Green production in India

by

Corinna Möller
**Declaration of authorship**

Me, Corinna Möller, herewith declare that this report is solely my own work. Any material derived from others will be acknowledge and the sources are stated in footnotes. In detail the exact sources can be found at the back of the report in the bibliography.

Corinna Möller, New Delhi, May 2009
Green production in India

Why should western companies walk the green fashion road and how can green production in India be facilitated?

Guiding report for the organic fashion industry by

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Amsterdam, August 2009
Foreword

Coming to the end of my forth year at AMFI it was not very hard for me to find a right subject which truly interests me and will be of use in the fashion industry. After completing my Internship at Loomstate, I wanted to stick to the organic part of the industry and did that successfully with this report. Finding a right path for my professional career was my major emphasis during that research project and I truly believe I succeeded with that.

After I was clear about my general subject in which I wanted to gain most professional knowledge, I further decided to take it a step forward. Hence my decision on completing my work in India was based. Being in India helped me a lot to understand basic but very important facts.

It was not always easy being far from friends, family, professional coaches and my very own culture, though I can still say that I am more than proud about the end result.

I would like to thank all my friends and family members who gave me most of the mental support needed. Further on special thanks go to all my professional supporters in the industry.
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Summary

The report will be starting with an introduction which will answer the question of why I choose this subject and how I am achieving my professional aim through this report. Within this research I examined the green apparel industry within India and how the western world can walk the green fashion road in India. When it comes to green apparel production there are a few options a western company can chose from. They can either work with an agency/ middleman or they can handle all production related issues by themselves. I would like to look closer to the German based organic company Armedangel who are as of now receiving materials from India but still unsure about shifting some production there. The primary approach to the research was very practical since I spend most of my time in India to observe the industry as closely as possible and therefore was able to bring these two named parties together for a successful business transaction. Further on my research was based on my questionnaire which I interviewed many professionals with. (Please see appendix of list of sources.)

Chapter two will be dealing with an analysis of the organic market with regards to India’s position and responsibilities. Through the growing trend of organic farming, India was able to reach a 32% share of the organic cotton production in the whole world and should be able to overtake Turkey as the leading organic cotton producer. The benefits of organic cotton come clear if the negative outcomes of conventional cotton are portrayed. Such as millions of farmers seeing suicide as their only way out of the treadmill situation conventional farming with all the chemicals has brought to them. And millions of people are heavily affected by the side effects of all chemicals used during production.¹

The following chapter will be showing the trend and forecasts for the organic industry with specific emphasis on the Indian market. Several examples from the industry will be named to underline India’s strengths and weaknesses. The trend of organic cotton is not stagnating and will be a continuous global trend. It is said that the organic market world wide will have a turnover of US 5.3$ billion in the year 2010 by many brands continuously expanding their product lines. Germany, France and the US are the leading countries.

Chapter four, which forms the start of the second part of my report, contains a short market analysis of the Chinese market. The reason why I would like to bring China into the picture is that India itself is eagerly trying to reach a better position in the global market and China is therefore forming the best role model out of the Asian market. The fact that China has been concentrating too much on expansion - instead of innovation - and stepping up into a more Westernized world is leaving a gap in

China’s economy which can be easily filled by India. China’s disadvantages lie in the fact that they are not flexible enough in production quantity, that often products are still questionable if they are produced under strict eco standards and the lack of innovation. Therefore India’s advantages are easier sourcing availabilities, lower production quantity and higher quality in finer work.

If we now approach India as a green production country from a Western point of view we have to consider many things. Chapter five will therefore be concentrating on the demand of Western buyers and what Indian producers need to supply to satisfy their needs. With regards to the green apparel industry, quality within the apparel production process is one of the most important issues. Therefore it is very important for the green production in India not only to show constant textile innovations but also stay up to date with the Western quality standards in regards of finished goods. Further on communication problems are often a reason for misunderstandings and therefore efficient business is not ensured.

Chapter six will give an inside into the different options on how production can be facilitated in India. The plot of this chapter will be the solution of a middleman for the German brand Armedangels. In the case of Armedangels it will be from clear advantage if they work with the Indian based producers Ram Raja since they offer good quality for reasonable pricing. Since they have made some bad experience with quality differences while sampling in India they are still not convinced shifting production there. With the concept of the middleman I want to ensure that quality can be reached the desired level. The concept of the mediator in the industry seems to be most appealing to the majority since it regains higher efficiency for both parties.

My last chapter will be an answer to my main questions and sub questions. I will add up some substantial recommendations for Armedangels regarding how production can be facilitated for the company in India through the role of a middleman. Final conclusions with regards to my very own position in the industry will be drawn.
1. Introduction

“Green is the new black!” Green clothing has been a growing market over the past few years and has grown to an essential part of the fashion industry. I chose this subject not only out of personal interest but also in order to find professional solutions on how the green market should be approached with regards to sourcing and production. With this report I would like to create a guiding report for small to middle sized companies in Europe who are interested in producing their eco-friendly clothing line in India. During my research I critically investigated into the opportunities which India offers for green clothing production and why companies should consider the green way as a new business solution. With this report I hope to give substantial advice on how green production can be facilitated in India with special attention to the German brand Armedangel.

Since India represents the country in Asia with the fastest growing economy, I chose India for my final research. “India will be the fastest growing economy in Asia by 2010” said by Mr. P. K. Basu, Director and Chief Economist, South East Asia and India, Credit Suisse first Boston, Singapore. ²

The organic market has been a growing market over the past years and is estimated to grow even more. Some good reasons are the drastic changes within our environment, global warming, higher consciousness in the consumer mind and the urge of living a healthier life. This trend is also very noticeable in the food sector and will take even higher dimensions in the textile industry. Garment companies, especially in Europe, are seriously threatened by general competition from countries, especially those of Asian origin. They are being forced to streamline their operations and become more specialized in order to survive. Becoming involved in organic cotton is one good way of creating a competitive advantage. Consumers are increasingly concerned about the environmental impact of their lifestyles and consumption patterns. This growing awareness is being translated into changes in buying patterns and demands being placed on companies through the marketplace. The burgeoning demand for organic goods in supermarkets in Europe and the USA is an example. Consumers are not only interested in the environmental impact of the goods they consume, but also about their social impact, which is expressed through a growing interest in fairly traded goods. The approaches taken in many organic cotton projects are intended to create a more equitable distribution of benefits, including better returns at the farmer level. There is much interest among the Fair Trade organizations in including organic standards within their criteria.

With all the environmental and economical changes, the demand of organic garments has truly been booming throughout the last years. According to an assessment by Organic Exchange of the United States, organic products registered retail sales at $1.9 billion in 2007 in America, an increase of 83% from $ 1.1 billion in 2006.³ And India is standing out as a major player with market leaders such as Marks & Spencer as premium customers who are keen to source more of their organic cotton from India. ⁴

¹ http://www.blonnet.com/2003/02/19/stories/2003021902060400.htm
The trend of going green has been steadily growing and it is no longer a small niche market. Companies are increasingly being called to account for their social and environmental performance, brought upon by consumer pressure. They also face increasingly stringent environmental regulation. Engaging in the organic sector provides an opportunity to companies to respond to increasing environmental and social demands. Numerous retailing giants such as Marks & Spencer, Wal-Mart and H&M have been choosing organic as an option for some of their lines to fulfill the consumers’ needs. “The top ten organic cotton-using brands and retailers globally were Wal-Mart (USA), C&A (Belgium), Nike (USA), H&M (SE), Zara (Spain), Anvil (USA), Coop Switzerland, Pottery Barn (USA), Greensource (USA), and Hess Natur (Germany).”  

“All the retailers in the US are rushing to organic and it is nearly unthinkable not to do so.” says Marshal Cohen, Chief Retail Analyst, NPD Group – a research firm based in New York. “You cannot afford not to go organic. It appeals to the two biggest markets: youth and baby boomers.”

The problem with conventional cotton becomes very clear if you only consider the enormous health and wealth problems it brings to most of the farmers and people who are in direct contact with it. This report will be answering the question of how both sides of the industry can benefit from organic farming. Through the help of the numerous organisations, useful data was collated and analysed. (Please refer to appendix to see list of sources)

**How does Organic cotton contribute to India’s economy and what is the expected trend in the Western consumers demand? How can India improve their position in the organic market and does China as their main competitor and role model play an important part in it?**

Through my qualitative research I would like to answer the questions on what Indian producers need to do in order to satisfy Western demands. As mentioned above, many organisations are in process of expanding their organic projects; to underline my statements of ‘Why India is ideal as a business partner in the eco-friendly industry’ I would like to outline my findings in regards to the trend of organic cotton cultivation.

Last but not least I would like to present the concept of how the organic apparel production in India can be facilitated. How does the middleman contribute to the business efficiency and is it really required? These will be my main questions answered through my final part of my research paper.

Not only would I like to achieve the goal of gaining the sufficient knowledge to be able to act as a middleman between Indian producers and Western companies with this report. One of my other goals with this report is to have an educational function with this report. I hope to give substantial information on how each and every one of us, might it be on a professional level or on an end consumer level, is able to maintain our own environment in regard of the textile industry. In regards of the role

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5 http://www.organicexchange.org/Documents/press_08market.pdf

6 http://www.stitchworld.net/display1.asp?msg=1203&cat=1
of the middleman my aim would it be to create at least one collaboration between a Western brand and an Indian producer.

Many terms such as green, environment friendly, eco-friendly or biodynamic are often used but organic is the most popular and widest spread term for it. The difference between those terms varies from company to company but the major concept of working as sustainably as possible remains the same. Within this report I would like to use solely the term “organic” and “green” to avoid any confusion.
2. Current market analysis within the green production industry

With this chapter I would like to give an insight into the organic cotton Industry in India in relations to the general economical situation. I would like to answer the questions on how much organic cotton has been produced in India over the past years and at what rate it is at the moment. Further on I would like to have a closer look on how much does cotton and specifically organic cotton contribute to India’s economy.

