main spending within the store regarding water.

(4) Waste Generation

Contrarily to water consumption, one of the main problems to tackle in this phase is waste. When studying the waste within stores, it is important to notice that there are several aspects to be analyzed such as waste generation, waste reduction and waste treatment.

As a general rule, waste at H&M stores is mainly generated by these following items: plastics, boxes, hangers and tags. All of them come with the garment that every store in the world receives from the distribution centers at least twice per week. This means that huge amounts of waste are constantly generated at H&M stores and therefore H&M's staff has to deal with it on a daily basis. That is why H&M's store are provided with guidance on how to handle waste including hazardous materials such as fluorescents tube lights, batteries, electronic equipment, glues and other chemicals.

Nevertheless, sales countries handle solid waste in a variety of ways, according to the facilities available to the store within their country of operation. According to H&M, *"Some stores use the waste-handling facilities of the shopping center or landlord, others have separate waste-handling co0ntracts or return waste to H&M distribution centers"*.[120]

One important point to highlight regarding waste at H&M stores, it is the fact that every year the company not only set targets to reduce the waste generated before and after the product goes into the shop, but it is also tries to increase recycling during the whole process. For instance, in 2008 76% of the **hangers** purchased by H&M were recycled and most of the remaining hangers are reused again in the store.[121]

As said by *Henrik Lampa, "Every year we set ourselves a target to increase the reuse of hangers that come with the garment to the shops resending them to the distribution centers as well as the recycling of the ones that are around the stores displaying the items". "Once the target is fixed",* added, *"we keep monitoring them through Key Performance Indicators"* [122].

Another relevant point in waste generation is the **plastic bag** given to every customer when he makes a purchase at any H&M store. Regarding this issue, H&M conducted a life cycle analysis on plastic bags which compared "virgin and recycled polyethylene (PE) plastic, paper, starch-based plastic and green PE, which is made from wood cellulose rather than oil" and the results showed that, from the life cycle perspective, this kind of material (PE) requires half the energy

[120] and [13] H&M Sustainability Report, 2008

[122] Interview made by Candela Aldao, Clemence David and Eliza Panagiotidou to Henrik Lampa on 18th of June of 2009.

and less water to produce paper. That is why the company still wants to continue using PE bags in its stores.

8. Final Disposal

Sustainable clothing is governed by the three principles: *recycling, reusing and reducing*. Final disposal plays a crucial role in the organic cotton industry, since it is at this stage that the textile used is collected with the intention to be launched again into the market. These three principles have social but mostly environmental impacts that are going to be analyzed as such:

a) Social aspects

Textile recycling is considered to result in numerous important environmental and economic benefits (they will be analyzed in the environmental aspects of final disposal) and as such in 2008 the Waste Framework Directive revised by the EU, nominated the textile industry as *"a priority waste stream"*. For this reason recycling is also promoted by companies and associations, as the *UK Textile Recycling for Aid and International Development* (TRAID) and also several NGO´s.

H&M works on reducing material and energy consumption when purchasing shop fittings for the equipment of its stores. For example, PVC is avoided in the shop fittings and no mercury is used in light sources. The company is also working to reduce energy consumption in its stores from lighting, heating and air conditioning. Furthermore it is increasing its recycling activities, mainly referring to packaging, hangers and decoration materials among other things.

b) Environmental aspects

Recycling in the textile industry can be beneficial for companies, especially in environmental and economic terms, since it is a fabric made from recovered cotton that would, otherwise, be cast off during the spinning, weaving or cutting processes. Recycling cloth and textiles saves energy and reduces pollution that would result from transportation and particularly the dyeing and color fixing processes applied to new, raw cloth. Recycling helps in this case by saving water, which is used in large quantity to wash and treat raw cloth. Clothing items that cannot be sold or repaired can go through a recycling method. This involves collecting post-industrial waste, cloth and scraps left over from fabric and garment manufacture, and post-consumer waste, used and old clothes. All the discarded cotton waste is collected, sorted according to

type, color and grade and then shredded into fibers and reprocessed into yarns and fabrics. It is a truly eco-friendly process because thanks to waste recycling no chemicals are used during processing recycling textiles. However a culture of easy disposal of clothes has not been developed yet as it has been with other materials such as plastic, glass and paper.

Although, few international companies are starting getting involved in recycling, such as the U.K Marks & Spencer, the USA Wal-Mart, the USA Unifi, the owner of Repreve brand of yarns made from 100% recycled materials.

A good source for recyclable textiles are textile recycling banks, 3.200 of them operated in 1996 charities and rag merchants. The largest operator is the *Salvation Army*, which combines the use of over 1,500 banks with door-to-door collections. *Recyclatex*[123] considers that an individual textile bank produces four tones of textiles per year, equivalent to a national total of 12,800 tons annually. The most important clothing recycling initiative was taken by the joined forces of *Marks & Spencer and Oxfam* in the U.K that created the clothes exchange both for raising money for *Oxfam´s* work to tackle poverty but also to decrease the million tons of textiles sent to the landfill. *Oxfam* is the only major charity to operate on its own textile sorting facility, *Wastesaver*, which maximizes revenues from textiles that can´t be resold in its shops and minimizes the amount of textiles sent to the landfill. Clothes are being sorted and resold through redistribution to *Oxfam* stores, online shop and festivals, even through designers who restyle garments and reuse materials or textile wholesalers and finally low grade items that are not sold as garments are sold to recycling traders to be used in the general textile industry as carpet under lays, mattress fillers etc. In addition materials that can´t be recycled in the traditional way are recycled into cardboard boxes and go back to the clothing industry.

Solid waste is a significant aspect in *H&M´s* stores and its distribution centers. Waste handling in the stores differs according to the sales country. For example In Norway the majority of the stores use the waste handling system of the shopping center or landlord. On the contrary, in the USA more than half of the stores have a separate contract with a waste handling company. In Germany, more than half of the waste is sent back to *H&M's* warehouse. As a result of this complexity, it is difficult for the company to measure, compare and report on how each type of waste is handled. However they can present figures on recycled cardboard and clothes hangers, as these types of waste are mainly collected at its distribution centers. The increase in cardboard collected and recycled at its distribution centers was 5.4%, which can be compared to the 6.4% increase in volumes.[124]

In general it is estimated that approximately the 95% of the textiles[125] that are land filled each year could be recycled (Recycling Association 1995). Textiles that are neither reused nor recycled are either incinerated with household waste or sent to landfills for final disposal. According to estimations around 50% less energy is used in the production of fabric using recycled fiber (NI 2000 1995) and as a reference 400,000 - 700,000 tones of textiles are land filled in the UK each year (DETR 1999).
Garment cutting waste is 10% - 20% of fabric consumption, depending on production techniques and product range in the garment textiles sector. Knitting waste is typically 6% in the shaped knitwear area and up to 20% for traditional cut and sews manufacture (ETBPP 1997c).

There are several good reasons we should go textile recycling. They are mainly associated to important environmental benefits. First of all textile recovery reduces the need for landfill

[123] A trading group made of Textile Recycling Association members.
http://www.textile-recycling.org.uk/recyclatex.htm
[124] According to H&M´s 2005 CSR report
[125] The waste guide to sustainable management. Available at
http://www.wasteonline.org.uk/resources/Wasteguide/mn_wastetypes_textiles.html

space, which poses a threat to local ground water supplies. Every time it rains, water drains through all the rubbish, and picks up chemicals and hazardous materials from whatever is in the landfill site. This includes chemicals used in clothing and textiles such as dyes and bleaches. The water collects at the bottom of the landfill, often in large amounts and can be up to 200 times as toxic as raw sewage. Second reason, recycling reduces pressure on virgin resources, since by re-using existing textiles there is no need to make textiles from raw materials, such as cotton, wool, and synthetic fibers. As a result it decreases the pollution emitted during the manufacturing process and increases energy savings, as fibers do not have to be manufactured or transported from abroad.

9. Research and Development

a) Social aspects

The R&D department is of a great importance in the textile industry, mainly because it is specifically in this area, that the company is creating its future sustainability in the market and possibly, its competitive advantage. First of all it is a market source; it shapes the trend and gives the required flexibility to a company to adapt to the market changes that occur. Thanks to the clothing design which is pre-worked by its designers, who in *H&M* count approximately for a hundred and cooperate with a team of print designers and product developers, the clothing collections are perfectly meeting the market's needs. Not only in terms of fashion, but also in terms of speed and efficiency, *H&M* covers the market´s and the global company needs with its short-lead times.

b) Environmental aspects

Furthermore the R&D is also a technical source since it plans and contributes to the dyeing washing, embroidery and printing procedures. It advances the technical and quality development through the knit or weaves techniques and mills but also through the fabrics, yarns and trim respectively.

The range of services that Research and Development may provide to the companies operating in the textile industry are gradually expanding, with microbiological testing, fabric and process tests. These include wash trials, component and process testing, system validation and equipment calibration. Laboratories allow further development focused on customer requirements, since the R&D department works closely with the Customer Service and Sales teams both to provide technical support and to develop new garments, fabrics, support products and processes.

Usually the R&D areas of activity are the following:

(1) Laboratory testing

Laboratory testing includes microbiological monitoring in order to show compliance with all the relative guidelines, monitoring of water systems, particulate and physical testing of garments and components to appropriate standards and fabric and component trials in conjunction with customers, suppliers and external test laboratories.

(2) Process development and validation

In this field researchers are studying and developing hygiene processes, surface-coatings removal processes and they are aiming to improve garment repair systems.

(3) Fabric and component investigation

A wide range of fabrics are available throughout the world together with an ever expanding range of garment components, which need to be evaluated with multiple methods. These methods consist in the comparison with various anti-microbial fabrics, evaluation and development of new textile components (zips, buttons, etc) and improved undergarment fabric trials.

(4) Product design

It is said that an exceptional design is the company´s DNA. A creative and innovative design does not mean contributing only to an improvement of the environment, but it implies also economic and even social benefits. From an environmental aspect the selection of the right materials, which are biodegradable, reusable and may be remanufactured, leads in recycling, up-cycling (to obtain a higher quality after reprocessing) or down-cycling (to obtain a lower quality after reprocessing) and in this way waste and incineration are limited.
From an economic point of view a creative design is based on new materials, less expensive, more durable (these aspects will be analyzed more in detail in "recommendations" part) and on methods such as re-designing or re-processing. Those methods do not require the need of machinery and as a result lead to a reduction in costs of operation. The innovative product design may assist in maintaining and extending the garment's quality and in general increasing the garment's life. *H&M´*s designers use highly sophisticated software and color matching tools in order to design their cutting-edge new collections.

Finally it may also have social benefit, because design determines the fashion and lifestyles, therefore by promoting eco-friendly designed garments it can lead to a more sustainable lifestyle.

IV. RECOMMENDATIONS

There is a lot of room for improving business processes and making them sustainable in order to build truly ethical and responsible companies. Especially nowadays with the amazingly rapid development of technology the possibilities that are offered bring up solutions that advance the economical growth and decrease cost and environmental impacts. As sustainable development is based upon economy, environment and society, different opportunities derive from each one of these pillars, but of course it is always related to the type of the company.

STRATEGY: improvement of the whole supply chain

Objectives

- ✓ Making partnerships according to H&M core business
- ✓ Driving efficiencies in production and increasing
- ✓ Reducing its carbon emissions as well as costs in all stages of the supply chain
- ✓ Minimizing environmental and social impacts along the supply chain
- ✓ Protecting reputation and build a stronger brand
- ✓ Driving innovation and creativity

A. Raw Material Harvesting

1. Objectives

1. Closing proximity between H&M and farmers: linking corporation with its suppliers
2. Gaining knowledge about organic cotton farming to better estimate future supply
3. Building long-term relations with suppliers to assure future supply
4. Community development trough community investment
5. Minimizing environmental impacts
6. Ensuring fair conditions for farmers

2. Actions

The actions proposed are divided in four areas: education, economic, environmental and social.

a) Education

Education is one of the main issues to take into account in this phase for several reasons. Firstly, there generally is lack of education in farmers entailed difficulties when technical knowledge about sustainable agriculture aimed to be transfer from organic exchange expertise to farmers. On the other hand, since technology is key to minimize the environmental footprint in farming, research and development is, therefore, crucial in this stage of the process.

Due to these reasons, two different projects are suggested:

(1) Educational Programs in the communities where H&M gets its organic cotton from.

Since these regions are China, India, Turkey and Paraguay, those programs would be firstly implemented in Paraguay and progressively applied to the rest of the regions.
The aim of such programs is to teach farmers to read and write in order for them to be able to understand better what sustainable agriculture means for them and how this should be developed properly. Furthermore, since illiteracy means vulnerability, education would bring farmers other possibilities such as new market opportunities or better price set.
Nevertheless, it is important to remark that although some educational programs are already in place through Organic Exchange. All of them are referred to show how to apply the right techniques to grow organically. However the aim of this project is not only teach farmers to grow but also to teach them to read and write so they can get freedom independency and strength. On the other side, H&M would benefit from this too since communities will feel closer to the company and, therefore, more willing to cooperate with them at any time in the future.

(2) Grants for Universities.

H&M would donate funding to various universities specialized in farming technology in order to promote research and development. Consequently, H&M would promote technology which at the end would bring energy efficient and, therefore, a reduction in carbon emissions.

b) Economic

(1) Micro-credit for Indian farmers. Cooperation with the Grameen Bank.

