



From better cotton fields to market transformation



The WWF and IKEA cotton journey into sustainability

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INTRODUCTION

Soft and strong, versatile and affordable, cotton is one of the world's most popular textile fibres.

You're probably wearing some right now.

Yet conventional cotton production often comes at a high price for people and planet.

Many cotton farmers struggle to make a profit. Poor working conditions, child labour, soil erosion, intensive use of water, chemical pesticides and fertilisers, and associated health hazards, are all common problems.

Since 2005, WWF and IKEA have sought to address these challenges by developing and promoting better practice through joint cotton projects in India and Pakistan.

Our aim is to make more sustainable cotton a mainstream commodity and transform the global cotton market.

This briefing tells the story of our journey together into cotton sustainability. We hope that it will inspire you to join us.

Enjoy reading about our cotton journey!

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WWF and IKEA - A partnership for change

WWF and IKEA work together to safeguard and manage precious natural resources and transform business for the benefit of people and planet.

In partnership since 2002, we now run joint projects in 17 countries to promote responsible forest management, water stewardship and sustainable cotton production.

Our combined expertise and market power allow us to deliver conservation and resource stewardship that would not otherwise be possible.

BETTER COTTON BUSINESS CASE

When we began collaborating on cotton in 2005, there was a clear business case for change for both WWF and IKEA. Cotton is an important raw material for IKEA –

the company uses around 0.7 per cent of all cotton produced annually and it is found in many popular products such as sofas, cushions, sheets and towels.

“IKEA’s vision is to create a better everyday life for the many people, and sustainability should be available to all irrespective of wallet size. It doesn’t have to be expensive. Our ethos is about saving and using resources wisely and working for the community.”

Pramod Singh, IKEA

Partnership for market transformation

Pollution from agricultural chemicals used in cotton production and heavy water use were a common concern. Both can significantly affect freshwater ecosystems, especially in south Asia, as well as posing serious risks to human health and well-being.

For IKEA, addressing sustainability meant going to the source of raw materials used in products to understand the risks and dependencies for the business. And working with farmers, at the very beginning of the cotton supply chain, was the obvious place to start.

“In terms of investment, the business case is simple. Farmers will only grow cotton if they can make a living. And if they can’t do that, IKEA won’t have any cotton. Using more sustainable cotton is about securing a future for farmers and the people working on the factory floor and future-proofing our cotton supplies.” Pramod Singh, IKEA

Together, we have built a solid business case for change by ensuring security of supply, reducing risk, creating a resilient farming system, increasing productivity, avoiding differentiated prices for sustainable cotton, and strengthening reputation.

And by helping to set up the Better Cotton Initiative (see page 6), we have shown that better farming practices can benefit families and whole communities, as well as the environment, and children once obliged to work in cotton fields can go to school.

Together, we’re now accelerating sustainable cotton production by looking beyond cotton fields and engaging other parts of the supply chain such as ginning in best practice.

“Many companies are increasingly looking to demonstrate leadership and purpose as global citizens by delivering on the Sustainable Development Goals. Recognising risks are shared, they are looking to WWF to help facilitate pre-competitive collaboration and encourage governments and local stakeholders to go beyond voluntary certification and make better practices the norm.” Laila Petrie, Cotton & Textiles Lead, WWF

From field to retail



A typical cotton supply chain often involves several companies in different countries before the finished product reaches consumers. Addressing sustainability issues already at farm level is important in order to create lasting and large-scale improvements in conventional cotton.



Cotton takes about six months from sowing to harvesting. Once picked, the cotton is bagged and transported to the local gin where the lint (cotton fibre) is separated from the seeds. The lint is traded in man-high bales before being carded and spun into a yarn which is woven to make fabrics.