Over the years India has built up its textile industry as a major business for its own country. 70% of India’s population are still living in rural areas and 70% out of these people are dependent on agricultural business.7 Cotton is India’s backbone in the textile industry and counts up to 70% of the total fibre consumption and 38% of the country’s export. India holds the highest cotton cultivation in the world with 8.9 million hectares and 7 million employees.8 As one might naturally think, not all of these cotton crops are eco-friendly, but India is making a great effort in steadily developing improvements for lesser soil, water and environmental pollution which is directly affecting human health. These improvements are a result of higher awareness within the industry - education plays a great part in this. Since the number of educated people is growing in India, awareness and consciousness is growing steadily resulting in a positive effect. Nowadays, people are realising the sickening effects of the chemicals involved in the process and are switching over to organic cotton cultivation and eco-friendly processing. This necessitates acquisition of knowledge on cultivation of organic cotton and its processing in the textile industry. India is receiving great help from other countries and organisations and their necessary developments within this field. The German TÜV Group with their Indian headquarters in Mumbai and 21 offices throughout India is constantly trying to improve quality, safety, environment and social accountability within the textile industry. It aims to bring India to a stage where it can be seen in a competitive level to other countries with regards to the named attributes.9

"Alternative production methods are needed which entail distinct environmental benefits [.They] can be defined in transparent terms and which can be made attractive to producers. [...] A production method designed for the economic, ecological and socio-political conditions of a producing area would be ideal. The ultimate goal of complete sustainability will not be easily attained, but organic cotton growing comes close to this goal." 10

Organic farming in India showed a remarkable growth over the past few years. It is reported by the International Fund for Agricultural Development (IFAD) that 332 new organic certifications have been issued in the year of 2004. In 2003 the numbers of organic farmers was as high as 12.000 and according to the trend and high international demand this number should be way higher by now. One of the main organic products is cotton which will be helpful for the Indian textile industry. Not only is India fulfilling the international demand but there is also a growing domestic market for organic due to India’s large population and increasing middle class. More people

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7 http://www.stitchworld.net/display1.asp?msg=1205&cat=1
8 http://www.stitchworld.net/display1.asp?msg=1205&cat=1
9 http://www.stitchworld.net/display1.asp?msg=1205&cat=1
are stepping out of poverty into the middle class, which is following a conscious lifestyle. Though the national demand for organic cotton is still very low compared to the international demand, there is a high demand of environmental education throughout all classes.  

“The country’s organic cotton output increased 292 per cent during 2007-08 to 73,702 tonnes compared with the previous year.” But even though India is now the leading organic cotton producer before Turkey it is still said that the output of organic cotton is less than 3% of the nations overall cotton production.

India overtook Turkey in leading the organic market. Turkey and India always have been very close in regards of quantity. In the growing season of 2006-07 Turkey was only slightly leading with 10,834 tonnes before India with 10,760 tonnes of organic cotton. While in 2004-05 India was still well behind Turkey with 25% they made it to the very top, leaving China and the US way behind on third and forth place with 1,868 tonnes and 1,336 tonnes. The new report from 2008 of the non-profit organisation Organic Exchange which was published recently showed that the industry had a 63% increase with regards to 2007. In the running year 2007-2008, the organic textile market reached around $3.2 billion whereas the year before the number was only estimated to be $1.9 billion.

Organic Exchange estimates sales volumes for organic cotton to reach up to 100,000 tons for 2010. India is estimated to carry 32% of the production.

2.1 Organic cotton

With this part of the chapter I will clearly portray the benefits of organic cotton. Not only the financial benefits of organic farming but also the social and health aspects will be explained. In addition to this chapter you will find an elaborate explanation of conventional cotton cultivation and some more information about organic cotton in Appendix III.

The research in this chapter is solely concentrated on organic cotton. It does not include the scope of BT cotton. Even though BT cotton does also seem like an interesting option nowadays, it does not reach the same level than organic cotton in all aspects. BT cotton turns out to be more expensive than organic cotton. A recent study conducted in Andhra Pradesh on that subject showed that the cost per acre for BT cotton is Rs 8,366 where the same for organic cotton is Rs 5,008. Further on the studies proved that the net income for BT cotton was lower by 37% than organic cotton. (Rs 3,551 for BT cotton and 5,618 for organic cotton) Not only is organic cotton the more economical choice but it is also the more eco-friendly approach. In recent studies over BT cotton it was found that it does harm the environment to some extent. The soil suffers significantly and even though BT cotton might be a reasonable option for the short term it is not a good choice in the long run. The soil
that BT cotton has been put on is very likely to completely die off after some time and will then be of no use for any further farming. BT cotton does not have the same appeal on an eco-friendly level compared to organic cotton and is not a valid comparison factor.

In the process of turning a cotton seed into cotton apparel these are the following steps which will lead to the finished garment.

- **Planting and Growing**
- **Harvesting**
- “Ginning”, or cleaning of the cotton boll
- Spinning the cotton fibres to create yarn
- Weaving or knitting
- **Fabric Dyeing**
- Finishing process to create smooth fabric
- Cutting and Sewing of garments

Each step has to be followed accordingly in order to be able to call a product organic. It is not only important that the seed is planted and grown in an organic manner but also that all the steps mentioned above should be as eco-friendly and as harmless to the environment as possible.

**Organic cotton** is the end result of cotton crops which have been produced without synthetic fertilisers and other chemicals. Organic farming is the principle of working sustainably – with, rather than against, the environment. By focusing on managing rather than completely eliminating troublesome weeds and insects, organic farmers are able to maintain an ecological balance and to protect the environment. As mentioned before, the entire process starting from planting, harvesting to finishing the garments have to be completed in a proper way to avoid harming the environment. Organic cotton production does not only avoid certain health issues but it will reduce the following consequences:

- Soil Pollution and Erosion (“According to Word Bank Group Approximately 200 kilograms of waste are generated per metric ton of active ingredients (Pesticide) manufactured.”)\(^\text{17}\)
- Water and Air Pollution (One women’s organic jersey T-shirt saves up to 1.2 tonnes of CO2 emission. 80-85% of CO2 emission can be reduced with an

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organic t-shirt. In conventional T-shirt production the water wastage is up to
20.000 litres\textsuperscript{18}

- Death of Beneficial Insects (pesticides are often taking out all insects also the
ones which are beneficial for the crop. It is proven that organic farming
preserves these insects)
- Risks for the Health, like Cancer, Sterility, acute and chronic poisoning,
neurological problems, weakening of the immune system and allergies\textsuperscript{19}
(Endosulfan one of the chemicals used as pesticides, is known to have killed
40 people in one season, in one area in a country)\textsuperscript{20}

With regards to these consequences it is more than logical that the benefits of
organic cotton can no longer be overseen. There are certain kinds of groups within
the industry who are involved with the green industry. First, and most important, there
are those involved in actual production in the field who are concerned about the
effects of what they do on health, the environment of their communities and on their
household economy. Secondly, there are those involved in the textile industry, who
are concerned about the polluting nature of the processes they carry out, and are
under increasing pressure from environmental regulators. Thirdly, there is a growing
body of informed consumers who are ready to take environmental and social issues
into account in their buying preferences. Finally, having seen the failures and
limitations of modern, conventional agriculture, there are groups involved in
promoting alternative, more sustainable forms of agricultural at both a practical and
policy level. Several NGO’s, such as Krushi, CEC, Prids, Kvas, Vofa, Basix and
Velugu are more then willing to improve the organic agricultural industry and are
running an enormous amount of organic projects to strengthen the industry. (See
detailed information in Chapter 3.)

The use of an organic system in general promotes enhanced biological activity,
encourages sustainability and most of all commands proactive management of
production. The system of eco-management, which can be followed by the ISO14000
standards, should be developed so that the purchase of raw materials, production
management, finished product quality testing of finished products and marketing
should ensure that the eco-standards of the product are to the satisfaction of the
consumer and the society. These standards cannot be generalized and are highly
dependent on the company and can only provide a framework for each business to
imply these standards. To ensure that the company is doing justice to the
environment, the management should decide its clear cut policy. The management
system should then develop the culture in the organization that would serve the eco
policy of the management. (Please find a more elaborated explanation in chapter
5.)\textsuperscript{21}

Organic production is not simply a reduction or elimination of fertilisers and chemicals
but should round up with a complete system. A deeper knowledge of non-chemical
means of insect control in particular is an absolute must for organic production. Since
most chemicals are applied during harvesting, it is absolute necessary to understand
and apply alternatives to be able call your products organic. If this is not understood

\textsuperscript{18} http://reset.to/handeln/earthpositive-baumwolle-oekologisch-fair-co2-neutral
\textsuperscript{19} http://www.indiantextilejournal.com/articles/FAdetails.asp?id=644
\textsuperscript{20} http://www.pollutionissues.co.uk/why-use-organic-cotton.html
\textsuperscript{21} Eco-friendly textiles wet processing, July 2007
a great risk of not getting certified by international standards will be existent. The main act of organic production includes reducing the use of toxic and pesticides and fertiliser, replenishing and maintaining of soil fertility and building a biologically diverse agriculture.

**The ten countries with the highest increase of organic land 2006-2007**

<table>
<thead>
<tr>
<th>Country</th>
<th>Increase in Hectares</th>
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<tbody>
<tr>
<td>India</td>
<td>+695'769</td>
</tr>
<tr>
<td>Argentina</td>
<td>+419'563</td>
</tr>
<tr>
<td>Mexico</td>
<td>+426'792</td>
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<tr>
<td>Spain</td>
<td>+57'969</td>
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<tr>
<td>Poland</td>
<td>+55'669</td>
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<tr>
<td>UK</td>
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<td>Uganda</td>
<td>+36'436</td>
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<tr>
<td>Germany</td>
<td>+39'797</td>
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<tr>
<td>Tanzania</td>
<td>+38'448</td>
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<tr>
<td>Dominican Rep.</td>
<td>+37'977</td>
</tr>
</tbody>
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While planting, growing, harvesting and processing conventional cotton a huge amount of chemicals are used, this automatically increases the cost of production and causes the loss of profitability against other field crops such as linen.

Conventional cotton is not only a threat to the environment but also causes higher investments since over the years the amount of chemicals used increased enormously. That leaves the farmers in a treadmill-like situation where they have to increasingly invest in chemicals to compensate the resistance of the insects towards the heavily used chemicals. That leaves the farmers with more debts and higher working pressure. Unfortunately the last way out of this vicious circus is often suicide. The numbers of cotton farmers taking suicide as their last escape is incredibly high and almost speaks for its own. 16,632 farmers in 2008 took their lives and the states in which cotton is grown the rate is the highest. “Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh, and Chhattisgarh - account for two-thirds of all such suicides in the country. Together, they saw 11,026 in 2007. Of these, Maharashtra alone accounted for over 38 per cent.” From the research it became clear that BT cotton is a good reason for these farmers in that area to fall into that treadmill of debts and therefore the highest demand of organic farming is in this area. Furthermore, farmers can benefit financially from organic farming since they receive a 10-20% premium for organically grown cotton. This initiative was originally built up to motivate farmers to go the green way and in many cases in these named states it worked out successfully. There are an uncountable number of projects running in the different areas of India and with all these projects, India is able to have a 32% share of the organic cotton cultivation world wide.