As previously explained in the "Raw Material Harvesting" part, three years are needed to get a certification that assures that a land comply with all requirements to grow cotton organically. During such period of time farmers might not have enough income to economically survive.
Through micro-credit, relatively small loans would be extended to low-income farmers who have no collateral and little access to formal banking sources. In such a way, they could consider to change their conventional agriculture to a sustainable one. That is to say, they could get their lands certified in order to grow organic cotton.
As a matter of fact, "an increasing number of agriculture producers in developing countries are using micro-credit to develop more profitable businesses"[126]. However, a financial institution needs to be included.
Consequently, since the project is going to be developed in India, *Grammen Bank* is the perfect institution to collaborate with. The Grammen Bank is a financial institution that "has reversed conventional banking practice by removing the need for collateral and created a banking system based on mutual trust, accountability, participation and creativity"[127]. That is why it is a cost effective weapon to fight poverty.
As a result, H&M would contribute to community development in one of the regions where it operates, India, and at the same time it would assure future supply of organic cotton.

c) Environment

(1) Partnership with the Soil Association

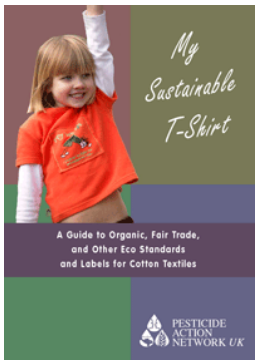
Working together with the *Soil Association* would also help to organic cotton growers. The Soil Association is a charity campaigning for planet-friendly food and farming. It believes in the importance of the connection between soil, food, the health of people and the health of the planet. It pioneered the first organic standards in 1967 and its symbol means that products have been produced sustainably, in harmony with nature and that animals have enjoyed free-range, high-welfare lives[128]. They work at all levels of government and community to develop and promote campaigns and policy work. That is why this partnership would bring a lot of benefits for organic cotton growers, suppliers of H&M.
Currently, there are several brands in the textile sector that are already working with the Soil Association. It is interesting to highlight the case of the brand *Continental Clothing*, a wholesale apparel brand located in the UK that has been licensed by the Soil Association as suppliers of 100% organic garments under the Global Organic Textile Standard (GOTS). (See Appendix 3)

[126] http://www.cfa-fca.ca/upload/CFA%20February%20article.pdf
[127] http://www.grameen-info.org/index.php?option=com_content&task=view&id=16&Itemid=112
[128] http://www.soilassociation.org/Whatwedo/Campaignsandpolicies/tabid/245/Default.aspx

Such standards were created in 2002 "*to unify the various existing standards and draft standards which caused confusion with market participants and consumers and were an obstacle to free international trade with organic textiles"*[129]. And today it is considered as the leading set of criteria in the field of organic textile processing.

To sum up, the aim of the standard is to define requirements to ensure organic status of textiles, from harvesting of the raw materials, through environmentally and socially responsible manufacturing up to labelling in order to provide a credible assurance to the end consumer.

So, if H&M were licensed by the Soil Association as supplier of organic garment, it would meant to be under the Global Organic Textile Standard and therefore to have a high accountability for a reliable quality assurance concept.



(2) Partnership with the Pesticide Action Network International

Another way for H&M to contribute to minimize its environmental impact as well as to support organic cotton growers is through a partnership with the international *Pesticide Action Network* (PAN). It is a network of over 600 participating nongovernmental organizations, institutions and individuals in over 90 countries working to replace the use of hazardous pesticides with ecologically sound and socially just alternatives. PAN was founded in 1982 and has five independent, collaborating Regional Centers that implement its projects and campaigns. Among other objectives, PAN is aimed to protect health and the environment by eliminating highly hazardous pesticides from the market and replacing them with sustainable solutions as well as to resist development and stop the introduction and use of genetic engineering into agricultural production systems.[130]

Through this partnership H&M would offer support to farmers in local communities who wish to transition from conventional to organic cotton, and to factories that wish to gain organic certification.

Again, *Continental Clothing* is one of the companies that have already implemented this kind of action. In July 2007 the apparel worked in partnership with Pesticide Action Network UK to produce their information leaflet "My sustainable T-shirt" as a Turkish language version, and sponsored its dissemination to conventional cotton farmers and farm workers across Turkey to aid in their understanding of the principles behind organic agriculture.[131]

[129] http://www.global-standard.org/
[130] http://www.pan-international.org/panint/?q=es/node/33
[131] http://www.continentalclothing.com/?module=cms&P=99&SP=45

d) Social

(1) Partnership with the Fair Trade Labeling Organizations International (FLO)

Fair Trade Labelling Organization are 24 organizations working to secure a better deal for producers through setting international Fair-trade standards and support Fair-trade producers. According to this organization "since the introduction of the first Fair-trade minimum prices for cotton in 2004, Fair-trade has demonstrated it can substantially improve the lives of cotton producing communities. By selling to the Fair-trade market, cotton farmers have the security that they will receive a minimum price which covers the costs of sustainable production. They also receive a Fair-trade Premium which allows them to invest in community projects, such as schools, roads or health care facilities.[132]
Consequently, H&M would contribute to improve the lives of cotton producers and their communities while bringing other benefits to the company. Indeed, H&M could label its cotton garment as Fair-trade cotton which means it is contributing to provide a sustainable livelihood for the producers.
Today, few textile brands are selling fair-trade organic cotton. Among them, it is *Gossypium*, a brand that sells organic cotton under fair-trade conditions. Currently, Gossypium work together with *Agrocel*, an industry that has defined and branded a cotton fiber that is both organic and traded fairly[133]. Agrocel co-ordinates organic fiber cultivation with a selected group of local farmers from its 12 rural service centres across India. Then, a team of agronomists is based at each Agrocel service centre, and monitors growing to International Organic Standards. As a matter of fact, the collaboration of those two originations ensures a long term future for Indian small scale cotton farmers which greatly benefit both company and producers.

Overall, H&M has already taken significant steps to move towards a more sustainable way of operating. As it has been previously mentioned in preceding sections, in June 2008 H&M signed the CEO Water Mandate, a voluntary initiative from the UN Global Compact. The CEO Water Mandate consists of a group of companies that has committed to work collectively on issues of sustainable water management[134]. The mandate commits those companies to improve water efficiency while operating, improve wastewater quality and report transparently on progress.

Despite these improvements, there are still other issues to be tackled at this stage such as fair trade, soil management or driving better and closer relationships with farmers of organic cotton, as suppliers of H&M. Above all, when those suppliers are the ones that are going to assure company's future targets regarding organic cotton integration in its collections.

From this perspective, the previous solutions have been proposed in order to move H&M one step ahead so that the Swedish company would not only guarantee the respect for the planet, but also for the people.

Implementing such recommendations H&M would assure a better deal to all who are involved – from the farmers in the cotton fields to the customers who buy its products. That is to say, H&M would make sure that its organic cotton garment is made from the purest cotton in the most environmentally friendly and ethical way.

[132] http://www.fairtrade.org.uk/producers/cotton/agrocel_pure_and_fair_cotton_growers.aspx
[133] http://www.agrocel-cotton.com/english/en_home.html
[134] H&M Sustainability report, 2008.

B. Manufacturing

1. Objectives

1. Carbon neutral: Reduce carbon emissions
2. Assure quality in labor conditions
3. Reduce waste water

2. Actions

a) "Eco-buildings": Build installations in a sustainable way

b) Increase use of renewable energies. (Solar, wind partnerships)

c) Partnership with Fair Wear Association

d) Water recycling

e) Water low flow

Manufacturing companies that go under various and complicated processes, not only have to take sustainability measures in respect with the transportation, distribution and sales strategies of their products but also during their production and packaging processes in respect with the waste that is created and the labor policies.

However, there are many eco-friendly measures, which all type of companies can take from the early stage of building their installations. They should be proactive enough to deal with some of their major issues, such as carbon emissions, waste water, natural resources consumption and waste disposal. With an aim to become carbon neutral, just as Marks & Spencer´s[135] goal is, they should start by building their installations in a sustainable way and prepare the appropriate operation conditions that reduce energy consumption and increase the use of renewable energies. More specifically they can be built and painted with environmental friendly materials that enhance insulation and can be designed in a way that enhances the natural lighting, so less electricity for heating, cooling and lighting will be required.

The aim should be to create a cool micro climate and *H&M* can achieve that by planting greenery around and on its buildings roofs. "Green roofs", as they are called, are totally covered with vegetation and soil and their purpose is to absorb rainwater, provide insulation, create a habitat for wildlife, and help to lower urban air temperatures and combat the "heat island effect"(a metropolitan area, which is significantly warmer that its surrounding rural areas.)

Factories need to make changes in the production processes towards clean production and develop policies that favor the use of natural materials, renewable energies and product durability. In terms of renewable energies, factories with large facilities can even set up wind mills and generate their own energy.

In H&M´s case, although there are no factories owned, which means that the company has limited opportunities to implicate innovative sustainability strategies; there is a code of conduct, composed of specified policies and guidelines that the company has set to its suppliers/factories. So, since these guidelines standardize procedures in order to assure quality of the end products, H&M could add into it a new part with a set of standards concerning eco-friendly production procedures with the use of renewable energies.

[135] M&S Eco-factories, http://plana.marksandspencer.com/we-are-doing/climate-change/stories/31/

As renewable energies we mainly refer to solar and wind. With an aim to minimize reliance on energy, *H&M* could make an agreement with its suppliers either to install solar panels on the factories roofs, or to buy a piece of land and locate photovoltaic in order to sell the electricity generated, so it will balance its emissions and become as carbon neutral as possible. In fact installation of solar panels on roofs can also be done easier and without an agreement by *H&M* itself to all kind of buildings that the company may own, warehouses, production offices etc.

Regarding the wind energy, an idea would be to create a small wind mill park, so the factories will rely on their own energy generated from wind power, just as *EarthPositive*[136] does, which with its thirty massive wind turbines generates a continuous source of renewable energy. These ideas may seem unrealistic to the suppliers/factories both in terms of technology and funding, but by making such a move they can attract more customers and moreover it can be done by participating in partnerships like *BGMA Bangladesh Garment Manufacturers and exporters*[137] *A*ssociation. Many companies and organizations, such as *WWF* would be interested in working with the partnership´s members to offset factories carbon emissions. The funding of such an initiative could be done by *World Bank, International Finance Corporation* etc.

Another possibility would be to set up a partnership with a company like *M&S* that already uses sustainable strategies for the production of their own goods, so it won´t need to spend time to enrich its code of conduct and standardize new production procedures for its suppliers.

Concerning the labor conditions, to assure quality and to standardize a satisfying working level both for workers and the company, a partnership with Fair Wear Association could help. External audits could visit H&M´s suppliers/factories and monitor the conditions under which they operate.

Another field of very high importance is water. Promotion of water efficiency can be achieved by capturing rainfall water in tanks, reuse it and then recharge it in the ground. Recycling water can be used for flushing and for various operations that do not require potable water. Even if recycling water cannot be achieved, other simple measures can be taken for decreasing the water consumption, such as installing low flow water in toilets and shower hands.

[136] Earthpositive Apparel Continental clothing, www.continentaclothing.com
[137] BGMA: established with the aim and object of uniting all the local Label Manufacturing Companies by encouraging cooperation amongst the members, www.blmea.org

C. Packaging

1. Objectives

4. Reduce plastic packaging waste in distribution centers
5. Reduce the amount of packaging used by suppliers
6. Packaging reduction in the shops
7. Packaging used as "education tool"
8. Cost savings by reducing packaging

2. Actions

a) Plastic packaging waste management in distribution centers

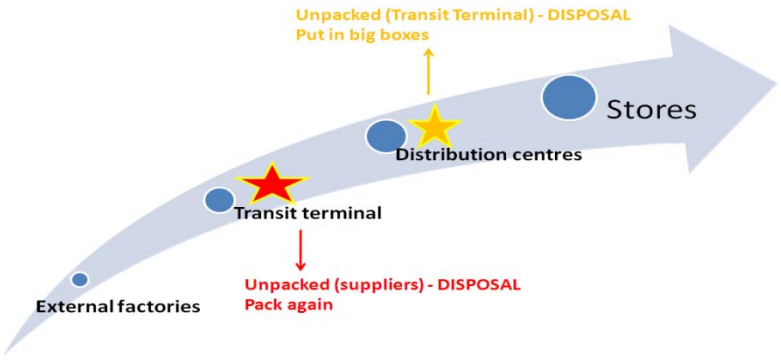
(1) Plastic packaging recycling close loop

Packaging refers to the *process* of design, evaluation, and production of packages and can be described as a *coordinated system* of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells[138] Packaging and package labels in the textile industry has evolved from a basic purpose – physical protection of garments - to a more "educational "one – the transmission of key information (place of production, environmental and social impacts) to customers. Jane bickerstaffe, director for Industry Council for Packaging and the Environment (INCPEN) – a non-profit research organization focused on packaging sustainability – said, in an interview given to the newspaper online Food Production daily, that retailers should have a more holistic supply chain approach in terms of packaging. First, they must look at the "strain" they are putting in the entire supply chain (cooperation with suppliers to reduce packaging waste) and second besides pushing use of environmentally friendly packaging they must look beyond the end of a pack´s life.[139]

In the field of packaging, for H&M, the main area of risk is located in the transit terminal. At this stage a huge amount of plastic packaging is received from the suppliers. Items are unpacked, checked for quality, allocated to a distribution centers and finally packed again to be sent. The issue here is the management of the packaging produced by the suppliers (the only requirement of H&M towards its suppliers is the prohibition of the use of polyethylene because it is not considered as biodegradable). H&M disposes of this packaging.

Second area of risk is the distribution centers, where clothes are unpacked in order to be allocated to the shops. H&M again disposes of this packaging.