Facts about cotton

- Since 1960, world consumption of textile fibres has increased from 15 million tons to an estimated 93 million tons in 2017
- Cotton's share in total fibre consumption declined from about 45% in 1995 to 27% in 2017 but cotton remains a key raw material and represents about one third of all fibre used in the textiles sector
- 68 countries around the world produce cotton and Australia, Brazil, China, India, Pakistan and the USA are the six largest cotton producers
- Globally around 30 million hectares – 0.63% of all agricultural land – are used to grow cotton and approximately 25 million metric tonnes of cotton are produced annually
- More than 100 million households around the world are directly engaged in cotton cultivation, relying on it for their income
- Cotton accounts for over 6% of global pesticide use
- On average, 1,214 litres of irrigation water are used to grow 1 kilogram of cotton
- Global market share of sustainable cotton increased from 8% in 2014/15 to 12% in 2015/16, and for 2016/17 the total volume of sustainable cotton is estimated to be 15%, approximately 3.4 million metric tonnes

Source: International Cotton Advisory Committee www.icac.org

BETTER COTTON FIELDS & THE BETTER COTTON INITIATIVE

In 2005, concern about the impacts of cotton production inspired WWF, IKEA and a handful of other visionary business partners, including H&M and M&S, to develop a more sustainable approach.

Focusing on what was happening in cotton fields, WWF and IKEA set about working closely with small groups of farmers in India and Pakistan, offering them hands-on field training in cultivation techniques that reduced fertiliser, pesticide and water use.

“At the beginning, persuading farmers to try out different approaches was challenging. With average smallholdings of 1.5 hectares, they are vulnerable and apprehensive about anything new. But through a demonstration farm we could show ways to reduce costs and increase margins and productivity.” Srinivasan Krishnamurthy, IKEA, India

Based on our early experience, in 2009, we also helped found the Better Cotton Initiative (BCI), an independent not-for-profit organisation that brings together farmers, producers and retailers in an effort to make global cotton production better for people, the environment and the sector’s future.

“We realised tackling cotton sustainability was a big issue and that IKEA couldn’t take care of it alone. Starting up what became BCI was a way to involve others. Now BCI is fully autonomous and has its own independent standard.” Rizwan Syed, IKEA, Pakistan



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BCI aims to have Better Cotton make up 30% of global cotton production by 2020.

“We wanted to improve the conventional cotton industry, which meant sustainable cotton practices needed to be part of our business. Connecting the initiative to the market, working throughout the supply chain and working with small farmers in India and Pakistan – who supply around 50% of the world’s cotton – meant we had the possibility to improve the industry as well as the lives of those who work within it.”

Torbjörn Elleson,
Supply Chain
Sustainability Manager,
IKEA of Sweden

BCI, WWF and IKEA - how we work together

BCI is an independent organisation whose mission is to make global cotton production better for the people who produce it, better for the environment it grows in and better for the sector’s future by developing Better Cotton as a sustainable mainstream commodity.



Its approach is underpinned by the Better Cotton Standard System which is designed to ensure exchange of best practice and encourage the collective action for more sustainable cotton production.

BCI’s Better Cotton Growth and Innovation Fund invests in innovation while fostering adoption of the Better Cotton Standard System by governments, trade associations and other actors.

Together, through partnership projects, WWF and IKEA have trained thousands of farmers to adopt and implement the Better Cotton Standard System. And today, our collaboration also goes beyond promoting Better Cotton and addresses wider challenges in cotton sustainability (see page 14).

Separately, through BCI stakeholder consultations, WWF, IKEA and others have also helped improve the Better Cotton Standard System, and its Principles and Criteria now cover water stewardship, social development, gender equality, biodiversity conservation, soil management, crop protection, fibre contamination and climate resilience.

© WWF Pakistan



Through applying better farming practices, farmers often get quick results such as increased crop yields and reduced water use. And by using fewer chemical pesticides and fertilisers, farmers save money too.

© Anders Envall, Vingalund

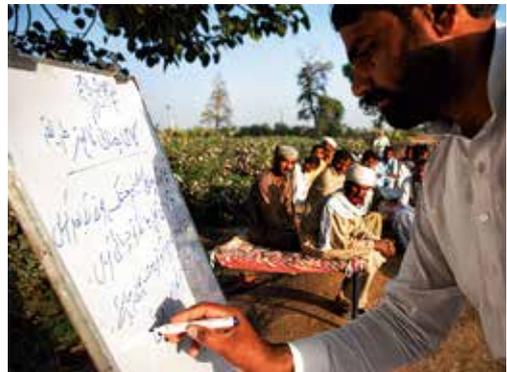


Positive results spread like ripples in water. Farmers that successfully adopt more sustainable farming techniques become advocates and inspire their neighbours to do the same.