24 http://www.indiatogether.org/2008/dec/psa-16k.htm
3. Trends and forecasts

When we talk about the trends and forecasts for organic cotton, I would like to look deeper into the production side of it and in that case specifically into India’s production development over the past years and how it will continue. First of all I would like to look closer to the Western demand and trend of organic clothing. After finding these measurements I would like to put it into relations with the other side of the table. To look into the great future of organic clothing from two different dimensions will be the main goal for this chapter. Where is the future of organic cotton in the Western world?

As mentioned earlier, the green apparel market in the Western society established itself as a booming and economically attractive market. It is said that the organic clothing industry has been growing by at least 11% per year. A recent study from SKOPOS, a German market research institute, shows that out of 1002 people every second is willing to spend a 10% higher price for organic clothing than for conventional fashion. Though further on the research revealed that only 15% out of these asked people recognized an ecolabel as their recently bought items. Out of this research it can be concluded that over 60% associate a certain meaning with sustainable, organic clothing production. The other 40% were simply unaware of these keywords. That clearly shows the necessity of more and concentrated communication and education throughout the consumer markets.

But even though the market has not reached its full potential, the growth numbers of the whole market are positively high and indicate a wealthy and consistent growth for the coming years. “It clearly has gotten more attention now because it’s not just an industry sector. It’s a global phenomenon,” said Marshal Cohen, chief analyst for the NPD Group, a market-research firm. “We’re seeing it in cars, we’re seeing it in homes products, apparel, food.”

“The organic fibre market has been rapidly growing and is estimated to represent an $ 85 million retail market and above average growth.”

These numbers make the market convincing and prosperous. Many global players have recognized that and are therefore eager to go for green alternatives. As previously mentioned, many companies decided to produce a green line for their fashion house and have been showing great success with that. (See page 4)

Giant retailers like Wal-Mart are leading the way with sourcing their products mainly in India and South-East Asia. It is said that they will be spending close to $200 million to source organic cotton out of these regions. Big orders such as the above will give India a good image and experience and therefore India plays an important part in the supply of the growing demand of organic clothing. If India is able to satisfy the demand of such big global players within the fashion industry it will not only give

28 http://pressemitteilung.ws/node/163641
29 http://www.msnbc.msn.com/id/17027965
them the needed experience but it will also mean that they can portray themselves on the market in a more confident manner. That will attract more clients in their search of new sourcing options in the green industry and hence more business can be generated.

One of the reasons why India is such a popular destination for sustainable cotton is the fact that they have been coming up with new developments ever since the organic wave hit.

New Developments

One of the latest developments comes from one of the global leaders in silicon-based technology, Dow Corning. They have been working on a new product which is not only offering good hand feel and softness but are approaching their process in an organic manner. The product named Greenure is a joint invention by Dow Corning and Resil, a company specialised in silicones and finishing solutions in the denim sector. The product will not only serve the denim market but is also applicable in other textile processing stages. It is the first time in the Indian textile industry that silicones are being delivered in granular form. The product was created with the thought of giving the consumer a choice to protect the environment without losing any points in quality and appearance of the final product. 31

Another nameable development I would like to introduce is the teamwork of SIMEM & JANAKSON. This company as been successfully introducing a great system for wastewater treatments and recovery. They are the leaders in effluent treatment in the Indian industry and have been showing success with various mills all over the country. One of the biggest Denim producers in India, KG Denim has chosen their system and therefore it is likely that it will encourage other producers to follow this trend. Apart from the wastewater treatment plant, SIMEM has been installing biological treatment plans at few production sites and are planning to expand their business throughout the country. Those systems are built to reduce the production of sludge, which is non-toxic and can be later used as a sort of manure. The low running cost system has recovery of water up to 82% and therefore is a major step towards the protection of our environment. 32

Indian potential

These are just a few companies who are very ambitious in the organic movement in India and there are many more companies and designers who adopted the green way of moving forward. To name a few, Birla Cellulose is an internationally known company who are producing an absolute biodegradable fibre which does not harm the environment at all. Not only has the production industry in India understood the importance of organic processing, but also a lot of creative upcoming young designers are choosing organic not only because it is helping the environment but also because even the Indian end consumers are getting more and more involved with green fashion. Deepika Govind, Payal Jain and Ekru are a few to name. And not only has the organic way reached to the higher design level but expanding technical

31 http://www.stitchworld.net/display1.asp?msg=1203&cat=1
knowledge and expertise has also increased opportunities for change. Knowledge of biological pest control methods, for example, is expanding in some regions because of farmers’ improved confidence in using their own traditional methods. Efforts are being made to exchange information and disseminate knowledge for the benefit of a wider audience to be able to bring the movement forward. \(^{33}\) The actual consumer market in India is still very small and the demand for organic products is mainly due to foreign demand. Due to much lower income and educational deficits, the general awareness of environmental issues has not reached the majority yet. But since India is growing fast and things are being approved daily, this issue should spread accordingly. Just recently a new trailer for cinema has been launched in which famous people explain the benefits of saving energy. This trailer was its first of a kind which was launched in Hindi to address a wider range of people and not leave the lesser educated people behind.

**Professionals on Production in India**

Those great achievements and developments are not the only reason why India might take the lead of the organic market very soon. Another valid reason why India shows great advantages towards China is the fact that many buyers from the West have a moral problem with putting organic garments with the tag “Made in China” in their shelves. Moose Huerto, Sales manager at Loomstate, a leading organic brand in the USA said that buyers are more likely to buy from Indian producers, regardless of the style. The end consumer does not like to identify themselves with a garment which is organic but made in China. It seems that India has a strong advantage towards China when it comes to the countries image. Twenty out of twenty-two professionals relate China rather to mass production then delivering quality under eco standards. This might be related back to the countries history, religious views and moral standards which traditionally incorporate the relation between nature and humans. The earth is considered pious and not to be abused by harmful chemicals. Therefore Loomstate decided to expand their business with India and other brands regardless their size are likely to follow that trend.

More than 40,000 farmers across the country are involved in organic farming and this number is said to steadily increase. The main productions of organic farming occur in Gujarat, Madhya Pradesh, Maharashtra, Orissa and Andhra Pradesh. All these areas are involved in certain organic projects which are either funded through cooperatives or private initiatives. The demand is so high that most of the orders of their production are announced well in advance.

“It is a sign of the times that despite ominous financial forecasts, brands and retailers are standing fast to their commitment to making their product lines more sustainable by ever increasing their use of organic cotton and other organic fibres such as wool, linen, and silk,” said LaRhea Pepper, Organic Exchange senior director.\(^{35}\)

Further on it is estimated by Organic Exchange that organic brands are likely to expand their product lines into 24% for 2009 and 33% for 2010. This ration will then result into a total of $4 billion in 2009 and $5.3 billion for the whole organic market.\(^{36}\)

India is playing an important part in that since they are said to lead the market in the near future. (See page 18) They have gained more and more consciousness with regards to their environment and nature. Therefore they understood the effects of pesticides, poisoning and using chemicals to the core. Since the organic business is still a growing market India is constantly trying to find ways to reduce energy and consumption. Named developments are helping to produce with cleaner and more efficient methods, cutting carbon dioxide and other emissions whilst taking on board biodegradable, recyclable and renewable materials. But not only is India as a production country playing a big part in contributing to a better environment, it is also of high importance that buyers from the West understand the real price of cheap clothes. It is the consumer himself who has been asking for cheaper-faster-more products and this is clearly the wrong way of thinking with regards to the protection of our environment. Buyers should develop a higher sensibility towards their responsibility within the fashion industry. It is important that all parties understand the “real” cost of making cheap clothes and the impact on the environment if the industry keeps on offering these cheaper-faster-more products. The most recent research conducted in 2008 from Prof. Tom Fisher, School of Art and Design, NTU, UK, on “Sustainable Consumption and Retail” showed the spectrum that exists in the

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\(^{34}\) http://www.organic-world.net/graphs-2009.html


\(^{36}\) http://www.ecotextile.com/headline_details.php?id=935
relationship between consumers understanding of where their clothes come from and their actions, in terms of buying. 37

As mentioned before a great leadership who totally understood the importance of going the green way, is Marks & Spencer. Not only are they constantly sourcing more and more organic fabrics from India and other parts of the world but they also changed their whole marketing approach from people-planet-profit to reduce-reuse-recyclable. Another good reason why global brands and retailers have chosen organic garment marketing might be the fear of China becoming too expensive for garment production in the next five to ten years, says Mr. Ferrigno, Farm Development Director of the Organic Exchange.38

Hong Lee another member of the board of organic exchange USA said: “Companies are more and more agreeing on aligning businesses, sustainability and organic strategies hence the signs of growth, measured in terms of sales increase were evident – for example, in products for infants and children, also ladies underwear and sportswear products.” 39

Coming back to the Indian industry, the most recent conference on sustainability and organic was held jointly by the Pearl Academy of Fashion (PAF) and the northern India section of the textiles Institute (NISTI) in January 2009. The conference attracted national and international specialists in the field and buyers e.g. from Nike, M&S and GAP who are all frontrunners in the field of sustainability. The urgency and the seriousness were announced by many national and international speakers and it is definitely a serious direction to go ahead with in the fashion and textile industry. 40

‘The main reason why some producers are still not following the concept of organic production is due to misconception’, says Atul Ujagar, Director Nike (Sri Lanka, India, and Pakistan). Further on he says that farmers think the system is just adopted for the sake of a formality and therefore a lot of farmers are not willing to change it. ‘Although the actual truth is’, he says, ‘that it decreases costs and makes your business more profitable if you know what you are doing and doing it in the right way. Farmers can benefit in many ways from organic production systems.’ They gain an improved understanding of agricultural ecosystems and the opportunity to draw on traditional farming knowledge. The existing good level of support from new and more supportive extension arrangements will help them with capacity issues and therefore reduce their dependency on state systems and premium prices. Last but not least it will improve environmental and working conditions which will be safer for themselves and their animals. Removal of input subsidies in many countries has led to increases in the cost of pesticides and fertilizers, which are not necessarily offset by increased income. Experience to date shows that farmers are more than ready to contemplate new systems if they are not locked into a state production system and are thus able to make their own choices, receive the support they need when converting, and find new markets. Organic systems can be of special interest to female farmers who often lack access to financial resources necessary for the purchase of inputs. Nowadays

37 A business publication: Textile Asia, the Asian textile & apparel monthly Sept/Oct 2008
39 A business publication: Textile Asia, the Asian textile & apparel monthly Sept/Oct 2008
conventional cotton farmers are very dependent on pesticides and are increasingly seeking ways out of reducing the spiralling costs that they entail.