[138] Walter Soroka - *"Fundamentals of Packaging Technology*" - Institute of Packaging Professionals, 2002
[139] www.foodproductiondaily.com -*"Green supply chain stance required by retailer"* – Neil Merrett – April 2009



The project of M&S towards a plastic packaging recycling loop could provide some good ideas to H&M. M&S has started in 2005 incorporating 1500 tonnes of recycled PET into salad bowls, bottles etc. M&S get to a 40 % recycled plastic (made from recycled plastic bottle)[140] thanks to a partnership with WRAP (the Waste & Resources Action Program helps businesses to reduce waste and recycle more) and a UK based company called closed loop recycling (UK´s first food grade plastics recycler, recycled from plastic bottle waste). If M&S has been able to make it for food recipients, H&M could do it for its plastic transportation packaging. The wasted plastic should be collected in the transit terminal and distribution centers and then sent to a recycling plant. The plastic could then be used over and over again for the same or other purpose.

b) Control of the amount of packaging used by suppliers

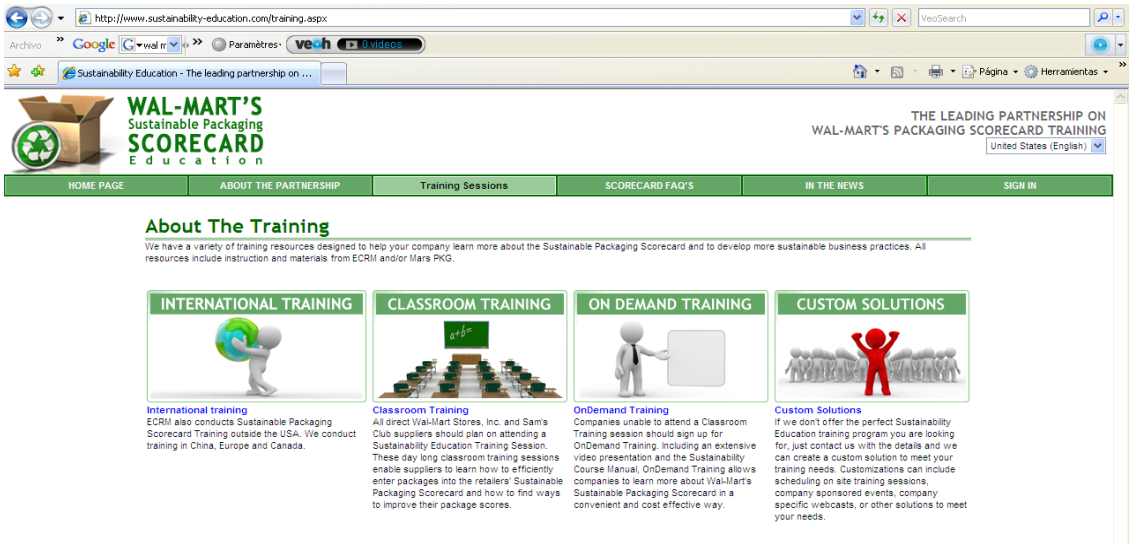
(1) Creation of a "packaging scorecard"

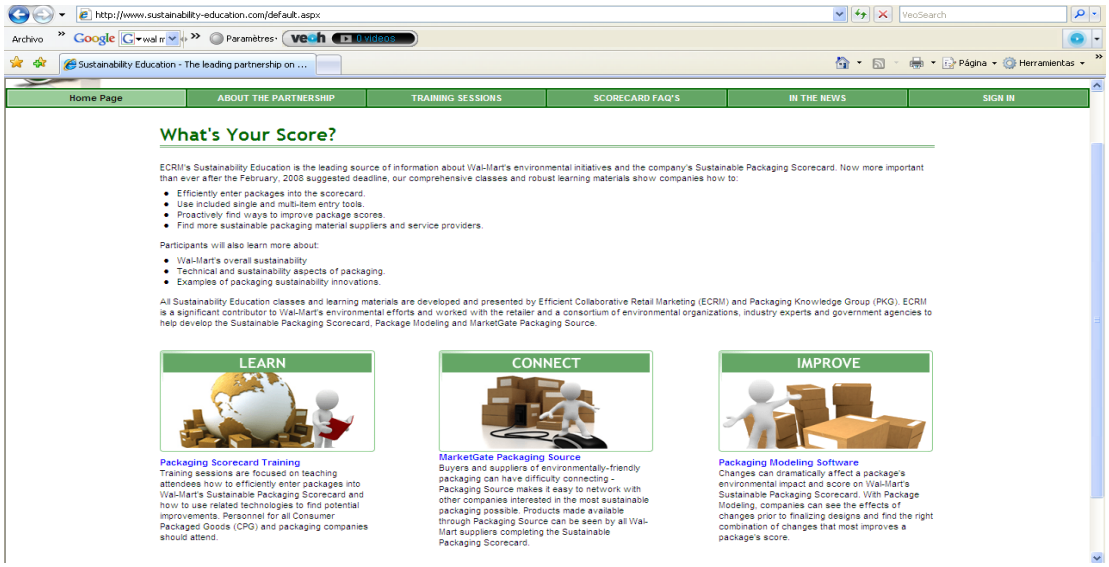
Concerning the suppliers, H&M could audit and train them on the way they pack the garments, in order to reduce the amount of packaging used. Wal-Mart had been a significant presence in the environmental movement concerning packaging reduction in their supply chain. The company has set up a "sustainable-packaging scorecard" system (by which it will measure its vendors' packaging according to a specific list of metrics) requiring 60 000 of its suppliers worldwide to lower the amount of packaging they use. The goal is to reduce packaging across the global supply chain by 5 percent by 2013.[141]

(2) Software and training to help suppliers to reach reduction targets

Wal-Mart has set up a software and training classes for each of its suppliers in order to provide them with key information to reach the "packaging reduction targets". Below is the website dedicated to the suppliers (http://www.sustainability-education.com):

[140] www.wrap.org.uk : *"Marks & Spencer Project Closes the Plastics Packaging Recycling Loop"* , June 2005
[141] www.walmartstores.com – *"Wal-Mart unveils packaging scorecard to suppliers"* – November 2006





c) Packaging reduction in the shops

Other issues can be identified in the shops.

(1) 100% recycled hangers

Hangers are actually recycled at a small 76% for two reasons: employees-cahiers dump them and customers take them home. In order to get to a 90% recycled hangers H&M should first, train its employees on environmental matters (hangers recycling should be part of the environmental training program). Also customers should not have the opportunity to keep the hanger (cashiers have to make sure customers are not taking the hanger home). In case they keep the hanger, a recycling bin would be available for customers in each shop (Tesco has implemented hangers collection point in many of its shops in UK). This action aims to prevent tonnes of plastic going into landfill

by recycling clothes hangers. Another important point is the communication; Tesco is working hard to inform their customers that they will send their unwanted hangers to be recycled. Clothing Technical Manager from Tesco, Alan Wragg said that in 2007 they estimated that their customers took home over 150 million Tesco hangers. Although many of these will have been put to good use, they feared that a significant number were ending up in the bin. They estimate that over 1,000 tonnes of plastic are spared from landfill each year. [142]

(2) Use of recycled carton for socks and tights packaging

H&M has not taken any specific action to reduce the packaging of the socks and tights that they sell in-store. Here are different samples of H&M packaging:

Packaging is composed of carton or plastic. H&M should eliminate plastic or conventional carton from this type of packaging and replace them by recycled paper or carton. Timberland has switched to a totally sustainable packaging for its footwear carton boxes, crafted from 100% post-consumer recycled waste fiber, using no chemical glues. Only soy-based inks are used to print the labels.

(3) Offer the possibility for customers to dispose of packaging in the store

Another interesting initiative comes from Tesco, which asks its customers to dispose the packaging before leaving the stores.[143] And according to the type of packaging left, Tesco is making a survey, about how to redesign the products, but with less wasteful wrapping (See the part dedicated to packaging). This measure has been achievable thanks to collaboration with WRAP.[144] H&M should either directly implement this measure in its stores (to assume its responsibility of packaging producer & to educate its customers) or set up a similar partnership with WRAP.

[142] www.tenbees.co.uk - *"Tesco campaign to recycle clothes hangers"* – November 2008
[143] www.tesco.com – Recycling and waste.
[144] www.wrap.org.uk – *"Tesco Packaging Pledges Welcomed by WRAP"* – April 2007

d) Packaging as "education tool"

(1) Creation of a CSR label

Our Footprint Notre Empreinte

Environmental Impact Impact sur l'environnement

Energy to Produce: (per pair)*	2kWh
Énergie utilisée (par paire)*	2kWh
Renewable energy (Timberland-owned facilities):	5%
L'énergie renouvelable (sites appartenant à Timberland) :	5%

Community Impact Impact sur la communauté

Hours served in our communities:	119,776
Nombre total d'heures données :	119,776
% of factories assessed against code of conduct:*	100%
% d'usines évaluées pour leur conformité au code de conduite :*	100%
Child labor:*	0%
Main-d'oeuvre enfantine :*	0%

Manufactured Fabriqué à

Shingtak, China Shingtak, Chine

* metrics based on global footwear production for 2005
* informations fondées sur production totale de chaussures en 2005

FOR MORE INFORMATION VISIT WWW.TIMBERLAND.COM/CSRREPORT
POUR PLUS D'INFORMATIONS : WWW.TIMBERLAND.COM/CSRREPORT

Nutrition Facts

Serving Size 1/6 slice (80g)
Servings Per Container 6

Amount Per Serving

Calories 180	Calories from Fat 45
	% Daily Value*
Total Fat 4.5g	7%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 350mg	15%
Total Carbohydrate 33g	11%
Dietary Fiber 2g	8%
Sugars 18g	
Protein 2g	

Vitamin A 70% • Vitamin C 2%
Calcium 6% • Iron 10%

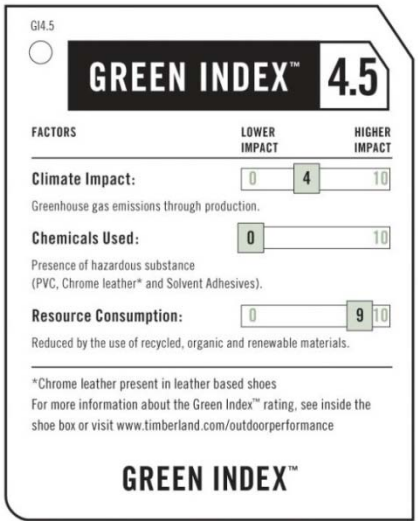
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less Than	65g	80g
Saturated Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300 mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

To go further into tractability and sustainability, H&M could create a "CSR label" for its garments (possible collaboration with Carbon Trust)[145] in order to differentiate their brand and educate their customers. Packaging would then become a vector – a relay of education and information for the customers. To create this label, H&M could review the "nutritional labels" - found on food and beverage products. These labels give to customers essential details about the content of the product. Why not using this model to give environmental, social and economic information about the products? Timberland has been the first retailer to implement this idea and is now a leader in the field; its products are labeled with information on the origin, environmental and community impacts (see part on packaging). Usually these labels provide you with data concerning: first the environmental impacts of the product (energy used to produce the items and percentage of renewable energies in production) and second on the impacts of the production of this item on the surrounded communities (number of audits in the factories and number of factories assessed through labor rights & code of conduct). The organic cotton line could be used as a perfect pilot program for the implementation of this "nutritional label".

(2) Implementation of a "green rating index"



GI4.5

GREEN INDEX™ 4.5

FACTORS	LOWER IMPACT	HIGHER IMPACT
Climate Impact:	0 **4**	10
Greenhouse gas emissions through production.		
Chemicals Used:	**0**	10
Presence of hazardous substance (PVC, Chrome leather* and Solvent Adhesives).		
Resource Consumption:	0	**9** 10
Reduced by the use of recycled, organic and renewable materials.		

*Chrome leather present in leather based shoes
For more information about the Green Index™ rating, see inside the shoe box or visit www.timberland.com/outdoorperformance

GREEN INDEX™

H&M has also the opportunity to implement a "Green Rating Index" (see part on packaging), in order to assess the environmental impacts of the products (not the production). Timberland has implemented this rating in 2007. The material used to make the garments, the use or chemical, the recyclability are ones of the elements assessed in order to allocate a mark from 0 (best) to 10 (worst). If H&M wants to implement this type of rating, the organic cotton line presents the best qualities to get a good rating and then to inspire H&M to continue along this path.

[145] www.carbontrust.co.uk

D. Distribution

1. Objectives

1. Mitigate the negative impacts of the distribution centers on the environment

2. Actions

a) Mitigate the negative impacts of the distribution centers on the environment

(1) Rethink the location of the facilities as a way to reduce CO2 emissions

H&M transit terminal is located in Hamburg (second largest port in Europe after Rotterdam). This location is strategic from a business but also an environmental point of view: setting up a transit terminal closed to a port facilitates the delivery but also prevents from additional transportation (from the port to the transit terminal). Second step, the distribution centers should be located near railway station, in order to be delivered by railways instead of roads. All these questions are essential for companies willing to open a new transit terminal or distribution center (perhaps H&M in a near future).

It is the case of Tesco at the moment, as it is about to move its old warehouse in-land to a new "green distribution center" on the coast. For Tesco it is a step further to a more environmentally friendly transportation process, as the goods arriving by sea will no longer be transported to a distribution warehouse in-land.[146] Another example is Sainsbury in UK, which is actually rethinking the locations of warehouses to reduce the number of road miles required.[147]

(2) A "green" transit terminal

H&M contrary to its competitors (Patagonia, Tesco) does not own "green" distribution facilities. H&M has still a lot of work to do in order to comply with certain environmental standards for its facilities. Patagonia is one of the first companies, in the textile industry having taken an environmentally-green step forward by obtaining the LEED certification for its distribution center in Nevada. **LEED is an internationally recognized green building certification system**, *providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO_2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. Developed by the U.S. Green Building Council (USGBC), LEED provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design,*

[146] www.northeastengland.co.uk - *"Tesco green distribution centre"* – April 2009
[147] CSR best practices – *"Building truly sustainable supply chains in the retail sector"* – June 2009

construction, operations and maintenance solutions. It works throughout the building lifecycle – design and construction, operations and maintenance. [148]

When Patagonia Inc set out to expand its Nevada based distribution center, the company designed and build the structure to align with its core purpose of using business to inspire and implement solutions for positive environmental impact. Every component of the project appears to have been aligned with environmentally sensitive mandate.[149] The building's steel frame, insulation and window glass contain recycled materials; energy efficient lighting systems rely on motion sensors to help conserve electricity; in winter a radiant system using copper tubing and hot waster saves on natural gas; a bio-filtration system; its carpet is hundred percent recycled polyester, the restroom counter tops are hundred percent recycled plastic, all wood used is either reclaimed or sustainable harvested.[150]

Inside the distribution center, Patagonia has been looking for machinery with tremendous capability for energy saving; with for example the implementation of flexible conveyors able to automatically turn themselves off when they are not needed.[151] According to Chris Joyce, manager of the eastern region distribution center (Bedford, Pa, USA) for the outdoor gear and clothing company REI[152]:

"*building an environmentally friendly distribution center is not as difficult or as costly as you might think (…) adhering to the LEED program requires considerable planning upfront but the actual construction was not particularly hard. The cost comparison between his green facility and a more traditional facility is surprising, the difference is pretty insignificant. The distribution center´s energy-efficient roller conveyor and lighting will quickly pay for themselves through lower electricity bills. The low-toxicity paint and carpets REI bought came at a good price because there is plenty of demand for such products. And while building´s skylights were more expensive than a regular roof, employees are feeling happier with bright natural light, and it is hard to put a dollar figure on that".*[153]

[148] www.usgbc.org – *"An introduction to LEED"* – US Green Building Council
[149] http://www.youtube.com/watch?v=nr9WU4-NAc4 – *"Video: Patagonia distribution centre built green with LEED"*
[150] www.environmnetalleader.com - *"Patagonia goes for gold at Reno distribution centre"* – February 2009
[151] www.dematic.com – "Patagonia upgrades green distribution centre with Dematic eco-friendly plug-and-convey conveyors"
[152] www.csrwire.com – *"REI's Eastern Region Distribution Center Certified LEED-Silver by the U.S. Green Building Council"* – Megan Behrbaum - January 2008
[153] www.mmh.com - Modern Materials Handling "A green distribution center: easier than you think: Outdoor clothing company REI says building a LEED-certified DC wasn't especially difficult or expensive" - Corinne Kator – January 2009

E. Transportation

1. Objectives

1. Reduction of the CO2 emissions due to transportation

2. Actions

a) Reduction of the CO2 emissions due to transportation

(1) No “airfreight” policy

H&M is doing some good efforts to reduce the negative consequences of its transportation process: Selection of the suppliers according to strict environmental requirements, collaboration with other brands to increase the use of biodiesel in haulage, involved in Clean Shipping project and Clean Cargo initiatives.[154] But still a lot need to be done.

H&M should seriously work on a reduction of its co2 emissions caused by transportation (for more information regarding data, see part dedicated to transportation). H&M should first start putting in place a strict no “airfreight” policy. This is what Continental (a B2B wholesaler of blank printable t-shirts for corporate, leisure and promotional wear) has done with all its goods shipped by sea.[155] H&M and Continental are different businesses; Continental is a Business to Business company and is not as fashion orientated as H&M. But H&M could think about the opportunity (cost and CO2 emissions reduction) to generalize local production when there is a large demand from customers (new trends) in a short period of time. Usually air freight option is selected in this occasion.

(2) Reduction of business travels

H&M should find out solutions to reduce its business travels – with an increase of 2 % (from 4% of the global emissions in 2005 to a 6 % in 2006). An interesting example in the field is HSBC. HSBC claims the title of "the world's first carbon neutral major bank".

- **Company:** HSBC, one of the world's largest banking and financial services organizations, with offices in 82 countries and territories, headquartered in London
- **Volume:** Total business travel of 1.2 billion kilometers (746 million miles) and business travel-related carbon dioxide emissions of 179,000 tonnes in 2006
- **Challenge:** Devise ways for travel procurement to contribute to the company's corporate social responsibility goals, including carbon neutrality, carbon emissions reductions and other sustainability initiatives
- **Approach:** Apply the company's three-pronged carbon management plan to travel procurement and travel management practices by managing and reducing direct emissions, using "green electricity" to reduce carbon intensity and offsetting remaining emissions
- **Solution:** Create baseline measurements and ongoing tracking of the environmental and social impacts of travel; internally develop new travel policies and procedures; encourage travel suppliers to incorporate CSR principles into their operations

[154] H&M CSR report 2008
[155] Carbon trust case study – *“Working with continental clothing, product carbon footprinting in practice”*

To help attain and then maintain HSBC's self-imposed standards, Tony Pilcher, HSBC's head of global business travel and expense management, and the company's travel sourcing and management teams enacted and renewed a slew of policies and procurement practices.[156] (Extract from an interview given by *Tony Pilcher* in July 2007 to *David Jonas* from *Procurement travel*).

They range from:

Pre-trip authorization - the company reintroduced a pre-trip approvals process, though not primarily for cost-savings reasons. *"We went through a phase where we only asked, 'Is your trip necessary?' and left it to the individual to decide,"* explained Tony Pilcher. "*Now we have gone back to a more robust travel authorization policy. People have to justify really why they are getting on a plane or a train or in a car".*

Viable videoconferencing facilities - HSBC London headquarters building has dedicated facilities for videoconferencing. Similarly, the Hong Kong branch invested approximately HK$3.9 million (US$500,000) in videoconferencing facilities.

Aggressive supplier management - The hotel industry outwardly has embraced eco-friendly projects and other CSR initiatives through accreditation programs, renewable energy pursuits, waste management and other mechanisms, but from the travel buyer perspective, there is a multitude of data required to determine the complete environmental impact. For example, some hotels have pools, fountains and golf courses, requiring much more water than those that do not. *"Simple things like using keycards for room lights (so when you go out, the lights go out) have a major impact on energy usage"* noted Tony Pilcher.

Integrating sustainable practices into airline purchasing also is challenging, but for different reasons. Though there is no consensus on the exact level of carbon dioxide emitted by air travel - given such factors as airplane and engine types, flight profiles, airline load factors, etc. - at least the airlines and therefore their corporate clients can build a general picture
"We are setting up a structure so we can collect the data, recognize the impact and break it down route by route, supplier by supplier," Said Mr Pilcher *"Then you can understand if there is an option, both in terms of supplier and type of plane. From there, it comes down again to [traveler] education, which is not always easy".*
For car rental and ground transportation, HSBC seeks fleet profiles from suppliers. *"Part of our decision-making for a U.K. taxi companies was that after they had said they were carbon-neutral, the process was auditing that statement and understanding if what they were offering was substantiated. If it fit into our profile strategy, so therefore we chose them."*

Data collection - For the internal collection, constant improvement is essential in order to establish baselines and measure progress. Externally, travel providers are selected only if they can provide robust and verifiable information to help HSBC monitor its progress.

[156] www.procurement.travel/ - *"Leading on Sustainability: HSBC Considers CSR Throughout Travel Procurement"* - David Jonas -*July 2007*

(3) Development of river transportation

The fact that shops are located in city centers increases the impact of pollution caused by transportation. It is not easy to identify which is the most appropriate solution to adapt the delivery system of the store to urban constraints. For example Monoprix[157] (France-based largest local grocery and general merchandising retail chain). Monoprix has made it a priority to refine the analysis of pollution generated due to transportation and to reduce it more effectively. In 2003 the company explored various alternatives: river transportation and natural gas fuelled carriers.

For long distance transportation (in France or Europe), Monoprix has experimented a partial substitution of road by river transportation, when shipping bulk import products from their port of arrival to storage depots. A specific system was designed, whereby bulk imports arrive by boat at Le Havre, and are then redirected as bonded goods by river for customs clearance and delivery to the Combs –la-Ville warehouse. The total savings represents 175kg of co2 per transported container and reduction of transportation cost by 4 %. H&M warehouse is directly located in a port (Hamburg) but the distribution centers are in-land.

An interesting option, to reduce co2 emissions, could be for H&M to make a study about the opportunity to set up distribution centers closed to European rivers (attached a map the rivers). If they keep their distribution center in Hamburg, they can transport goods to Eastern Europe by the Elbe River.

If they make the decision to set up a new transit terminal in the Netherlands (Rotterdam, largest port in Europe), they could have the opportunity to deliver goods via river transportation to all Europe (Rhin river: Netherlands, Belgium, France, Germany, Luxembourg, Switzerland, and Italy). River transportation allows the reduction of CO2 emissions and cuts costs.

[157] www.monoprix.fr

(4) Fleet of trucks running with natural gas

For environmental reasons H&M could also become owner of a fleet of trucks running with natural gas (they can start in Stockholm with 2 or 3 natural vehicles). Monoprix, has invested in two natural gas vehicles (19 metrics tons) to supply about 10 shops in the Paris area. They have been designed with Geodis BM and Gaz de France, with the financial support of the French energy conservation agency (ADEME). Natural gas fuelled vehicles emit around 25% less CO2 emissions than standard delivery vehicles and generate less noise.

(5) Partnership with other companies for transportation by road & rail

To reduce CO2 emissions due to transportation another solution is to decrease the number of vehicles on the roads via collective mechanisms. It is possible to consolidate goods from several companies to increase the load carried (then to avoid partially filled truck to take the road). The Swedish retailers KF and BTL combine their loads in order to reduce the number of vehicles per kilometers. They have opened a common "loading center" at Malmö, to group and send their goods to regional warehouses. Thanks to this mechanism their daily deliveries to supermarkets have been cut by 75%.[158]

The same mechanism could be applied to rail transportation. Then IKEA has established a partnership with Electrolux in order "to share trains" for transportation (for environmental, cost and transport capacity reasons).

For example when IKEA wants to organized the transportation of goods from Italy to Spain, it just writes and advertisement in Italian newspapers and websites to find partners for this journey.[159]

[158] Recueil Commission européenne - *"Bonnes pratiques dans le domaine du transport de marchandises"* January 2000

[159] Recueil Commission européenne - *"Bonnes pratiques dans le domaine du transport de marchandises"* January 2000

F. Marketing

1. Objectives

1. Raise awareness on environmental issues among customer and staff
2. Gaining consciousness about H&M organic cotton line
3. Change to sustainable marketing
4. Differentiate the brand
5. Increase customer retention and brand loyalty
6. Mitigating risks and identifying opportunities
7. Building a bridge between MK and CSR department

2. Actions

a) H&M Magazine

Currently H&M magazine is focused on fashion and beauty, including last trends, articles about photographers or any information that interesting enough to promote H&M as a global and modern brand as well as its collections.
The recommendation is to include information related to environmental issues. So the aim is to convey both environmental/social and fashion news.
From this perspective, H&M customers would not only be informed about new products, collections or trends but they would also be updated with the latest H&M innovations regarding environmental and social issues.
For instance, if H&M launched a new carrier bag (as the one that has been recommended in the sale section), this would be announced in the magazine through an informative article. Such methodology would allow H&M to be perceived as a responsible and reliable brand by its customers.
As a matter of fact, Inditex, the main competitor of H&M, has already published a magazine that includes such information. Yet, the publication is only available for the staff.

(1) Recycling of Catalogues

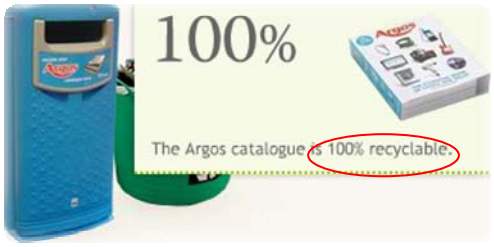
Along with newspapers and magazines, catalogues are one of the largest contributors to land fill sites[160]. That is why H&M should consider other alternatives regarding this issue. On the one, it could recycle its catalogues and, on the other hand, it could also diminish their amount.
Taking the former alternative first, it is important to highlight that some companies are already recycling these materials. The clearest example is *Argos*, the UK's leading home and

[160] http://www.ukcatalogues.org.uk/cataloguerecycling.php

general merchandise retailer. They have already in place a program to recycle every single catalogue or flyer placed at the shop and they are also encouraging customers to recycle old catalogues when they receive the new one every season. Additionally, as the picture illustrates, all its catalogues are 100% recyclable.[161]
Regarding the later alternative, the number of catalogues printed every year by H&M could be actually diminished if the company put in place new systems. For instance, H&M could mail requested catalogues, instead of giving as many catalogues as possible to its customers. However, if a massive delivery wants to be done, other channels have to be considered. Online catalogues would be the perfect solution for that purpose.

(2) New Policy Paper

The aim of this action is to change H&M policy paper towards more sustainable alternatives. The proposal is to get paper certified by the Forest Stewardship Council (FSC), an international non-profit, multi-stakeholder organization established in 1993 to promote responsible management of the world's forests.



In that sense, every piece of communication made by H&M would have a much lower environmental impact since bleach paper would be avoided and many toxic chemicals that cause health and environmental problems would not be emitted as a result.

b) Organic Cotton Line: new place in the store

The aim of this action is to highlight the organic cotton line within every section in the stores. Currently, it is completely integrated with the rest of the garment in every section (woman, baby, divide, denim, men). There is no differentiation among garments according to material used.
This initiative aims to make customers aware of the fact that H&M has an organic cotton line available for them. As a result, an environmental message would be given within every H&M store, which would contribute to build a responsible and reliable brand.
A poster would be placed to indicate which items correspond with the Organic Cotton Collection. Mannequins would be displaced to show how the collection looks like.

[161] http://www.homeretailgroup.com/cr/2009/

c) Strengthen the environmental message: promote the Organic Cotton Collection

The aim if this action is to better communicate the organic cotton line to H&M customers. As it has been previously analyzed, H&M lacks any advertising campaign to promote its organic cotton collection.

Although it has already launched several campaigns on diverse social issues such as AIDS or has marketed some products, such as a bikini in 2007, to raise money for Water Aids, one of its environmental partnerships, there is still the need to communicate its organic cotton garment through new channels.

The proposal is to make an advertising campaign using: outdoor advertising, a spot in the TV, a commercial break in the radio, print ads and banners in Internet. In addition to this, some posters would also be placed in H&M shops worldwide.

In line with H&M advertising, other suggestion to be included in this proposal is the use of famous actors, models or singers to attract customer's attention to the issue.