Another important point with was being made by Nandita Abraham, Head – Business & Technology, PAF in her presentation “Mapping the lifecycle of a t-shirt in India VS. USA.” Even though India does not seem to have such an elaborate waste system like in the West it is proven that through their traditional way of operating in society it made them a more environment-friendly nation. In the USA a t-shirt is send to a landfill after first use, whereas in India a t-shirt has at least six lifecycles before it is used as a cleaning rag.

One of the main messages during this conference was the importance of acting NOW. NISTI and PAF are creating a body which will be responsible for generating awareness and supporting the industry in their decision for going a greener way. GAP inc. immediately announced to donate US $5000 to PAF and NISTI for them to create a “Best practices manual on sustainability in the fashion value chain”. This step was part of the five point action plan to battle the ‘cheaper-faster-more’ products. The other four points which were decided collectively are:

- NITI, AEPC (Apparel Export Promotion Council), and PAF to set up a joint garment and apparel coordination committee to address sustainable development
- Setting up a joint task force of Government and non-Government organization to look at critical issues in the supply chain
- Interactive website and blog spots on the issues and create a marketing agenda in same lines as the drive by Sri Lankan textile industry “Garments without Guilt”
- An educational drive on sustainable practices to include institutes

This conference was another step for India to be on top of the market and show their ability to react now. Not only were concrete decisions being made but the promotion of biodegradable fibres such as hemp, ramie, flux coloured cotton and bamboo fibre was another priority to some speakers.41

As mentioned before, most of the organic farms are run by certain organisations which have different source of money influx. These projects show great success and established producers are either extending their already existing organic business up to 50% or they are fully switching from conventional farming to organic production. The fact that organic farming in India is done in such an organized manner, is due to these projects and inspired many international organizations and retailers to bond partnerships for mutual benefits. The latest big retailer that took initiative in this field is C&A with their ‘We C&Are’ programme in where they are investing millions of dollars in rural farming areas throughout India. 42

The newest press release from BioFach, the biggest international Fair Trade on organic clothing and textiles just confirmed the growing green trend in the Western consumer market. Sales of organic cotton clothing are estimated to rise up to 5.3bn

41 Stitchworld January 2009 publication
US dollars in 2010. Companies which are already walking the green fashion road are eager to expand their product lines by 24% for 2009 and 33% in 2010. Major green markets within Europe are Great Britain, Germany, France and the Netherlands. According to the British Soil Association, which puts great hope into the green market, estimated the sales of eco textiles to treble by the year 2010. In 2008 sales were around 113 million € and should reach 318 million € in 2012. 43

The given facts and developments within India show that India is very well capable of being able to hold up with the emerging trend from overseas. Alps industries, one of the largest organic producers within India, just upgraded their inventory of machines with new investments of around $ 90 million US to reach treble the amount of turnover in the year 2010. 44

Through my field research, I was able to obtain the following information. Please refer to appendix for list of sources.

65% believe that green production will increase by 20-30%

35% believe that green production will increase by 5-15%

5% believe that green production will increase by less than 5%

This outcome once again underlines the fact that the organic cotton supply from India is definitely on one page with the demand. The future of organic farming, production, clothing show great promises and it becomes apparent that the global trend will continue to grow. India is definitely ready to supply the west with the needed goods since their organic textile industry is in a continues grow.

4. Can India reach up to China's industrial level?

Why China? China is, next to India, the obvious option for green apparel production and is one of the major plays in the textile industry, which is why I would like to juxtapose these two countries. China has been the leading force in the apparel production industry and is very likely to outpace India when it comes to green apparel production. The reason why I want to compare these two economies is the fact that India has the fastest growing economy and therefore is often compared with China – an economy which grew so fast that it could develop into one of the biggest world economy in the very near future. Currently, India is going through a lot of change and businesses within India are expanding at an accelerating rate. My interest to compare India with China is due to the fact that there is great hope for India to become one of the leading textile destinations if developments are looked after carefully. Any other comparison seemed not applicable and would not show the same level of professionalism. According to the German magazine “WirtschaftsWoche”, India is growing faster than any other either industrial or developing country and is therefore said to become the third biggest economic power by the year 2012. 45 What are their efforts of reaching this goal and what are the true pros and cons of both nations? For a clear summary of the points raised below, please refer to the end of this chapter.

China’s critical leadership role

China has been leading the apparel production industry for many years. Due to their cheap labour costs and low land costs they were always able to be ahead of their competitors in terms of pricing. In the past few years we have seen some changes in China’s leading position. Production has been moving out of China because of the constant uprising prices. China has almost created a monopoly during all these years and it is likely to crash in the foreseeable future.

“Production is almost 20% higher than in 2003.” Says business owner Melanie Corpstein, who produces her toy and clothing line in China. Naturally, companies are trying to find cheaper ways for production. 46

Although China is very keen in constantly improving its environmental and labour conditions, it appears as a threat for the green movement in India. But due to their changing economy and their efforts of trying to step into a more and more Westernized world the pricing issue is very critical. It is a great opportunity for India to fill this gap which China’s economy is leaving behind.

"In my research of multinational companies, 17% of manufacturers are moving investments out of China," said Ron Haddock, the Shanghai-based vice president of consulting firm Booz Allen Hamilton. "The majority go to Vietnam and India." 47

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45 Wirtschaftswoche November 2008
China is still the biggest textile exporter and shows healthy numbers in export and import. Over the last three years, China's textile export has been steadily increasing by 20% yearly. One cannot deny that China is still the number one country for producing garments. But despite these good figures China is also facing some major problems which will grow bigger and bigger if they are not on top of their actions.

Other countries are fast in catching up with China's pace and especially quota free countries such as India, Pakistan and other countries in Southeast Asia have an extra advantage in not being restricted in their export numbers.

**China goes organic**

With regards to the eco-friendly production China's government has been quite ambitious in improving their standards. In return to that prices have been constantly rising on a faster scale than in other countries. China's main disadvantage is the constant uprising costs. Labour, electricity and material costs all remain a serious threat to Chinese textile manufacturers since they have been rising over the last years.

**China VS. India**

India's economy has been booming for the last few years – the side effects of an open and free market become very obvious. India is the perfect example of how a country can develop if they no longer resist globalization. From the time when India opened their markets in 1991 until now India gained the second highest economy growth in the world after China. In this time span more people made their way out of poverty than in the previous 50 years before liberalisation. Therefore one could say that India is a great role model for a developing country just as China was during the years of establishing itself as one of the major economies in the world. There are many differences between the development of India and China. The biggest and most influential companies in China were built by the government itself and therefore the government has a completely different influential power in China than India's government. In India, the dynamic and innovative family businesses made it to the top and the government has not as much influence as in China.

**India's infrastructure**

India is attracting an increasing number of foreign direct investments and therefore should make an effort in winning trust while offering better transport systems, making sure electricity and water is a given source at any point of time, constantly investing into their educational systems and most of all ensuring that the bureaucratic and corrupt ways of handling business is simplified without losing on standards.

With regards to the transport systems, electricity and educational systems, there are several projects in planning which will take care of these issues. Until the year 2012 the government is planning to invest more than 450 billion US dollars into the infrastructure. The biggest project in mind is the stabilisation of electricity. Through the power cuts within the whole country India is losing one tenth of their actual

49 Wirtschaftswoche, November 2006
industrial production capacity. With investing more than US $245bn, New Delhi is building a new power station to support the electrical network. Currently, India is using 135 giga watts in a year, which is not even one third from China’s usage. Until the year 2012 the capacity is said to rise to 240 giga watt.  

The transport systems in India have already improved compared to previous years. The largest road project of today connects the four major cities New Delhi, Mumbai, Chennai and Kolkata with an efficient road system. It was completed in late 2008 and a reliable transport between these cities is ensured. Apart from that, the New Delhi and Mumbai airports have already been privatised and Chennai and Kolkata are likely to follow. Until the year 2010 the government is planning to invest 9.5 billion US dollars and 7 billion are said to come from foreign investments. Through rebuilding all the major airports, India shows great ambition on creating an international hub to ensure their positive image towards the Western business world.

**Education**

India has a great range of internationally known universities, some of whose graduates from Engineering, Arts or Management can easily compete with European or American graduates. The times during which India was only known for cheap labour are past. Qualified students from all different fields are welcomed by international companies. The most common fields for spreading this positive picture of Indians educational systems are the textile-, car-, steel- and metal industry. Nonetheless one should not oversee the fact that there is still an existing lack in the lower educational system throughout the country. Therefore the Indian government is not only investing in streets, airports and electricity but is also aiming at educating the younger generation. With the help of the World Bank India was able to built 200.000 more schools and ensure that 21 million more children are able to enjoy schooling. Further on the government introduced a basic right for every kid to have the right on education.

**Bureaucracy**

As mentioned before these infrastructural problems are all being dealt with in a professional manner. The other big issue which still remains is the fact that India has very complicated bureaucratic procedures. Cultural differences should not be underestimated. Indians One must understand that they have very strict customs and labour regulations. Outlining an example: normal customs procedure takes up to 18 hours. In the harbour of Mumbai, it can take 3-5 days until the customs are cleared and ready to ship. Having this in mind many foreign investors are shocked by the way time is handled so differently in India. This example makes it is very obvious that any company should work with a middleman who handles those kinds of issues in the country itself. European companies could waste a lot of time, energy and money on communicating to officials which they can save through a middleman who is responsible for such issues.
India’s future

India’s economy grew by about 90% in the last four years which shows that the country is eager to reach the top. From being just an agricultural-driven economy India did not only manage to develop itself into a service-driven economy but meanwhile they also industrialised major parts of the country.