In fact, H&M main competitor, the Spanish company Zara, has already launched, as the picture shows, an advertising campaign in Internet to promote its organic cotton line.[162]

[162] http://www.youtube.com/watch?v=ZLUX5EdlIDo

G. Sales

1. Objectives

1. Reducing waste generation in the shops
2. Reducing energy consumption
3. Reducing emissions generated through sales materials (bags)
4. Changing customers' attitudes towards a more environmentally friendly behave
5. Retaining the best staff

2. Actions

a) "Bring your H&M Bag"

This action aims to encourage customers to reuse H&M bags. In every H&M store there would be plastic bags with a creative patterned to be reused again and again by H&M customers. Every bag would cost 1€ but it could be reused as many times as wanted. Such change in customer's behavior would save a lot of plastic as a result and, therefore, less emissions of Co^2 and less waste generation in the store would be achieved.
Moreover, in order to encourage people to do so, every customer would have a discount of 1% in every purchase made with this bag, instead of using a new one.
As a matter of fact Tesco, a supermarket chain in the UK, has recently introduced this kind of carrier bag in order to encourage its customers to reuse and make, therefore, a difference towards the environment. Tesco is rewarding the customers that use those bags when they purchase with points that go to a card called "Green Clubcard".[163]
Other companies such as Mark and Spencer are charging to its customers for every bag they receive in order to encourage them to reuse plastic bags. Under the slogan "Kicking the carrier bag habit" the Britain supermarket chain has introduced a 5p charge for food carrier bags in order to cut by 80%the 280 million carrier bags that are given to customers every year. The money collected by M&S goes to a Groundwork projects.[164]
So, another possible solution could be this method: charge customer per every bag they receive as a way of encouraged to reusing it.

b) Partnership with Cáritas

This action aims to help Cáritas raise money and to reduce the amount of clothing that ends up as landfill. Since it would be a program to encourage H&M customers to recycle their clothes in order to give them to poor people, it would be both an environ mentally friendly action and a social activity.
Cáritas is a charitable Spanish organization whose main objective is to eradicate poverty worldwide. However, it is in Spain where its campaigns take place. Indeed, Cáritas is the NGO on which Spanish people most rely to donate their

[163] http://www.tesco.com/greenerliving/what_we_are_doing/carrier_bags/default.page?#reusing
[164] http://plana.marksandspencer.com/we-are-doing/waste/stories/24/

clothes. That is why it would be the perfect partner in Spain to make this Clothes Exchange Program whose main aim is to avoid people throwing clothes away in bins.

Due to this program customers would be encouraged to donate their clothes to Cáritas. A cardboard box (from recycled materials) would be placed next to the counters in every Spanish H&M store, under the slogan *"Give your unwanted clothes to Caritas for people who need them"*. Then, other boxes would be located at Cáritas offices.

As a way of encouraging, 1 € voucher would be given to customers that donate their H&M clothes (items must have an H&M label) either in an H&M shop or in Cáritas offices. Such voucher could be used in a purchase higher than 35 € at any Spanish H&M store.

In the same way, Mark and Spencer has been made a partnership with the organization Intermon Oxfam. Due to this partnership Mark and Spencer have raised £1million through the sale of extra M&S clothes donated to Oxfam shops as part of the Clothes Exchange Program, which encourages customers to give M&S clothes they no longer wear to Oxfam. In return they get a £5 M&S voucher which can be redeemed in store on purchases of £35 or more on clothing, home or beauty products.[165]

In addition to this, M&S has also reduced 1 million tonnes of clothes that otherwise would have been got sent to landfill as every year happens in the UK.

c) Help farmers through customer spending

In line with H&M's sustainability strategy, this action aims to collect money from customers and donate it to organic cotton growers in order to promote the transition from conventional to organic cotton. The objective is to donate 5% out the price of every item certified as 100% organic of H&M organic collection. All the money collected through this initiative would be donated to any of the organizations in partnership with H&M that try to increase organic cotton worldwide as well as to improve farmers work and life conditions. Some are: the Organic Exchange, the Better Cotton Initiative, the Pesticide Action Network International, the Fair Trade Labeling Organizations International and the Soil Association. Also, educational programs for the communities where H&M operates and grants for universities would be included in the funding collected by this action.

Due to this action, customers would not only support organic cotton, but also growers of organic cotton and their communities.

d) Energy Efficient Stores

H&M has already set targets to reduce energy consumption in its stores. Those were referred to get energy consumption reduction by a minimum of 20% by 2020 compared to 2007 levels. Although some measures have already been put in place as previously analyzed in part 2, further steps are necessary if those targets aim to be achieved. Some of them are the following:

- ✓ Installation of "intelligent" lighting systems, and efficient air conditioning and heating equipment
- ✓ Use of renewable technologies such as ground source heat pumps, solar thermal and photovoltaic panels, and micro wind turbines

[165] http://plana.marksandspencer.com/about/partnerships/oxfam/stories/18/

In point of fact, the Britain bank HSBC has already implemented environmental initiatives as such and energy use was reduced by 4.6 per cent in 2008 through these measures in most of the buildings were targets were set[166]. The headquarters of the same institution was awarded as the best "Green Building" in 2008, receiving the Leadership in Energy and Environmental Design (LEED) gold certification from the US Green Building Council as a result. The building has installed water-efficient equipment, achieving savings of over 30 per cent compared with current best practice design. Other "green" features included drought-resistant landscaping that reduces irrigation, a partial green roof, and the use of rainwater for toilet flushing and irrigation. Ninety per cent of the building's waste is composted or recycled and 100 per cent of its electricity comes from renewable sources.[167]

In the same way, Wal-Mart has implemented measures to achieve its energy reduction targets. Indeed, it has design a strategy that start with several experimental stores as laboratories for energy-efficient technologies, new building materials and new landscaping methods that could potentially be incorporated into store prototypes.

Then, it has developed "high efficiency" pilot stores where promising technologies from experimental stores can be further tested in a range of geographic and climatic settings, allowing customers and associates to test them before being added to the prototype.

Finally, there is a Baseline model whose main technologies include: Daylight Harvesting (skylights connected to sensors), Energy Management System (centralized energy management system to monitor and control the heating, air conditioning, refrigeration and lighting systems for all U.S. stores), Light Emitting Diodes (exterior building signage and many refrigerated food cases which can provide a 52 % more energy efficient operation than fluorescent illumination), white roofs that help reduce building energy consumption in most climate zones and have a lower heat island effect than a darker roofing color, advanced water (the restroom sinks use sensor-activated 1/2 gallon per minute high efficiency faucets) and low chemical materials (better performing standard paint products with lower VOC content limits).[168]

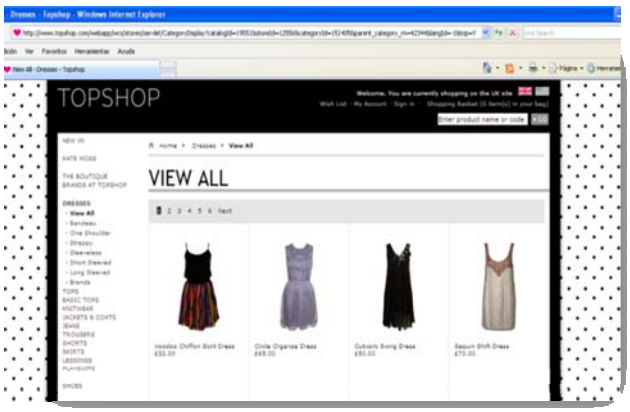
e) Guide to recycling/ fight against climate change

The aim of this action is to teach customers on environmental issues and make them aware of their impacts when using the product they have bought. The proposed guide would be a small piece of communication given to customers when they make a purchase either in the store or by Internet or Catalogue. The information provided will be focused on diverse issues such as recycling, sustainable materials, clothing watching, etc.

[166] http://www.hsbc.com/1/PA_1_1_S5/content/assets/sustainability/hsbc_sustainability_report_2008.pdf
[167] http://www.hsbc.com/1/PA_1_1_S5/content/assets/sustainability/hsbc_sustainability_report_2008.pdf
[168] http://walmartstores.com/Sustainability/9124.aspx

From this perspective, *consumer use* is considered to be another relevant aspect in the supply chain between sale and the final disposal of the product which in most of cases end up to landfill.

One of the companies that have already put in place a similar action is Mark and Spencer with its "Guide to recycling". According to the company, recycling depends a lot on where customer lives, what customer buy and where he buys it from. Different materials are recycled in different ways, and some can't be recycled at all. So "this guide has been made to help consumers make recycling part of their daily routine".[169]



f) Extend online shopping

First to Europe then to the rest of H&M markets.

This action aims to reduce transportation and, therefore, Co^2 emissions. Buying from Internet would avoid that thousands of people had to go to the shop. Thus a lot of unnecessary customer trips from home to the store would be avoided.

Nevertheless, it is important to remark that items' deliveries to customer homes would also entail transportation. Still the transport needed to do so would be much lower than if the same items that a lorry contains were bought by customers in the stores.

Today, many companies are already using Internet to sell their products or services. For instance, the English textile brand *Topshop*. Actually, it is one of the main competitors of H&M in the UK and it has globally extended its sales to Internet.[170]

[169] http://plana.marksandspencer.com/we-are-doing/waste/packaging/guide/

[170] http://www.topshop.com/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=19551&storeId=12556&categoryId=42344&langId=-1&top=Y

H. Final disposal

1. Objectives:

1. Decrease post industrial waste
2. Decrease post consumer waste

2. Actions:

a) Make textile accessories with textile waste

b) Create outlet stock centers

c) Locate recycling bins in stores

d) Recycle stock clothing

Henrik Lampa mentioned that although *H&M* has an R&D department of 21 people working to ensure quality by chemical and biological testing, "it doesn't take any action in post- consumer use recycling". Therefore, taking care of the final disposal of the used garments, but also the packaging is a real challenge for the company.

It is estimated that more than 1 million tons of textiles are thrown away every year, with most of this coming from household sources and at least the 50% are recyclable.[171] However, waste textiles also arise during yarn and fabric manufacture, garment-making processes and from the retail industry. This kind of waste, the post-industrial and the post- consumer waste together, provide a vast potential for recovery and recycling.

Post industrial waste can either be recycled or used to make textile accessories, such as pillow cases. Several fashion businesses use fabric waste generated during the manufacturing process or material that has been designated as unusable due to minor faults. *H&M* and all textile companies should have as a goal not to send any clothing or packaging item to the landfills. From this aspect, stock clothing is also another big issue because unsold garments should be either recycled or reused. Another idea for the company could be to create outlet centers, where it will sell its stock at a lower price.

A simple way to encourage post- consumer use recycling is to locate big recycling bins in all of *H&M´s* stores, so customers will be enabled to come again and give back their old clothes for recycling. Then the quality department could sort the clothes according to the material, check and control them and pass them again to the production department to be reprocessed. Of course this procedure will be much easier in the countries where both *H&M´s* stores and suppliers-factories are located, because in all other countries this is going to be more complicated, since transportation will have to be involved, which will disable the sustainability strategy in terms of the transportation cost and emissions that will be created. A suggestion to enable recycling in countries where *H&M* has only stores and no suppliers-factories located could be to sell all the clothing collected to large recycling companies that will be in charge of recycling or reusing it in the most proper way.

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[171] Source: Analysis of household waste composition and factors driving waste increases - Dr. J. Parfitt, WRAP, December 2002. http://www.wasteonline.org.uk/resources/InformationSheets/Textiles.htm

I. Research & development

1. Objectives:

1. Decrease use of non recyclable materials
2. Increase product durability (reduce water consumption)

2. Actions:

a) Increase use of innovative and recyclable materials

b) Increase longevity, promote up-cycling

c) Redesign and restyle used clothes

Choosing the proper materials to manufacture the garments is one of the most important tasks. Companies usually choose the less costly without taking into account the environmental impacts that they may cause. Materials are divided in recyclable and non- recyclable. Synthetics, nylon, etc are artificial materials that are made out of petrochemicals and they are toxic. In addition to the long term health problems and environmental impact that they cause when produced, because they are made artificially, they are not degradable, which means that they cannot be recycled.

On the contrary, sustainability source materials, such as bamboo, hemp, wild silk and linen, organic wool not only are healthy and create very soft and smooth fabrics when blended with organic cotton, but also are very easily degradable. Recycled polyester, made from recycled drinks bottles is now used by companies to make fabrics, such as Patagonia, *Marks& Spencer*, and *Armani jeans*. Companies like *From Somewhere* specialize in creating collections from this kind of fabric, and characterize this process not as recycling, but as "up- cycling".

Armani Jeans have been incorporating eco- fabrics and design since the mid 90's. Their first eco- project started in 1995 with the development of a process to recycle denim. As this idea was revolutionary at that time, the jeans were displayed at the Science and Technology Museum of Milan. Later *Armani Jeans* also developed new materials using 60% recycled wool and recycled cross dyed cotton and introduced hemp eco-washes into the collection. This experimentation has continued with the production of an organic knitwear range, the use of pure alpaca and the engagement with fair-trade cotton projects in Peru and Bolivia and recycled polyester. [172]

Except for recycling, another important issue is product durability. Increasing product´s life span delays the need of being reprocessed and reused, recycled or end to the landfills in the worst case. It even reduces the need of frequent washing thanks to innovative materials nature, which means that it leads to less water consumption. Therefore, Product longevity minimizes waste and environmental impact and constitutes a key principal in some innovative companies' philosophy, such as *Beautiful Soul*[173].

However, today most of the clothes are not thrown because they are destroyed, but because their owner gets bored with them and this is due to the rapidly changing consumer needs and fast fashion. For this reason garments should be designed so that they are adjustable to the wearers changing needs. An innovative idea is to give the customers the opportunity to send their used clothes back to the store to be re-designed and restyled either according to the designers or the

[172] Ethical Fashion Forum, www.ethicalfashionforum.com
[173] Beautiful Soul Ltd, www.beautiful-soul.co.uk

customers' taste, who can get inspired of a catalogue that the company may launch. It can be done easily and quickly, even by sending an online order to the sales or design department. It´s a smart idea of giving clothes a second life that reduces cost and environmental impacts.

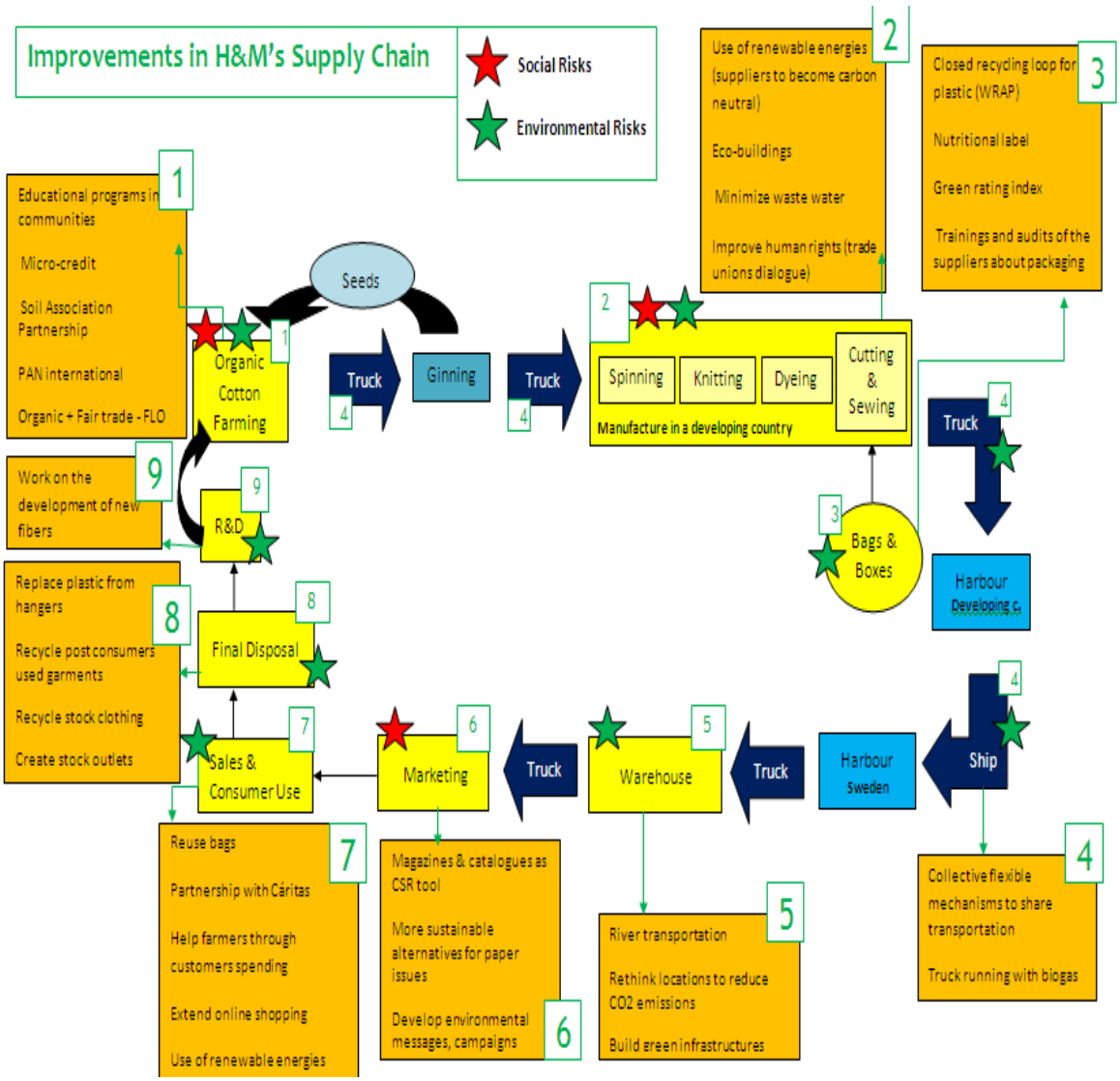
H&M should encourage its designers to apply eco-innovative methods and make its products durable from a technical point of view and upgradeable by using recyclable materials.
To conclude, in a sustainable textile industry the goal must be to close loops, to link consumers to farmers, and not only farmers to consumers, and ensure that none of the clothing items (or packages) is sent to the landfills.

J. Summary table of the recommendations

SUPPLY CHAIN	WHAT IS HAPPENING NOW AT H&M?	RECOMMENDATIONS
Raw Material	- Intermadiaries - no direct relationship farmers - Member Organic Exchange - Better Cotton Initiative - Lack perspective future supply of organic cotton	- Educational programs in communities (read-write) - Micro-credit (small loans low-income farmers) - Soil association (campaigning for planet friendly food & farming) Help organic cotton growers - PAN international Pesticide Action Network - Organic + Fair-trade FLO – Better deal with producers - Increase organic cotton production (less polluting)
Manufacturing	- Code of conduct - FAP: Full Audit Programme - 110 quality controlers - 30 code of conduct auditors - Human rights issues - Restriction use of chemicals - Tool for cleaner production (40 measures)	- Use of renewable energies (suppliers to become carbon neutral) - Eco-buildings - Minimize waste water - Improve human rights performance (trade unions dialogue)
Packaging	- Code of conduct (polyethylene) - No control of packaging from suppliers - 76% recycled hangers	- Closed recycling loop for plastic (WRAP) - Education tool: Nutritional label – Green index - Packaging scorecard for suppliers - 100% recycled hangers - Use of recycled carton for shop packaging - Customers dispose of packaging disposal in shop
Distribution	- Very efficient logistics system - Asia main production area - Europe main market - Transit terminal in Germany	- Rethink locations of the distribution centers to reduce CO2 emissions - Build green infrastructures
Transportation	- Strong selection of the suppliers (environment) - Green Cargo Working group - Clean Shipping Project - Important rate of transportation by air - Business travels increase - Eco-friendly methods - Biodiesel	- Develop river transportation - Collective flexible mechanisms to share transportation - Fleet of trucks running with natural gas - Reduction of business travels: videoconferencing facilities, Pre-trip authorization, Environmental audits suppliers (hotels, air & railway companies) - No “airfreight” policy

SUPPLY CHAIN	WHAT IS HAPPENING NOW AT H&M?	RECOMMENDATIONS
Marketing	- H&M magazine focused on fashion and beauty - Prestigious designers & popstars contracted - Website good CSR tool	- Magazines & catalogues used as CSR tool - Recycled paper for catalogues and magazines - Develop environmental messages, campaigns
Sales	- Target energy consumption reduction in stores 20% by 2020 - No differentiation in shop organic or non organic items - Plastic bags	- Reuse bags - Partnership with Cáritas - Help farmers through Customers spending - Extend online shopping - Use of renewable energies - New lights and heating equipment - Educate people about CSR in the shops
Final disposal	- PVC avoided for shop fittings - No mercury in light sources - No common waste management & stocks recycling actions in store - Disposal of a large proportion of hangers	- Replace plastic from hangers (wheat) - Recycle post consumers used garments - Recycle post industrial waste - Recycle stock clothing - Create stock outlets
R & D	- Laboratory testing (allergies etc) - Team of excellent designers - Organic cotton is H&M most innovative fiber Technical assistance to improve procedures & quality of dyeing, washing, embroidery, printing	- Use innovative and recyclable fibres (hemp, bamboo etc.) - Increase product durability - Redesigning old clothes (give them back to the shop - Later the clothes are redesigned according to your tastes)

K. Map of recommendations for the supply chain



V. CONCLUSION

The paper explores two elements of H&M: the organic cotton line and the supply chain. The research conducted on H&M´s transition to organic cotton has been helpful in understanding H&M´s supply chain from the source to the store. Indeed, we realized that H&M´s supply chain was not necessarily organized differently whether it was the life-cycle of organic or conventional cotton garments. These finding led us to explore more broadly the overall operations of H&M ´s supply chain while being conscious of the differences and peculiarities of organic cotton production.

As students from a Master in Sustainable Development and Corporate Social Responsibility, we intended to show the environmental and social, positive and negative impacts of the supply chain. In order to fully understand all the aspects of H&M´s supply chain our analysis includes desktop research, interviews with practitioners at H&M and Organic Exchange and a competitive analysis. All of which are supporting our ultimate goal: to inventory risk areas in the supply chain and present recommendations to reduce adverse impacts or promote positive impacts while enhancing H&M´s economic viability. Economic, social and environmental issues need to be considered systematically in order for a model to be truly sustainable.

The motivation to produce an objective paper that was useful in the real world has guided us. The research of data, the presentation of numerous examples, diagrams and visual tables illustrate this constant effort all along the project.

In order to understand H&M´s supply chain more fully we decided to conduct a SWOT analysis. The concept of supply chain presented in the diagram below includes all stages and processes from raw material harvesting, manufacturing, packaging, distribution, transportation, marketing, sales, final disposal and R&D. The SWOT analysis is a strategic planning method used to evaluate the strengths, weaknesses, opportunities and threats involved in a project or in a business venture. It involves specifying the objectives of the business venture and or project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective.

H&M Supply Chain	+	-
Internal	**Strengths** ✓International brand ✓Fashion brand - team of 21 excellent designers ✓Prestigous designers & stars collaboration ✓Website good CSR tool ✓Strong selection of the transportation suppliers ✓Increase of ship & rail transportation ✓Very efficient logistics process ✓Organic cotton line ✓Organic cotton items available for all types of customers	**Weaknesses** ✓Intermediaries = no direct selection of the raw material ✓Increase transportation by air (cost, co2 emissions) ✓Mandatory transit to Germany (cost, co2 emissions) ✓No green distribution centre ✓Material from head office or shops not recycled ✓No actions to reduce or recycled shop packaging ✓Waste generation (hangers, plastic: no recycling) ✓No marketing in shop to promote organic cotton ✓Plastic bags ✓Items not sold = disposal - no common actions to recycle ✓No recycling opportunities for customers ✓Most trendy line = organic cotton (usually: synthetics, nylon) ✓Poor durability of the products ✓Magazines and catalogues not used for CSR strategy ✓Increase business travels
External	**Opportunities** ✓Fashion industry = fast pace then opportunities to innovate ✓Large audience: educate people on CSR ✓Flexibility - customers demands ✓High demand ethical products ✓Sales online only for few countries ✓Member Organic Exchange ✓Better cotton initiative ✓Green Cargo workgroup ✓Member Clean Shipping project	**Threats** ✓Not direct relationships with farmers ✓No clear view of organic cotton future supply ✓Energy consumption & pollution for cotton production ✓Manufacturing polluting process ✓Human & trade union rights in manufacturing plants ✓Asia main production area BUT Europe main market ✓Organic cotton NOT fair trade ✓Competitors use collective mechanisms to share transportation ✓Competitors environmentally conscious of material used in facilities ✓No management of plastic packaging used by the suppliers ✓ competitors ahead: concept of "education tool" for packaging ✓No actions: simple disposal of the plastic packaging used ✓Competitors already involved in recycling actions ✓ Competitors commercialize - work on development of new fibres ✓No campaign with environmental message ✓Medias, NGOs

The strengths of H&M are: its international coverage with a broad base of customers (large social, age, gender mix). Its products are popular because they are fashionable (thanks to a team of high profile designers) and inexpensive. Collaboration with famous people also contributes to its popularity. Logistics is key; in fact you only need two to three months between the creation of a product and it sales in shops (half of the time required for a usual retailer). The selection of its transportation suppliers, realized according to environmental requirements, is of a very good quality (For example the Swedish transportation company Green Cargo in Sweden, provides trainings on "eco-friendly" driving practices to its drivers and owns the last generations of less polluting trucks etc). Another positive point is, the decision of H&M a few years ago to develop a line of organic cotton products, including models for all types of customers. Finally, their website dedicated to CSR is very good, with a lot of details about H&M commitment towards social and environmental partnerships and actions (Then at the opening of their CSR web page three short educative films are available: "H&M and environment in the supply chain", "H&M´s sewing training centre" or "H&M ´s CSR work").
The major weaknesses of H & M are three-fold. First weakness: their lack of long-term vision in waste management (packaging and plastic hangers). Secondly, the lack of a marketing strategy orientated towards environmental and social issues. Unlike Zara, no special campaign has been carried out to promote their organic cotton line. Finally, the default search (R & D) on the opportunity to produce new types of fibers.

The industry in which H & M operates, and the number and diversity of its customers, all represent potential vectors of innovation and creativity. Customer demand in H&M´s products is increasing all over the world – Then why customers based in some specific countries can buy H & M´s products online? This could be a fantastic opportunity for H & M. Moreover, the new requirements of customers - calling for profound positive change - are real business challenges. H & M has partially understood this when creating a line of organic cotton, or by taking par of working groups on issues related with the challenges it faces: (climate change, transportation etc.).
The main threats H & M will have to face in the future are located on the side of the management of subcontractors. First - the lack of a direct relationship with farmers (which does not allow them to properly monitor the future supply). Second - the management of manufacturer in developing countries, especially the management of social risks. Third - the transport of goods. H & M unlike its competitors do not use all possible mechanisms to reduce the frequency and distances required to transport its goods. And also, lack of waste management from external sources and of an environmental awareness concerning the design of its infrastructures and facilities (Headquarter, shops, distribution centers).

This table reflects perfectly the situation of the supply chain at H &M; This supply chain benefits from the reputation of the "brand" (international, prestigious, fashionable, large audience), as well as the various measures introduced by the CSR department (selection of the transportation suppliers, Organic Exchange, Better Cotton Initiative, Green Cargo Workshop, Clean Shipping Project). But it suffers from some real gaps; entire parts of the supply chain are neglected (packaging, final disposal, R & D) or poorly exploited (transportation, marketing, sales).