According to a study conducted by the German magazine ‘WirtschaftsWoche’ it was proven that German managers have a lot of trust in the Indian economy but are still unsure about infrastructural issues and bureaucratic procedures. It is said that 94% of the companies are willing to expand their businesses with India and if issues are taken care of accordingly there lies great hope in India’ s economic growth. 54

(See appendix I for graph)

With being able to represent the highest amount of companies in the Top 50 list of all Asian companies, India is definitely a true threat to China. The list is measured on growth in sale and return on capital. There are ten Indian companies with two of them leading the list. China is following with only eight companies which shows that India is not exclusively known for its IT sector. Many other industries have established themselves to such a great outcome. (See appendix I for graphic). According to Siddharth Srivastava, a Delhi based journalist, The Times of India “Textiles will be the next big story with billion-dollar deals if things are taken care of and handled delicately.” 55

Urbanisation

All these positive changes are mainly happening in the bigger cities and not as much in the rural areas. Agriculture and especially fabric production takes place in the rural areas which still suffer from underdevelopment across the board. Cotton farmers are facing various problems with their crops and are not able to make a living from it. Modernisation of agriculture has only started and it will take a while for many farmers to make a profit. Unfortunately the number of farmers which see suicide as their last chance to get out their debts is too high and must be taken care of. Cotton farmers from rural areas around Delhi went on a march to send a clear message across about their bad situation and are encouraging the Delhi government to handle the situation accordingly. Unfortunately the message was left unheard and not a single government member spent time on their concerns. Due to India’s size it is difficult for the government to take care of all regions and concerns. As it shows from the booming economy in the cities it is obvious that the officials have concentrated on the major cities than any other part. The degree of urbanisation in India is 30% and it clearly lies under the international standard of 50%. This low percentage shows that there is a clear demand for the government to not only concentrate on the cities but also to put more funds into the rural parts of India to stabilize the agricultural businesses. 56

54 Wirtschaftswoche, November 2008
55 Wirtschaftswoche, November 2008
56 Wirtschaftswoche, November 2008
Infrastructural changes

All these developments and improvements show India’s efforts of improving the missing links in the infrastructural system. In relation to China, India has more things to improve with regards to its overall infrastructural systems. But due to the fact that India is such a rapidly developing country, it will be advantageous to make good use of this situation. India should be able to not only rebuild its infrastructure in a conventional manner but to rebuild it in consideration of the environment and sustainability. This should be the optimum goal for India.

India’s/ China’s dis-advantages

Through the field research in the industry, the advantages of India became very clear. Easier sourcing availability in India was rated at 80% as India’s highest advantage. That shows a clear advantage before China since it only achieves average of 40%. (Please refer to Questionnaire in the appendix in order to understand the ranking system)

Another major disadvantage of the Chinese textile industry is that China put more effort, energy and therefore money into expanding its businesses and relies on massive orders. Very little money has gone into Research & Development (R&D) and it seems like a huge mistake in the long run.

The general ratio which production companies spend on R&D is between 5-10% of their annual sales. This number is not only based on China and India but also involves other production countries such as Vietnam, Bangladesh etc. It is proven that Chinese mainland companies suffer from under-investment in R&D. It is reported by the official census of China’s Industrial Establishments in 2006 that most apparel related businesses invested just 0.16% of their sales profit on R&D and it shows a serious impact on their profit margins. ‘India’s R&D sector is much more elaborate and reliable than China’s’, states Dr. Amol Nirban, Fair Trade Inspector ECOCERT. Once again India could outpace China in this category. India received an average of 9 out of 10 points which indicates the advantage of India in that section and China only follows with an average of 6 out of 10.

\[57 \text{www.news.bbc.co.uk} \]
\[60 \text{Questionnaire}\]
The lack of innovation within Chinese production is stands out rather starkly in comparison to their competitors. If China wants to keep up with the changing economy and all that is involved with it, it is important to understand the impact of R&D and innovation as such. ‘Companies should be concentrating on “enhancing technology” in order to keep themselves in a leading position with a concrete advantage’, says Zhaohua Yang, chief secretary of China’s Sub-Council of Textile Industry. Further on he adds: “Rivals can fake the name but not the technology.”

Another disadvantage within the Chinese market, which especially India can profit from, is the fact that there are hardly any well known fabric brands. India has the advantage of having a profound tradition of textile export and therefore vertical integration is much easier achievable then in China. Chinese textile producers are having problems with building successful fabric brands since the actual material is too far away from the end consumer to reach them with promotion.

A clear advantage for China is the fact that they can still offer cheaper pricing and better results in mass production. Compared to India which only reached average points of 4 in both the criteria, China was able to reach 8 out of 10 points. Nonetheless this result has to be handled with care for the small to middle sized companies within the organic industry. Pricing always has to stand in relation to quality and for small to middle sized companies it is not always a desirable goal to achieve better results in mass production.

To sum up the major advantages and disadvantages of both nations please find list below:

### Indias major advantages:  
1. Easier sourcing availability  
2. Delivering products strictly under given eco standards  
3. Lower production quantity  
4. Higher quality

### Indias major disadvantages:  
1. lack of following up and keeping timelines in production  
2. “slow” delivery

### Chinas major advantages:  
1. Cheaper pricing  
2. Better results in mass production  
3. Faster delivery  
4. Better follow up and keeping timelines in production

### Chinas major disadvantages:  
1. lack of new innovations  
2. lack of production quantity flexibility  
3. lack of delivering products strictly under given eco standards

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It becomes apparent that India is very well capable to be on one page with China with regards to the production of green apparel. The most important points to improve for India are the communication skills and time management.

The fact that China shows higher advantage in the field of mass production and cheaper pricing has to be handled carefully when we talk about green apparel production. “For this industry it is important not to be associated with cheaper-faster-bigger” says Rogan Gregory, creator of Loomstate leading organic brand USA. Further on he continues, “Quality is most important to our products and we cannot necessarily keep our first attention on pricing.”

It is apparent that through China’s disadvantage in the named sectors India can find new opportunities in these points with Western buyers. If India is able to fill this gap that China is leaving behind they can ensure more fruitful business. It is important for Indian producers to stay flexible in production quantity, ensure that highest eco norms are fulfilled and most important they should concentrate on their R&D to ensure a wider range of textile availability.
5. What do Indian producers need to do to satisfy Western buyers’ demands for green fashion?

This chapter will be mainly based on quantitative research with regards to the demands from the West towards green fashion from India. What are the main requests of Western buyers when it comes to organic clothing? How can Indian producers ensure a healthy business relation with the West and what segments of the process might need improvements? I further looked closer into the geographical constraints of organic cotton and where there might be some extra help needed, in the sense of supply chain management, to fulfil the Western demand.

From my desk and field research I figured that there is great hope for India as a growing economy in all fields. Especially in the organic textile market it is said that India will profit from the fact that the market is growing in the West. Offering organic product is no longer a niche market and retailers, big as well as small designers are following the green path. As mentioned in chapter three, it is said that India will be the main supplier for the biggest retailers in the industry. Apart from that, India is attractive to small designers and brands since they do not have such high production quantities demands. Due to the fact that India is known for its tradition of small workshops and cottage industry developments it is likely to serve the smaller to middle sized section of the fashion industry and will thus be able to constantly keep growing.

The main reasons why Western buyers prefer China over India is that India can deliver a higher quality at cheaper rates. Specifically in the organic market, China made itself a good name in terms of diligence and technology. China’s delivery and follow up of production is extremely accurate compared to Indian standards and in that way it makes business much easier than with India where timelines are often broken and production delays are rather common.  

More over it is also very important for India to show more ambition in fabric sourcing. They have the availability of organic fibres, however the fabric offering in organic is rather limited. Smaller brands are often demanding some uniqueness in fabric and production since this might be their competitive advantage in the market. If India would be able to spend time and effort in developing new makes in organic fibres then it could give them an advantage in the market.

“We do receive our fabrics from India but wish to have more varieties to choose from. We also once tried sampling simple shirts from India but the quality was simply not the same then from our Portuguese producers.” Said by Mara Silberberger, Head of production Armedangel, Cologne. It shows that India is well capable of representing a powerful sourcing alternative. In terms of production quality it is important to understand the Western demands in order to be able to deliver the right quality. Quality, is most important fact for business within the green apparel production. Further on, Silberberger adds “We would love to produce our shirts in India since Asian countries have much more options when it comes to fair trade. There are much more Indian producers which are fair trade certified than in Europe. This is an important part of our business and we would like to work more in that direction. But

63 Questionnaire
since quality is not yet where we need it we still have to wait with our decision to go to India.  

From the research it also became clear that India has one big advantage over China: The fact that they have lower production minimums makes the green apparel production more attractive to smaller / middle sized companies. Many small to middle sized businesses are looking for organic options but in a much smaller volume and therefore China cannot fulfil this need.

“We are very dependent on our buyers. If after a sales meeting we realize one style is not getting the desired order we automatically take that order to India since we know our flexibility with quantity in India is much higher than in China.” Kelli Roschak, Head of production, Loomstate NYC

Further on Ben Stubbington, Head designer Loomstate adds: “India will definitely be interesting for us in the coming years since our upcoming designs do involve more and more embroidery. India can deliver better quality and craftsmanship when it comes to embellishments.” The ability to deliver better results in regards of pricing and quality than China is a great advantage for India especially with the upcoming trends to more detailing in cloth.

A major issue discovered through the quantitative research is the fact that Western companies are really facing some major communication problems while dealing with India. One major problem which is repeating through out the industry is the fact that Indians do have a total different sense of time and a different way of communication. The follow up of production and keeping deadlines is an essential part in the industry and is often underestimated by Indian producers. If products are not ready by the agreed time and not at the right place in the right moment it might affect the business in the worst case. Therefore most businesses prefer working with a middleman/ an agent who is highly familiarised with the country, culture and language since working directly with Indian producers takes up a lot of time and energy.

“If we move production to India we would definitely work with an agency/ middleman since transparency is hugely important in the whole textile chain. And this is definitely

64 Questionnaire
65 Questionnaire
66 http://www.wgsn-edu.com/edu/edu-members/
achieved more easily while being “close” to the producer.”, said Mara Silberberger, Head of production Armedangel, Cologne.

To be able to maintain an advantage over China, Indian producers should certainly concentrate on small orders rather than mass production within the green industry. As mentioned before this market is not a niche market anymore and especially in Europe where more young brands are growing in the market. This section has to be served and India would give itself a great advantage if they are trying to do so. The demands from Western buyers would be served if Indian producers keep on improving their quality and timelines. Within the green apparel production the sampling quality appears almost as a stronger factor than in any other sector.

“Obviously the end product is something the consumer is willing to pay more for since qualitatively different materials have been used, so it is our job to deliver not only the best materials but also make sure it is sewn properly.”, says Rogan Gregory, creator of Loomstate, USA.

If we take a closer look at the production part of organic cotton it becomes very obvious that over the past years many farmers were able to profit from it. Since conventional farming created and is still creating a lot of damage wealth- and health wise, (see Chapter 2), it becomes evident that organic cotton farming is a good system on how Indian farmers do less harm to the environment, their own health and wealth status. To specify which area needs special help is rather difficult to locate since these named problems occur all over India. As this statement below sums it up it is important to not leave any part out to ensure an equal development and encouragement.