We can blame H & M (in the management of its supply chain) for its irregularity, its piecemeal measures and for not having a general environmental-social strategy to apply.

If there is a strong willingness coming from the management of the company, H&M has got all the qualities and advantages to achieve successfully this challenge.

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VIDEOS AND OTHER MATERIALS/WEBSITES TO LOOK AT

ORGANIC FIBRE-MORAN FLIBRE: http://www.youtube.com/watch?v=qHZR5SyA-CQ&feature=PlayList&p=2332EB7001622CA7&playnext=1&playnext_from=PL&index=6

BBC: http://news.bbc.co.uk/2/hi/programmes/documentary_archive/6564445.stm

H&M: Video on Corporate Social Responsability

Zara advertisement: http://www.youtube.com/watch?v=ZLUX5EdlIDo

“Patagonia distribution centre built green with LEED” Available at http://www.youtube.com/watch?v=nr9WU4-NAc4 –

IN-HOUSE MATERIALS

Interview made to Henrik Lampa by Candela Aldao, Clemence David and Eliza Panatiogudo on the 18th of June of 2009 in EOI, Escuela de Negocios. Madrid

VII. Annexes

A. Annex 1: H&M's Labor Compliance Program in 2006

H&M's labor compliance program is based on its internal Code of Conduct (CoC), which incorporates the standards outlined in the FLA Workplace Code of Conduct. H&M's Full Audit Programme (FAP) is managed by the CSR Manager, who is based in the company's head office in Stockholm, Sweden. The CSR department's leadership team comprises 11 team members at the head office, 1 regional coordinator in India, 2 regional coordinators in China, and senior auditors and auditors located globally. The compliance staff worldwide includes 51 full-time staff members working in the head office and four regions: Asia, Far East, Europe, and Africa. H&M's compliance team in the Far East, headquartered in Hong Kong, comprises 15 full-time leadership team and compliance staff members. FAP audits are conducted at the initiation of each supplier relationship and include inspection of factory premises, review of documentation, and worker and management interviews. The FAP audit is supplemented by a Management Action Plan (MAP) and Follow-up (FUP) visits to assess progress of remediation.

Developments in H&M's Labor Compliance Program in 2006

- All audits in 2006 were conducted in accordance with a new audit program launched in 2005. During the year, a total of 312 FAP and FUP audits were conducted, including 105 pre-sourcing FAP and FUP audits at potential factories. Of the 133 internal FAP audits conducted at existing factories, 1 was unannounced. Twelve of the 74 FUP audits at existing factories were unannounced.

- Developed methods for remediation and follow-up visits. Workshops were held for auditors to share experiences and discuss possible improvements. Evaluated and worked on improving FUP tools.

- Continued practice of sending the H&M Code of Conduct to all new suppliers and requiring each supplier to sign a compliance commitment. All of H&M's Chinese suppliers have been informed about H&M's participation in the FLA and their obligation to comply with the CoC.

- Conducted several training sessions for auditors and internal monitors during the year, including worker interview training, follow-up visit training and a "Training the Trainers" course aimed at enhancing the skills of auditors to better educate suppliers. A training session on follow-up visits was conducted in Shanghai in October 2006.

- H&M received 10, mostly anonymous, worker calls and faxes during the year. A primary complaint area was excessive overtime. Auditors and the receptionist, who have been trained in methods of effectively responding to anonymous callers, answered the calls. In all cases, H&M investigated the complaint.

B. Annex 2: Press Release launched by H&M to promote the Organic Cotton Collection

1/11/2008 - H&M'S ORGANIC COTTON COLLECTION INCREASES THIS SPRING

The H&M design team increased their usage of organic cotton for the 2008 spring collection. For the spring line, 1,500 tonnes of organic cotton will be used, which is more than the total amount utilized last year.

"Our organic cotton collection is also high fashion, as customers are becoming increasingly aware of both fashion and the environment. We are proud to offer clothes made from organic cotton in nearly every H&M department," says H&M's Head of Design, Margareta van den Bosch.

ORGANIC COTTON COLLECTION

Women

The collection is based on a romantic or pared down style with clear references to the 60s and 70s.
The colour palette is neutral grey, soft brown, khaki, black and white, with accents in poppy red, yellow and rose. Dresses are folk inspired in mini, midi and maxi lengths with patterns, gathers, puffs and tiers, or refined and simple with colour blocks and volume. Blouses and tops are feminine and romantic or in T-shirt style with a deep neckline in the back or front. These tops are teamed up with knee-length skirts, shorts or jersey trousers. Tailored blazers with waistcoats and shorts also make their mark for an updated look. Underwear and sleepwear complete the collection, as do tunics and jeans from the H&M Mama maternity range.

Divided

The girl's organic cotton collection features active, urban lifestyle blended with oriental influences. The range includes dresses, tops, trousers and shorts with sporty details and exotic patterns in black and white, cerise, apricot and turquoise. For boys it's all about patterns - checks, colour blocks, abstract patterns and frontal prints in grey, blue, orange and purple. Garments include classic shirts, T-shirts, vests, shorts and five-pocket style trousers. The range also includes denim skirts, shorts and jeans.

Children

The 70s also inspire children's fashion collection this season. For girls, the range includes denim dresses, skirts, waistcoats and shorts, fringed waistcoats, smocks, tunics and vests in white, grey, blue, red and pink. To complete the look there are matching accessories as classic 70s-style clogs and a shoulder bag in red. For boys there are striped or front print T-shirts and vests in off-white, grey, blue, green and pink worn with shorts, jeans and denim jackets. Essential are accessories for boys include baseball boots and a belt.

All clothes and accessories made with organic cotton have a special hangtag to help customers distinguish this collection.

C. Annex 3: Some news gathered in the media about H&M's Organic Cotton Collection

New 1 - H&M's New Organic Cotton Collection

by Leonora Oppenheim, London, UK on 02.20.07

Wow. British High Street fashion really seems to be getting it's eco on. This news just in from Style Will Save Us, H&M will soon be stocking a new organic cotton fashion range. Due in stores in March, the collection includes jeans, t-shirts, dresses and maternity wear. For those of you who are constantly exasperated by the price tags for organic clothing you'll be pleased to hear that Hennes aren't about to go all expensive on us. While T-shirts priced at £9.99 and tunic dresses are £29.99 are maybe a few more pounds than the basic H&M collection, these prices are certainly not going to alienate the teen, student and young adult markets they are aiming for. H&M have been using the EU Flower Eco-Label on some of their baby clothes since 2005, which makes one question why they are arriving at the eco-fashion party ever so slightly fashionably late. Other British high street competitors have been conspicuously publicizing their sustainable efforts, with Marks and Spencers leading the way.

Oasis launched their organic cotton collection last year. Top Shop, H&M's biggest UK rival, has been selling vintage and recycled clothing ranges for sometimes, whilst also launching ethical jeweler collections and working with ethical clothing labels such as People Tree. Nevertheless it can only be good news that H+M has now joined the eco-fashion trend with this stylish new collection. Oh and we hope this isn't just a UK treat, hopefully all H&Ms everywhere will be stocking this collection. via: Style Will Save us: H&M.

At www.treehugger.com[174]

New 2

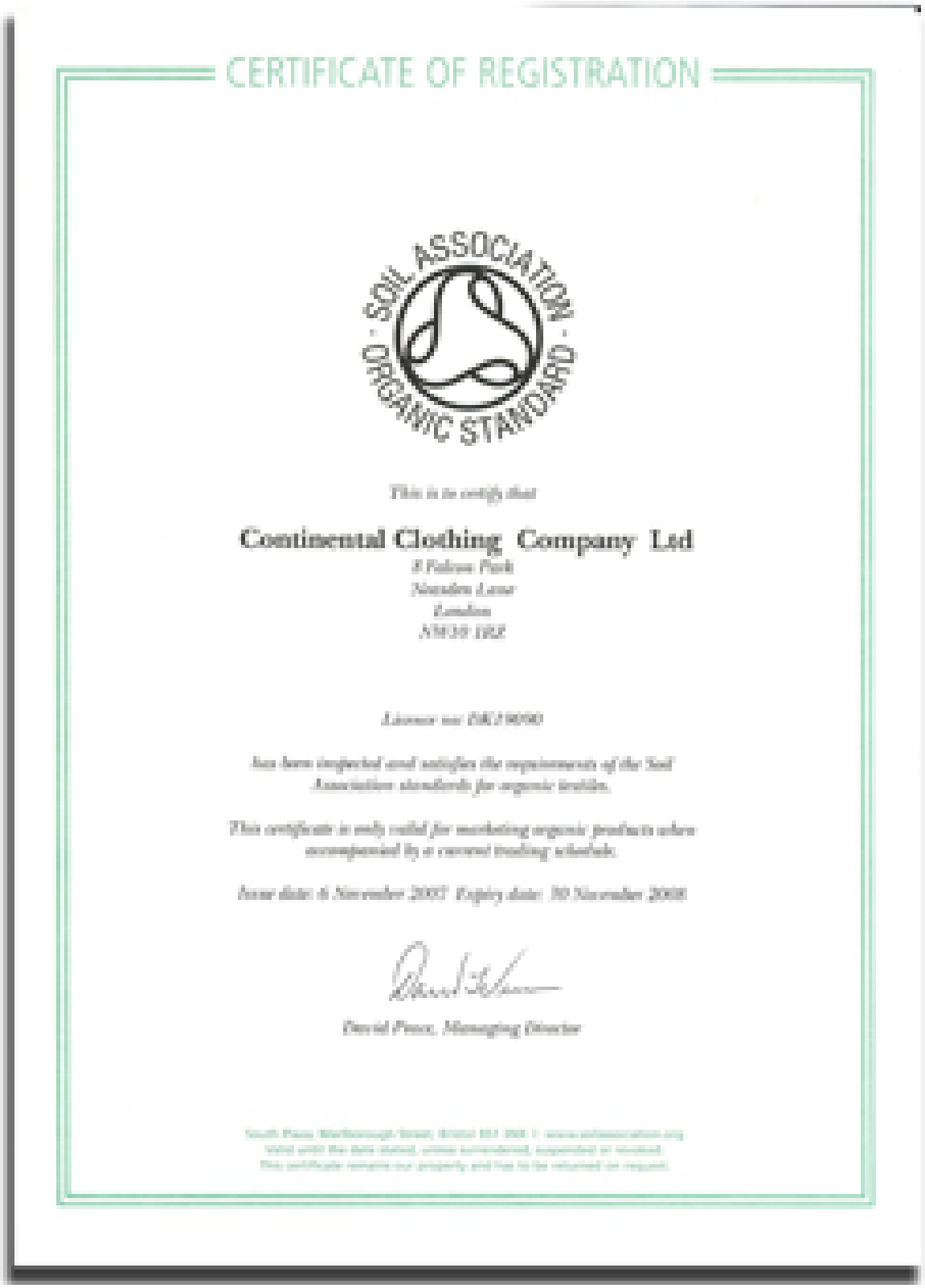
New H&M Collection Features Organic Cotton

This spring collection from H&M introduces a desirable fashion range for women, teens, children and babies. The clothing line, featuring organically grown cotton, will be available in selected stores in all H&M markets from March 2007. "These clothes are great pieces of the moment. They combine a conscious choice of materials with the latest design, allowing you to look just as good on the outside as you feel on the inside," says H&M's head of design Margareta van den Bosch.
Organic cotton is cotton grown without the use of harmful pesticides and synthetic fertilizers. The annual world production of organic cotton is still very limited and represents less than one per cent of all cotton. In order to increase the demand for organic cotton and thereby encourage cotton growers to convert to organic cultivation, H&M started to use organic cotton a few years ago. At the start, it was included mainly in a selection of babies' and children's garments. H&M has subsequently worked towards using an increased amount of organic cotton. In addition, H&M became a member of Organic Exchange, an organization that promotes organic cotton worldwide, in 2003. At www.dexigner.com[175]

[174] http://www.treehugger.com/files/2007/02/hennes-organic-cotton.php

[175] http://www.dexigner.com/fashion/news-g10337.html

D. <u>Annex 4</u>: Certificate of registration Soil Association Organic Standard



CERTIFICATE OF REGISTRATION

SOIL ASSOCIATION · ORGANIC STANDARD ·

This is to certify that

Continental Clothing Company Ltd

8 Fulton Park
Newsden Lane
London
NW10 1BZ

Licence no: UK19090

has been inspected and satisfies the requirements of the Soil Association standards for organic textiles.

This certificate is only valid for marketing organic products when accompanied by a current trading schedule.

Issue date: 6 November 2007 Expiry date: 30 November 2008

David Pryce, Managing Director

South Plaza, Marlborough Street, Bristol BS1 3NX | www.soilassociation.org
Valid until the date stated, unless surrendered, suspended or revoked.
This certificate remains our property and has to be returned on request.

E. Annex 5: Code of conduct

H & M HENNES & MAURITZ AB

Code of Conduct

INTRODUCTION

H&M, as a strongly expanding multinational company, feels that it is increasingly important for us to take responsibility for all our actions, in Europe as well as in the rest of the world. Most importantly we have a responsibility towards all the thousands of people taking part in the production of our garments. We have to make sure that nobody whose work is contributing to our success is deprived of his or her human rights, or suffers mental or bodily harm.

In order to make our position clear to our suppliers, our own staff, as well as any other parties, we have set up a Code of Conduct. It is a non-negotiable requirement from our side that all our suppliers and their subcontractors, without exception, should follow this code.

1. LEGAL REQUIREMENTS

Our general rule is that all our suppliers must, in all their activities, follow the national laws in the countries where they are operating. Should any of the following requirements by H&M, be in violation of the national law in any country or territory, the law should always be followed. In such a case, the supplier must always inform H&M immediately upon receiving this Code.

It is however important to understand that H&M's requirements may not be limited to the

requirements of the national law.

2. CHILD LABOUR

2. 1 Policy

We base our policy on child labour on the UN Convention on The Rights of the Child, article 32.1 .We recognise the rights of every child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.