“All the cotton growing belts in India and the farmers therein should get support in the form of premium price/fair price for their organically produced cotton by the consumers, Western as well as the domestic ones. The good price could offer them a decent living and also help to ignore the alluring promises of the GM/BT cotton seed companies. Besides, every consumer should demand for organic as well as fair trade certified apparel coming from the certified cotton commodity chain. The fair trade certification will ensure not only payment of fair price but also the social infrastructure development of the core population and fair wages and welfare measures for all the workers in the commodity chain.” Dr. Amol Nirban, Fair Trade Inspector, ECOCERT

The organic farming support from outsiders cannot be limited to one region in India. Since India covers such vast amounts of land, it is almost impossible to restrict support to one region. All asked organisations are planning to extend their organic projects within India by 2-10%. No “new” projects are planned for the coming year. (Please refer to appendix for detailed information on organisations.)

These numbers show that India is definitely ready for the growing Western demand and is able to supply the needed textiles. In order to stay ahead of China it is important to stay as flexible in production minimums as they already are, to definitely set higher quality standards for green apparel production and to understand the importance of Western time management.
6. How can production in India be facilitated for Western companies?

There are several different ways how production can be facilitated in a foreign country. Most of the fashion companies today have outsourced their production and are working with either an agency/middleman who is in direct contact with the producers. In some cases, production is also handled directly between the company and the supplier. In this chapter I would like to present my thoughts and findings with regards to that matter. How do both sides profit from a middleman? Is it the ideal situation to make business in?

On the example of the brand Armedangels, Germany, I would like to explain the different concepts. At this point of time, Armedangels are not having any apparel production in India. As mentioned earlier, they are receiving their textiles from an organic cotton project in India, Madhya Pradesh and would gladly shift apparel production to India since the fair trade aspect in India is already more elaborate than in Europe. Since they are a new and a very successful brand, they do have a lot of other things to take care of and would definitely choose the option of outsourcing their production completely. That means an agency/middleman would definitely be the way to go.

From my former experience and field research I could figure that most of the companies prefer working with a middleman since it simplifies a lot of time and money consuming processes.

“Being able to use a middleman for our production and not handling each and every step ourselves, saves us a huge amount of time and we would like to keep it that way especially for future Asian business partners.” Said by Anton Jurina, CEO Armedangels, Germany 67

The role as a middleman in the industry is highly important and should not be underestimated. It is a mean to outsource all your time-consuming production issues and will keep processes more efficient. It is not only the amount of time during production a business can save while working with a middleman, it is also the fact that the use of a middleman should always contribute to lower fixed costs.

“It is estimated that the role of a middleman leads to a 30% higher efficiency rate for a small business. Further on, outsourcing a part of the business will lead to other cost saving parts such as not being obliged to pay for working space, insurance etc.” said by Rogan Gregory, creator of Loomstate, USA. 68

Working together with another country such as India brings a lot of cultural differences which might have a negative effect on a business if one is not completely aware of them. Having done my industry visits in and around Delhi it showed me how much effort it takes to get in touch with a reliable and efficient organic production site. It starts with the fact that it is very hard to fix a proper appointment and make applicable time arrangements. If this is done, one can only hope that the appointment is really taking place and should confirm it as much as possible. If the meeting is

67 Questionnaire
68 Questionnaire
going to happen it very well depends from which background you are coming and what your initial order is. If the order does not seem to be appealing enough it is very likely that the company loses interest very fast. For small to middle sized brands it is very important to built strong relation with the factory and know their market position.

Small orders are a turn off for all factories and only if you find your right business partner it is possible to succeed with an efficient partnership. Only then business can take off and a long-term business relationship can be made. It is very important that Indian producers also understand and see the process of the growing possibilities within the market. As a middleman it is important to constantly generate business from both sides and so to say keep both sides content. Keeping the desired quality on a constant level and keeping minimums on an affordable level for both sides is one of the major issues to deal with.

Apart from the quantity issue, one should also take care of the quality issue. In all my industry visits, I noticed that not only numbers and facts have to be discussed, but first of all there should be a general understanding of your desired product. Very often the producers go by the products which they already have in current production. To completely make them understand what category your product is in, visuals are a must. It is always necessary to prepare and bring sufficient visual material so negotiations.

Having built a strong relationship with your business partner, follow up and communication is utterly important. Orders have to be altered and therefore confirmed several times to actually start into production. Sampling is very important, although it does not really go well with the concept of being sustainable and organic. Due to the fact that it is almost an unavoidable step in production it is important to be as specific and clear as possible to avoid waste. Being as close as possible to the production facility is from high importance. The use of middleman ensures that and is therefore the safest when it comes to quality and efficiency.

The demand of a middleman in the industry occurs reasonably high since 80% out of all people asked would suggest it as the most efficient tool to handle production.

The use of a middleman appear obvious. But not only is this kind of business relation from great advantage from the Western point of view but even seen from the other side it appears as a clever business solutions.

“We experienced smoother business relations while working with agencies/middleman since a third party is always more willing to keep both parties happy since that is their job. If we have to deal with the company immediately we often run into huge misunderstandings and complications which we feel is avoided that way.”, states Sudarshan Kumar, CEO Ram Rajia, India. Further on he adds: “Going to fairs, attracting new customers, putting ourselves out there consumes a lot of time and money from our side. Even we might have a little higher profit while working directly with the company, but we also have to put it in relation with what we spend to attract only one customer.”

That shows that a middleman situation comes in handy for both parties. It is apparent that a middleman should function as an intermediary between both of them. The
middleman brings business partners together and therefore simplifies the process of acquiring new customers to a 100%.

As a middleman it is also important to be a mediator not only between two business partners but moreover to act as an intermediary between the two cultures. It is impossible to oversee and ignore cultural differences if successful business is the main goal. The key of making good business is to bring together the right people to do fruitful business with. The middleman should be able to cut out the extra work which small to middle sized companies carry out during their production process. The outcome of my research also confirms this theory since the majority of the professionals consider it as very important to work with a middleman.

To go back to the example of Armedangels, I believe that the business relations with India would be most fruitful if they work with a middleman. Since their main obstacles were quality issues during their last sampling period in India, which was not done with on-site inspections, a middleman could ensure a correct production procedure.

I therefore value the role of a middleman as a very important option and can only recommend this mean as an efficient tool to succeed in all production concerns.

For further information on my personal first on site experience in India as a so-called middleman, please refer to appendix IIII.
7. Conclusion

With the last chapter of this report I want to give final answers to the main question on how should Western companies walk the Indian organic cotton path. The main conclusions on why India is the better option compared to China to go the green fashion way and in which way it should be approached. Further on I would like to reflect to my personal goals and how I achieved the middleman position through this research. With regards to that I would like to give recommendations for the German brand Armedangels.

There is no doubt about the fact that even in times of economical difficulties throughout all industries, the green market is still growing. Especially the organic textile industry shows enormous capacity of growth. All the mentioned facts and numbers should be seen as a great opportunity for both Indian producers and Western companies to generate upcoming business. Even in times of a bad economy it is possible to keep your business on a growing stream.

With India’s changing and booming economy it is definitely forming a centre of sources which should not be missed for future business plans. Due to the named advantages and strengths, specifically for the organic textile industry India is one of the best options for smaller to middle sized companies from the West. The organic textile industry in India is in a growing stage and is yet not fully developed. The existing lack of new materials should be handled accordingly. Therefore I am highly suggesting for the Indian production industry to invest money in R&D and sourcing. Further on it is an absolute must to further educate people throughout all classes but especially in rural areas where most of the agriculture is taking place. If more people understand the ill effects of fast fashion they are more likely to support and switch over to organic production which in return will support the organic market.

Concluding from my findings and intensive research I can only recommend India before China to any Western small to middle sized company. My outcome of the research showed that India is showing a definite advantage to China since they are more flexible in quantity, provide secure implementation of eco standards and are ambitiously working towards innovations within their sourcing sector.

Further on my research also made it very clear that a middleman in the industry is of high importance. As mentioned in the previous chapter, it takes a lot of time to truly find the right production company suiting your requirements which obviously differs from company to company. Since time is most essential in a good business relation, my recommendations for any Western company lies in using a middleman to keep the production part as efficient as possible.

My recommendations for Armedangels are definitely to proceed with sampling with the organic apparel production company Ram Raja in New Delhi. My on site visits in the factory proved that their quality and pricing are absolutely reasonable. Due to the fact that Armedangel is receiving their textiles from India it is an obvious option to run part of their garment production there as well. Further on Ram Raja seems like the best solution since apart from their production facilities they also offer logistical services within India. So the transportation of the textiles from Madhya Pradesh to Delhi would be ensured by them. From a financial point of view India would be definitely the more economical solution since the pricing of a basic shirt wit prints
would be lower than in Portugal where their current production is taking place. With an order of 2500 pieces divided into 3 different basic colour à 500 piece and two different printed shirt à 500 piece they could save up to €3.725 with this order. Please see financial statement in appendix VI.

My field research during my time in India came in very handy in that case and Armedangels is happy to have found a “local” but with the needed international experience. Therefore my goal of at least one business collaboration between a Western brand and an Indian producer in 2010 is reached. By the beginning of next year, I am free to enter my permanent employment with Armedangel to guide the following production in India. If sampling is successful with any of my Indian options, they would like to continue with the order.

In the case of Armedangels the role of a middleman appears also very important. I am glad that with my recommendations and guidance they are willing to approach India as their next production project. Without my input the decision to go back to India for sampling would have not taken place as of now. The gained knowledge and contacts through my research project will be sufficient enough to act as a mediator within the green industry and in that case for the advantage of Armedangel. The fact that I am now highly familiar with the countries culture and the way they are handling business gives me a clear advantage to any other young professional.
Appendix I

Appendix II

Nicht länger nur IT-Service
Die zehn Inder unter den 50 Top-Asien-Unternehmen

<table>
<thead>
<tr>
<th>Rang</th>
<th>Unternehmen</th>
<th>Umsatzwachstum</th>
<th>Kapitalrentabilität</th>
<th>Branche</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Siemens (India)</td>
<td>62</td>
<td>50</td>
<td>Industrie</td>
</tr>
<tr>
<td>2</td>
<td>Unitech</td>
<td>114</td>
<td>58</td>
<td>Finanzservices</td>
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<td>22</td>
<td>26</td>
<td>Gesundheit</td>
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<td>12</td>
<td>ABB (India)</td>
<td>39</td>
<td>43</td>
<td>Industrie</td>
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<tr>
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<td>Tech Mahindra</td>
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<td>61</td>
<td>IT</td>
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<td>Hindustan Zinc</td>
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<td>46</td>
<td>Finanzservices</td>
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<td>27</td>
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<td>Tata Consult.</td>
<td>35</td>
<td>51</td>
<td>IT</td>
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</tbody>
</table>

1 in Prozent; 2 Vorsteuergewinn in Prozent des investierten Kapitals;
Quelle: „Business Week“
Appendix III:

Conventional cotton is among the field crops one of the most chemically intensive treated and therefore a great threat to the environment. Though it only counts up to 3% of the total cultivation area in the world it still uses 25% of all insecticides consumed in agriculture.\textsuperscript{69} Due to the fact that pests in all forms are such a serious threat to cotton production it is almost impossible to not use chemicals to ensure economic outcomes. Unfortunately plant protection has become crucial to the daily production practices. Herbicides, insecticides, growth regulators and harvest aid chemicals have become a normal tool for cotton production especially in countries where cotton is machine picked. The environment is suffering from all these tools and processes to the maximum and will constantly get into worse conditions if these approaches are not stopped or altered drastically. Pesticides not only disrupt the balance of nature in the field, but also harm people who come in contact with them. The health of our planet has also been adversely affected by pesticides. The pesticides and synthetic fertilizers used on cotton routinely contaminate groundwater, surface water and pollute the water we drink. Fish, birds and other wildlife are also affected by the movement of these chemicals through the ecosystem. Unfortunately not only the production of conventional cotton is harmful to the environment but also the further processes of harvesting the cotton and the processes in the textile mills are very harmful to the environment and overall health of direct contactors. After the toxic debacle of the growing season, the chemical woes only continue. During harvesting, herbicides are used to defoliate cotton plants to make picking easier. The global consequences are that chemicals pollute ground water and rivers with potentially carcinogenic compounds. Further on the cotton fabrics are often processed with toxic dyes and formaldehydes to improve appearance and performance before they reach the end consumer. Although much of the pesticide and herbicide is bleached out or washed away during the manufacturing process, but a variety of toxic chemicals, oils, and waxes are used to manufacture, knit and weave convention cotton fabrics. The chemical residues of these processes constitute the major sensitivity problems experienced by people suffering from Multiple Chemical Sensitivities. One out of five people generally show a reaction towards these chemicals.\textsuperscript{70, 71}

The last step of the processes is finishing and this is also the most harmful to the environment. To reduce shrinkage and wrinkling specific kinds of chemicals are used to almost every garment which is exported to the US and Europe. “Finishing” is the final processing step for many conventional cotton garments to create easy care clothing that is soft, wrinkle-resistant, stain and odor resistant, fireproof, mothproof, and anti-static. Chemicals often used for finishing include formaldehyde, caustic soda, sulfuric acid, bromines, urea resins, sulfonamides, halogens, and bromines. The resulting waste water has a high acid content. Residual chemical traces on the fabric can also cause burning eyes, nose, and throat, as well as difficulties with sleep, concentration, and memory and they can increase susceptibility to cancer. Unless clothes are 100% organic, one should always wash new clothes or bedding first before wearing or putting on the bed. That "new" smell is a potent mixture of

\textsuperscript{69} http://www.indiantextilejournal.com/articles/FAdetails.asp?id=644
\textsuperscript{70} www.drgrisanti.com/mcs.htm
\textsuperscript{71} http://www.indiantextilejournal.com/articles/FAdetails.asp?id=644
chemicals such as formaldehyde and resins that can be reduced through repeated washings.\textsuperscript{72}

One should understand that the most harmful treatment to the environment is wet processing of textiles such as starches etc. It is reported that around 8000 chemicals are used for wet processing worldwide.\textsuperscript{73} Further on there are many more synthetic dyes which are used for coloration etc. These chemicals and harmful dyes have an enormous effect on the environment in three different ways.

1. Effect of production processes on people and environment
2. Effect of textile apparels next to skin on health
3. Effect of textile waste on clean environment

The Harm of the excessive use of chemicals becomes evident considering the following facts. Many chemicals were first developed for warfare. These substances were developed to harm people and environment. Per year there are more then 25 million people worldwide who are poisoned during the process of applying pesticides in the field. And there have been more than three million people reported in India which are suffering from effects of conventional cotton farming. From all the pesticides in the world, a high number up to 25% already goes into conventional cotton production. An average of about 0.5kg of toxic chemicals is used to make a pair of Jeans and a T-shirt. Out of all these pesticides used, approximately 65% out of these chemicals are used against insects.\textsuperscript{74}

\textbf{Additional organic cotton facts:}

The process always starts with the soil with healthy soil. In organic farming the soil is seen as a living system and not simply a growing medium for plants. Compost, efficient nutrient recycling, frequent crop rotations and cover crops replace synthetic fertilizers to keep the soil healthy and productive. After this is secured, the next step would be to control the weed. Organic Farmers have many options to control weeds including: hoes and other mechanical weeding implements, crop rotations, planting several crops together (intercropping), more efficient use of irrigation water, the use of mulches, and even adjusting the planting dates and densities of their crops. Another important factor is of course the pest control. By encouraging biological diversity, farmers create conditions which reduce the likelihood of any insect, bird or mammal doing any major damage to their crop. To control pests and minimize insects plagues as much as possible, organic farmers may use beneficial predator insects, crop rotations, intercropping, and biological pesticides such as neem oil. While all these things are taken care of during planting the next step to act eco-friendly is the harvesting process. Organic cotton is often handpicked, especially in developing countries, without the use of defoliants, machinery, or chemicals. Hand picking also means less waste. The further process of processing organic cotton involves a number of different techniques to avoid any sort of chemicals. The alternatives which are widely spread in organic processing in India are for example

\textsuperscript{72} http://www.lotusorganics.com/articles/cotton_facts.aspx

\textsuperscript{73} Eco-friendly textiles wet processing, July 2007

\textsuperscript{74} http://www.indiantextilejournal.com/articles/FAdetails.asp?id=644
using natural spinning oils which are easily biodegradable in the yarn spinning process, for sizing of yarns natural potato starch is used, the dyes which are used for colouring should be ideally low impact dyes. Another trend is also moving to organic colored grown cotton and using earth clays. If the whole process is called organic the prints are usually done with natural vegetable dyes and mineral inks. 

It also involves many other methods apart from not using synthetic chemical fertilisers, herbicides, conventional synthetic insecticides, growth regulators, growth stimulators and defoliants. It also involves methods and materials that will have a low impact on the environment and health of people who are in direct contact. Organic cotton is therefore grown without toxic chemicals unlike the conventional cotton. In conventional cotton all these chemicals, fertilisers and pesticides are likely to directly go to the users’ blood stream which might affect the bodies’ organs and tissues.

It is absolute necessary to plan the organic crops very carefully to ensure optimize outcome. There are a few important facts which always have to be taken into consideration while putting up organic cotton farming:

- site selection
- crop rotation
- variety
- weed control
- non-chemical means of insect control
- skills to manage organic crop
- continues ambition to grow the crops without synthetic fertilisers and pesticides

It is most common that production sites which call themselves organic have to go through certain evaluations from third parties to prove their accuracy in being green. The aims of these third party organisations are mainly to facilitate the selection of textiles which are organic for retailers, manufactures of readymade clothes and consumers. Further on they force the textile sector to develop substitutes for toxic chemicals, to shift to alternate environmentally sound methods of production and processing and to supply greater variety of eco-friendly textiles. The most common organisations which evaluate Indian organic producers are:

- **TÜV Süd**, Germany: An organisation which developed from a highly respected testing and certification organisation into one of the world’s leading providers of services related to technical safety.
- **MST** (Markenzeichen Schadstoffgeprüfte Textilien, Germany): A label which sets norms for the production process. All processing conditions should be analysed with reference to the degree of pollution of air, water and soil.
- **MUT** (Markenzeichen Umweltschonend Textilien, Germany): A label which sets for consumer goods and indicates a lower content of pollutants. Limiting values for pesticides, heavy metal, HCHO etc. serve as a standard for comparison.

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OEKOTEX standards 100, Austria: A standard set by the Austrian Research Institute.

Clean-fashion, Germany: A label given by one of the ten biggest wholesalers of textiles.

Steilmann, Germany: A label which is being followed by German and European importers/buyers as part of their buying condition.

Golden standards, USA: Mainly used from US companies to ensure production sites follow highest environmental and labour standards, controlling factory pollution and enforcing fair labour.

GOTS, Global organic textile standards, Germany

Control Union, Dutch

Apart from these international organisations, the bureau of Indian standards also made and eco-label known as Eco-Mark and the earthen pot is used as a logo on eco-friendly textiles. The textiles committee laboratories in Mumbai are the first Indian textile laboratories in India which are accredited by an international accreditation council. Namely the Dutch Raad voor Accreditatie. (RvA)

Further on Indians government has given out the following criteria to support environmental protection:

- Duty concession and low interest finance (under TÜV) for effluent treatment plants
- Subsidy on common effluent treatment plants
- Rebate on water cess on undertaking pollution control measures
- Eco-testing laboratories throughout the country
- Ban on benzidine based dyes and other carcinogenic dyes
- Awareness creation programmes and sponsoring of research projects for production of eco-friendly textiles

From a consumer point of view organic cotton has obviously several types of physical advantages. First of all the obvious advantage is that people with sensitive skin and allergies would not face any problems with wearing organic cotton. The next to skin comfort is much higher than with conventional cotton and the hand feel is much softer. A guideline for end consumers to be sure that garments are truly organic and do not harm their skin is to check if they fall under the Öko-Tex standard. There are four different classes of garments and all are strictly without chemicals which cause allergies or cancer. They all have to be free from dangerous dyes and should be proven with a neutral pH value. Further on the amount of pesticides used has to be as small as the requirements for food. The four classes are as follows:

- Class I: Garments for babies and kids up to the age of two. This class follows the strictest requirements.
- Class II: Products which come in contact with the skin to the fullest of their surface.
- Class III: Products which do not or very little get in contact with the consumers’ skin.
- Class IIII: Products which are used for decorative means.

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77 Eco-friendly textiles: the German ban, April 1996
78 Eco-friendly textiles: the German ban, April 1996
79
The durability is much longer in organic cotton and it is ideal for warmer countries, summers and sportswear since it keeps the body temperature two degrees lower than conventional garments.

Even though I am trying to underline the benefits of organic cotton, there are also some problems with organic farming which have to be clarified from a critical point of view. All the listed steps below should not be a reason to work with conventional cotton at all but should be rather seen as improvements which are taken care of.