2.2 Definition

We define, in this context, the word "child" as a person younger than 15 years of age or, as an exception, 14 years in countries covered by article 2.4 in the ILO convention No.138.

2.3 Implementation of H&M's policy on Child labour

H&M does not accept child labour.

We are concerned about the situation of children in many parts of the world. We acknowledge thefact that child labour does exist and can't be eradicated with rules or inspections, as long as thechildren's social situation is not improved. We want to actively work with factories and with NGO's(Non Government Organisations) in third world countries, to try to improve the situation for the children affected by our ban on child labour.If a child (see definition under 2.2) is found working in any of the factories producing our garments,we will request the factory to m.ake sure that the measures taken are in the child's best interest. We will, in co-operation with the factory, seek to find a satisfactory solution, taking into consideration the child's age, social situation, education, etc. We will not ask a factory to dismiss a child without a discussion about the child's future. Any measures taken should always aim to improve, not worsen,each individual child's situation. Any costs for education, etc. have to be paid by the factory.

We will firmly demand that the factory employs no further children.

We recommend factories with predominantly female workers to arrange day care for children below school age.

2.4 Enforcement

If a supplier does not accept our policy on child labour, we will not continue our co-operation with this supplier.

2.5 Apprenticeship programmes

In countries where the law permits apprenticeship programmes for children between 12 and 15 years of age, we will accept that children of this age work a few hours per day.

The total numbers of hours daily spent on school and light work should never exceed 7 (seven) hours (ILO convention No. 33).

The factory must be able to prove that this work is not interfering with the child's education, that the work is limited to a few hours per day, that the work is light and clearly aimed at training, and that the child is properly compensated. If we have any reason to doubt that these conditions are met, such apprenticeship programmes will not be accepted in factories producing garments for H&M.

2.6 Special recommendations

We acknowledge, that according to the UN Convention on the Rights of the Child, a person is a child until the age of 18. We therefore recommend our suppliers to make sure, that employees in the age group 15-18 years, are treated accordingly. Limits for working hours and overtime for this age group should be set with special consideration to the workers' low age.

3. SAFETY

3.1 Building and Fire Safety

We require from our suppliers that the workers' safety should be a priority at all times. No hazardous equipment or unsafe buildings are accepted.

The factory should have clearly marked exits, and preferably emergency exits on all floors. All exit doors should open outwards. Exits should not be blocked by cartons, fabric rolls or debris, and should be well lit. If emergency exits are locked, the keys should be placed behind breakable glass next to the doors, and thus be available to all staff at all times.

All workers should be aware of the safety arrangements in the factory, such as emergency exits, fire extinguishers, first aid equipment, etc. An evacuation plan should be displayed in the factory, the fire alarm should be tested regularly and regular evacuation drills are desirable.

3.2 First Aid

First aid equipment must be available in each factory, and at least one person in each department should have training in basic first aid.

It is recommended that a doctor or nurse should be available at short notice, in case of an accident in the factory. The employer should pay any costs (not covered by the social security) which a worker may incur for medical care, following an injury during work in the factory.

4. WORKERS' RIGHTS

4.1 Basic Rights

All workers producing garments for H&M should be entitled to his or her basic rights:

4.1.1 We do not accept that bonded workers, prisoners or illegal workers are used in the production of goods for H&M.

4.1.2 If foreign workers are employed on contract basis, they should never be required to remain employed for any period of time against their own will. All commissions and other fees to the recruitment agency in connection with their employment should be covered by the employer.

4.1.3 Under no circumstances do we accept that our suppliers or their subcontractors use corporal punishment or other forms of mental or physical disciplinary actions, or engage in sexual harassment.

4.1.4 All workers should be free to join associations of their own choosing, and they should have the right to bargain collectively. We don't accept any disciplinary actions from the factory against workers who choose to peacefully and lawfully organise or join an association.

4.1.5 No worker should be discriminated against because of race, gender, religion or ethnic background. All workers with the same experience and qualifications should receive equal pay for equal work.

4.1.6 All workers should be entitled to an employment contract.

4.2 Wages and Working Hours

4.2.1 Wages should be paid regularly, on time and be fair in respect of work performance. The legal minimum wages should be a minimum, but not a recommended, level.

4.2.2 Weekly working time must not exceed the legal limit, and overtime work should always be voluntary and properly compensated.

4.2.3 The workers should be granted their stipulated annual leave and sick leave without any form of repercussions.

4.2.4 Female workers should be given their stipulated maternity leave in case of pregnancy.

4.2.5 Dismissal of pregnant female workers is not acceptable. In developing countries, we recommend our suppliers to provide the workers with at least one free meal daily.

5. FACTORY CONDITIONS

5.1 It is important for the workers' well-being, and for the quality of the garments, that the factory environment is clean and free from pollution of different kinds.

5.2 The temperature in the factory should be tolerable as a working environment, and the ventilation should be adequate. Heaters or fans should be provided when needed.

5.3 The lighting in each workplace should be sufficient for the work performed, at all times of day.

5.4 Sanitary facilities should be clean, and the workers should have access without unreasonable restrictions. The number of facilities should be adequate for the number of workers in the factory. Sanitary facilities should be available on each floor, and preferably separated for men and women.

6. HOUSING CONDITIONS

If a factory provides housing facilities for its staff, the requirements regarding safety and factory conditions, under point 3 and 5 above, should also cover the housing area.

All workers must be provided with their own individual bed, and the living space per worker must meet the minimum legal requirement.

Separate dormitories, toilets and showers should be provided for men and women.

There should be no restriction on the workers' right to leave the dormitory during off hours. We want to particularly stress the importance of fire alarms, fire extinguishers, unobstructed emergency exits and evacuation drills in dormitory areas.

7. ENVIRONMENT

The environment is of increasing concern globally and H&M expects its suppliers to act responsibly in this respect. Our suppliers must comply with all applicable environmental laws and regulations in the country of operation.

According to the H&M Chemical Restrictions, we do not allow use of solvents or other hazardous chemicals in the production of our garments. All suppliers must sign the H&M

Chemical Restriction Commitment, confirming that no prohibited chemical substances will be used in the production.

8. MONITORING AND ENFORCEMENT

8.1 The principle of trust and co-operation

H&M expects all its suppliers to respect the above Code of Conduct and to actively do their utmost to achieve our standards. We trust our own staff to take a lot of responsibility in their work, and we expect from our suppliers that they do the same. We believe in co-operation and we are willing to work with our suppliers to achieve workable solutions in each individual case.

We are willing to take into consideration cultural differences and other factors which may vary from country to country, but we will not compromise on our basic requirements regarding safety and human rights.

8.2 Monitoring

All suppliers are obliged to always keep H&M informed about where each order is being produced.

H&M reserves the right to make unannounced visits to all factories producing our goods, at any time. We also reserve the right to let an independent third party (e.g. a NGO) of our choice make inspections, to ensure compliance with our Code of Conduct.

8.3 Non-compliance

Should we find that a supplier does not comply with our Code of Conduct, we will terminate our business relationship with this supplier, if corrective measures are not taken within an agreed time limit.

If we find repeated violations, we will immediately terminate the co-operation with the supplier and cancel our existing orders.

F. Annex 6: Presentation BSR Sustainable transport initiative

A Path to Sustainable Shipping, BSR's Sustainable Transport Initiative and Clean Cargo

Business for Social Responsibility
at IMarEST, February 1-2, 2005

BSR's Sustainable Transportation Initiative draws from business-to-business working groups

- The Clean Cargo Working Group – a collaboration between ocean carriers and their customers
- The Green Freight Working Group – focused on U.S. ground transportation
- The new Sustainable Freight Transport Working Group – integrating all modes of transport

www.bsr.org/sustainabletransport

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Clean Cargo and Sustainable Freight member companies include:

- APL Limited
- A.P. Moller (Maersk-Sealand)
- Chiquita Brands, Inc. & Great White Fleet, Ltd.
- CMA-CGM, Inc.
- Hapag-Lloyd Container Line
- Hewlett-Packard Company
- The Home Depot, Inc.
- IKEA Services, AB
- "K" Line
- Mattel, Inc.
- New United Motor Manufacturing, Inc.
- NIKE, Inc.
- Nordstrom, Inc.
- NYK Line
- OOCL
- Office Depot
- P&O Nedlloyd
- Starbucks Coffee Company
- Teragren LLC
- Wallenius-Wilhelmsen

3

The Clean Cargo working group integrates three components

1. Emission Calculation:

For greenhouse gases and other air pollutants.

2. Environmental Performance Reporting:

Environmental Performance Survey (EPS) Tool

3. Environmental Performance Improvements:

Goal to promote environmentally friendly practices

4

Standardized reporting on environmental performance is the core element of the groups

- Standard methodologies: Environmental Performance Survey and Guidance Appendix
- Monitoring and reporting
- Communication
- Sensible benchmarking

5

Clean Cargo's Environmental Performance Survey (EPS):

- Reports qualitative and quantitative aspects, from environmental management to air emissions
- Reports emissions according to the Greenhouse Gas Protocol (by WRI)
- Provides emission factors of ocean carriers' greenhouse gases for the shippers
- Enables shippers to calculate their CO2 footprint from ocean freight

6

Emission factors from Clean Cargo carriers enable shippers to calculate their share of transport emissions

- How much does my freight from port A – B on strings Y and Z of carrier emit?
- EPS data:

  String Y/Z = 114.5 g CO2/TEU-km
- Shipper's footprint sample calculation:

 # TEU * km (A-B) * 114.5 = x g CO2 for freight

7

Ocean transportation may gain in importance in a sustainable transportation network

- Ocean transport has a very beneficial energy ratio per unit of transport [e.g. TEU-km]
- Corporate greenhouse gas reduction strategies in freight transport could include a shift to ocean transport

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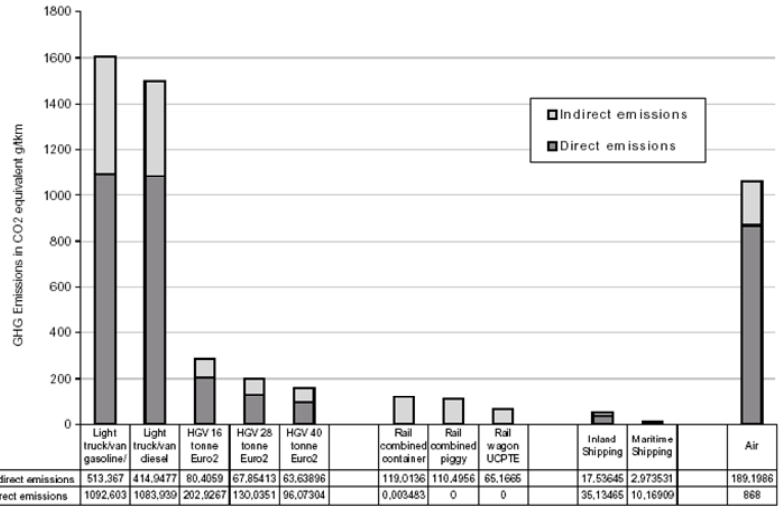
Figure 4: **Lifecycle GHG emissions for European freight transport modes**



	Light truck/van gasoline/	Light truck/van diesel	HGV 16 tonne Euro2	HGV 28 tonne Euro2	HGV 40 tonne Euro2	Rail combined container	Rail combined piggy	Rail wagon UCPTE	Inland Shipping	Maritime Shipping	Air
Indirect emissions	513,367	414,9477	80,4059	67,85413	63,63896	119,0136	110,4956	65,1665	17,53645	2,973531	189,1986
Direct emissions	1092,603	1083,939	202,9267	130,0351	96,07304	0,003483	0	0	35,13465	10,16909	868

Source: OECD (2001) Good Practice Greenhouse Gas Abatement Policies: Transport

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However, its ability to draw freight transport from other modes depends on its 'license to operate'

- License to operate would include for example activities in areas such as:
  - Ship management
  - Air quality
  - biodiversity
  - local impact
  - Labor and human rights
- The Clean Cargo working group may create
  - Ethical and environmental standards for ocean transport
  - Ocean carriers' license to operate

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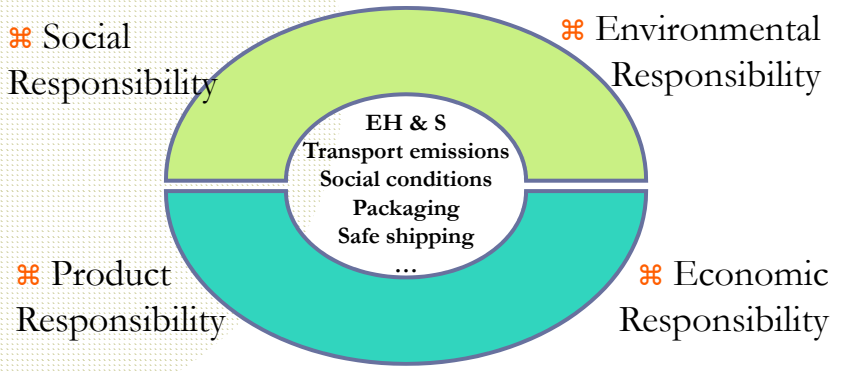
A group of BSR member companies now expands their view towards sustainable freight transport

- All modes of transportation, globally
- Social and environmental aspects of transportation
- Corporate principles and code of conducts for transport suppliers

11

Integrating transportation into codes of conduct means extending social, economic and environmental criteria to their transport suppliers



12

What constitutes ‘sustainability’ in freight transport is a work in progress. It may include:

- Compliance and excellence in air, land and water environmental performance
- Compliance with labor and human rights standards
- Driver’s and operational safety, employee safety
- Packaging and hazardous materials handling
- Waste management and recycling
- Effects on local communities

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BSR’s working groups under the Sustainable Transport Initiative are well positioned to take the next steps. We seek partnerships with other stakeholders to define sustainable transportation for the future. We aim to develop metrics and principles for responsible corporate transport management.

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