1. Organic cotton gives low yield and it costs more to produce.
2. No systematic research has been undertaken on organic production technology. Consequently, no pre-tested and authentic guidelines on production technology are available to the producers.
3. Information on economics of organic production is also lacking. Growers entering into organic production programs are usually not aware that either they are going to make money or they are going to lose compared with conventional production.
4. Certification facilities are not available to the growers in many countries. They have to rely not only on certification by outsiders but also on the price premium decided by the certifiers.
5. Cotton grown without chemicals is named differently in different countries. Nomenclature in some countries like environmentally friendly, chemical free, etc., creates a lot of confusion about what is really organic cotton. There is a need to promote organic cotton under worldwide acceptable labels.
6. No cotton can be certified as organic cotton unless all the crops grown in rotation with cotton on the same land are also grown organically. Thus, the economics of the grower have to be considered taking into account the income from the rotation crops. While there is a need for better marketability of organic cotton, a market also needs to be developed for rotational crops.
7. Many new areas need to be researched in the organic production system. One example could be varieties with natural characteristics to shed leaves at maturity, eliminating the need for defoliation in the case of machine picking.
8. Presently, there are almost no standards for ginning, spinning and weaving of organic cotton. Standards need to be established for the production of organic garments.  

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79 http://www.diegruenelinie.at/index.php?id=42#c551
Appendix III:

During my visit in India I did not only make use of all the resources I have due to my exchange semester at NIFT (National Institute of Fashion Technology) but I was also able to stay in contact with the Indian business partner from Loomstate, the company I interned with. Further I made the effort to visit different factories and tried to execute field research by means of observation and interviews.

Most of the factories are rather new (3-5 years old) and are rather the more visionary ones in the garment industry. “Madebyindia” is one of them and they were very hard to approach. An industry visit was almost impossible because my cause of contact did not seem attractive to them. Not coming with a specific order and only wanting to do some sourcing and research is rather difficult. Therefore it is extremely important for young brands to either establish a great network or if time and money is short the most efficient option would be to work with a middleman. This option became very clear to me after executing my field research and noticing how much time it consumes to just source the right production place. Therefore in the following chapter I would like to concentrate on the role of the middleman in the industry. Due to my subject of research and specialisation in the field of organic, this will be limited on the role of a middleman between organic brands dealing with India as their production country.

During my field research I sadly had to find out that most of the prints are still done with plastisol inks and are therefore not applicable for true organic products. Though many companies claim to be organic with their products it is still a difficult issue when it comes to printing. The producers often do not have any other mean then using these plastisol inks since it requires a special technology to work with those other prints. During my industry visits I could only find very few “true” organic producers who are also handling prints in the most eco friendly way. Doorbash International is an established bag company who over the years are using more and more organic and sustainable fabrics. Due to their specialisation in prints it made it possible for them to find the most eco-friendly way of printing. Their range of clients is very diverse from MC Donald to British Airways all demanding organic cotton bags with multi colour prints. Mr. Sanjay M. Bambhani, one of the owners of Doorbash International said that their business in organic bags is increasing per year since plastic bags are being banned from all markets across the globe. It is therefore the right time to step into this market and make use of the growing market.

Sudarshan Kumar the owner of Ram Rajya Clothing (RRC), another major industry player in the organic market is very well aware that it is very hard to keep the whole process organic. Five years back he turned his company organic after a visit to the Netherlands. A buyer from abroad suggested him to go into organic production not only to differentiate himself on the market but also to contribute to a healthier planet. After returning to India it took him a lot of time, money and research to finally set up the company the way it is running now. He worked hard to get some of his suppliers certified under international standards and the main problem he said was the lack of education and awareness in India. To convince his sourcing partners to go organic was his major problem. Though all the fabric developments are outsourced, they make absolutely sure that all products fall under GOT’s standards. Hence all processes and therefore products from RRC are certified by the international certifying body SKAL/Control Union based in the Netherlands. During my interview
with him he did not really clarify their way of printing and due to their broad range of products and high quantity he confirmed that they are not doing vegetable dyes but all their dyes are least harmful to the environment. By now Ram Rajya Clothing is offering such a broad range of products in organic cotton that they are hardly bothered about the upcoming competitors in the market. Especially with regards to Chinese competitors, Sudarshan Kumar said that the organic industry in China is losing its clients. The reason for that is, he said is the lack of trust which international buyers have in Chinese production. When he visited BioFach an international organic fair which is held in different cities all over the world, he noticed that the number of Chinese producers almost reduced to zero in the last years fair held in Frankfurt.

Though acting as a middleman between India and Western companies I do recommend to at least speak Hindi on a basic level. It will simplify things enormously and will give beneficial advantage towards the business.

Compared to China, India is much easier to work with for a middleman since more companies are still family owned businesses which worked hard to reach to a top level. That makes negotiating much easier than with big corporative businesses in China who mostly have to follow a set of rules given by the board.
Appendix V

Questionnaire: Green apparel production in India

(Please feel free to add any written information to any question)

1. Do you believe India will be able to expand their green apparel production within the next three years? If yes, please state why.
   A. 5-15%
   B. 20-30%
   C. 35-50%

2. If yes please state why
   A. Because Indian farmers are eager themselves to turn their production green
   B. Because Indian farmers are receiving great help from outside organisations
   C. Because it will be more profitable for farmers to go green
   D. Because India is keen on following the western demand
   E. Because India is willing to change to be able to preserve nature
   F. Other, please state why….

3. What do western clients demand out of Indian producers in order to do efficient business with them? Please rank each attribute from 1-10. Where 1 is less important and 10 very important.
   A. Better follow up and keeping timelines in production
   B. Concentrating on R&D, presenting new innovations
   C. Easier sourcing availability
   D. Cheaper pricing
   E. Lower production quantity
   F. Higher quality
   G. Faster delivery
   H. Easier communication means

4. Do you believe China or India is preferred as a green production country? Why? Please rank each attribute from 1-10. Where 1 stands for not preferred at all and 10 mostly preferred because of that reason

4.1 India is preferred for:
   a. Better follow up and keeping timelines in production
   b. Concentrating on R&D, presenting new innovations
   c. Easier sourcing availability
   d. Cheaper pricing
   e. Lower production quantity
   f. Higher quality
   g. Faster delivery
   h. Easier communication means
i. Better results in mass production
j. Delivering products strictly under given eco standards

4.2 China is preferred for:

a. Better follow up and keeping timelines in production
b. Concentrating on R&D, presenting new innovations
c. Easier sourcing availability
d. Cheaper pricing
e. Lower production quantity
f. Higher quality
g. Faster delivery
h. Easier communication means
i. Better results in mass production
j. Delivering products strictly under given eco standards

5. What are the pro’s and con’s for India as a green production country? Please rank from 1-10. Where 1 stands for a very strong contra and 10 for a very pro.

A. Follow up and keeping timelines in production
B. R&D and presentation of new innovations
C. Easy sourcing availability
D. Cheaper pricing
E. Lower production quantity
F. Higher quality
G. Faster delivery
H. Easier communication means

6. How many more organic farming projects are planned for India from your organisation for the next three years?
A. 1-3
B. 4-6
C. 7-10

7. How much of organic cotton do you expect to produce within these projects? In tonnes please

7. Which area in India does your organisation take care of?

8. Do you believe that there is an area in India which should get special support? And why?
Professionals interviewed in the industry

1. Rogan Gregory – Brand creator and creative manager of Loomstate, USA
2. Barbara Knapp – former production manager at Loomstate, USA
3. Charles Holmes – former denim production manager Loomstate, USA
4. Kelli Roschak – present production manager at Loomstate, USA
5. Ben Stubbington – Head designer at Loomstate, USA
6. Cathleen Kantu – Women’s wear designer at Loomstate, USA
7. Moose Huerta – sales manager at Loomstate, USA
8. Anton Jurina – CEO Armedangels, Germany
9. Martin Höfeler – CEO Armedangels, Germany
10. Mara Silberberger - production manager Armedangels, Germany
11. Traudi Winkler – Organic Shop owner, Germany
12. Peter Ton – Independent consultant organic cotton production, Amsterdam
13. Sunita Bose – Production manager for Shroff INDIA
14. Justina Cheng – Production manager for Shroff CHINA
15. Otto Cheng – Production assistant for Shroff CHINA
16. Sudarshan Kumar – CEO of Ram Rajia, India
17. Mr. Dillip – Assisting manager Ram Rajia, India
18. Mr. Sanjay M. Bhambhani – CEO Doorbhash International, India
19. Vikram Kumar – CEO Organic &MORE, India
20. Pawan Ojha – CEO Madebyindia, India
21. Senthil Kumar – NIFT faculty specialised in organic textiles
22. Anuradha Kumra – former NIFT faculty, Textile designer for FABINDIA, Delhi
23. Dr. Vandana Shiva – Creator of Navdjana, India
Other parties interviewed with altered questionnaire on organic cotton farming in India

1. IFOAM, International Foundation for Organic Agriculture Movement – Germany
2. PAN, Pesticide Action Network, UK & Germany
3. Remei, Switzerland
4. EJ Foundation, Environmental Justice Foundation, UK
5. Organic Exchange, USA
6. OrganicIndia, India
7. CONTROL Union, Netherlands
8. Demeter, Association for agricultural farming, Germany
9. Grolink, private limited company part of IFOAM, Sweden
10. GTZ, Deutsche Gesellschaft für Technische Zusammenarbeit, Germany
11. Graf, Certifier, Sweden
12. Soil association, UK
13. Continental clothing, UK & Germany
14. APEDA; Agricultural & Processed Food Products Export Development Authority, India
15. Zameen, Organic cotton farming association, India
16. Ecocert, Certifier, France & India
**Appendix VI**

**Profitable efficiency in the case of shifting production to India (Ram Raja)**

<table>
<thead>
<tr>
<th>Production order à 2500 pcs.</th>
<th>recent production cost of basic shirts</th>
<th>shirt with print</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 colours à 500 pcs.</td>
<td>2 prints à 500psc.</td>
<td></td>
</tr>
<tr>
<td>per shirt</td>
<td>4,15€</td>
<td>6,50€</td>
<td></td>
</tr>
<tr>
<td>total production cost</td>
<td>6,225 €</td>
<td>6,500 €</td>
<td>12,725 €</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production order à 2500 pcs.</th>
<th>Production costs in INDIA</th>
<th>shirt with print</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 colours 500 pcs.</td>
<td>2 prints à 500psc.</td>
<td></td>
</tr>
<tr>
<td>per shirt</td>
<td>3,-€</td>
<td>4.50 €</td>
<td></td>
</tr>
<tr>
<td>total production cost</td>
<td>4,500 €</td>
<td>4,500 €</td>
<td>9,000 €</td>
</tr>
</tbody>
</table>

**Cost saved during production in INDIA**  
3,725 €
Appendix VII

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