© Anders Envall, Vingalund



© Asim Hafeez / WWF-UK



Increased earnings mean that farmers can afford a better quality of life for their families, including schooling for children.

“It took some time to persuade the Department of Agricultural Extension that better management practices might have a positive impact – but by 2010, the benefits were self-evident.”

Arif Makhdam, WWF Pakistan.

From an initial effort involving around 500 farmers, the first bales of ‘Better Cotton’ were harvested in a partnership project in Pakistan in 2010.

Since 2010, we have trained thousands of farmers to adopt Better Cotton practices. And today, a market revolution is underway.

From WWF and IKEA starting work with just a few hundred farmers in Pakistan in 2005, 1.6 million farmers in 21 countries around the world are now engaged in Better Cotton production – 43,000 within WWF and IKEA projects alone – producing 14 per cent of all cotton globally.

BCI’s ambition is that by 2020, five million farmers will account for around 30 per cent of global cotton production – enough to make Better Cotton a mainstream commodity and trigger transformation of the entire sector.

Examples of more sustainable farming techniques

Under the projects, farmers adopt more sustainable farming techniques – modern ones as well as almost forgotten traditional ones. Here are some examples:

© Inter IKEA Systems B.V.



Fewer chemical pesticides

Many insects seek out maize rather than cotton so planting maize around cotton crops acts as an early warning system for pest attacks.

Pheromone traps help farmers monitor the type and number of insects, and prevent unnecessary spraying.

Many farmers use traditional techniques such as bio-pesticides to replace or complement new technologies and approaches.

© Inter IKEA Systems B.V.



Fewer chemical fertilisers

Organic compost and manure improve soil quality, and reduce the need for costly synthetic fertilisers.

© Anders Envall, Vngaland



Less water

Approaches like drip or automated irrigation using remote sensing can help farmers ensure cotton plants get the water they need while improving water efficiency.

© Asim Hafeez / WWF-UK



Better earnings

Basic equipment such as aprons make harvesting easier and help prevent contamination, improving the quality of cotton.



© Asim Hafeez / WWF-UK

Cotton at the time of harvest and post-harvest.



© Asim Hafeez / WWF-UK

A smallfarm owner poses in his cotton fieldpart of the Better Cotton project in Pakistan.



© Asim Hafeez / WWF-UK

A worker carries a bundle of cotton to put into a suction pipe for making bales at a ginning factory in Bahawalpur, Punjab, Pakistan.

RESULTS FROM BETTER COTTON FIELDS

Many of the more sustainable farming practices promoted by BCI and the Better Cotton Standard System, and that WWF and IKEA

30% AND 49%

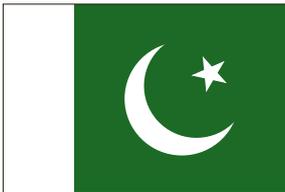
RESPECTIVELY, WAS THE INCREASE IN THE GROSS MARGINS FOR PROJECT FARMERS IN PAKISTAN AND INDIA IN 2017

have helped to develop and implement through joint projects in India and Pakistan, have demonstrated socio-economic and environmental benefits.

Each year, we have compared data on average use of pesticides, fertilisers and water by project farmers using Better Cotton practices and by farmers outside project areas using conventional production methods.

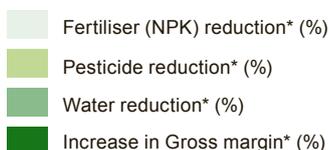
The differences between the two groups of farmers in any given year suggest that Better Cotton practices can result in reduced pesticide, fertiliser and water use.

In 2017, project farmers increased gross margins by 30 per cent in Pakistan and by 49 per cent in India compared to those using conventional cultivation methods.

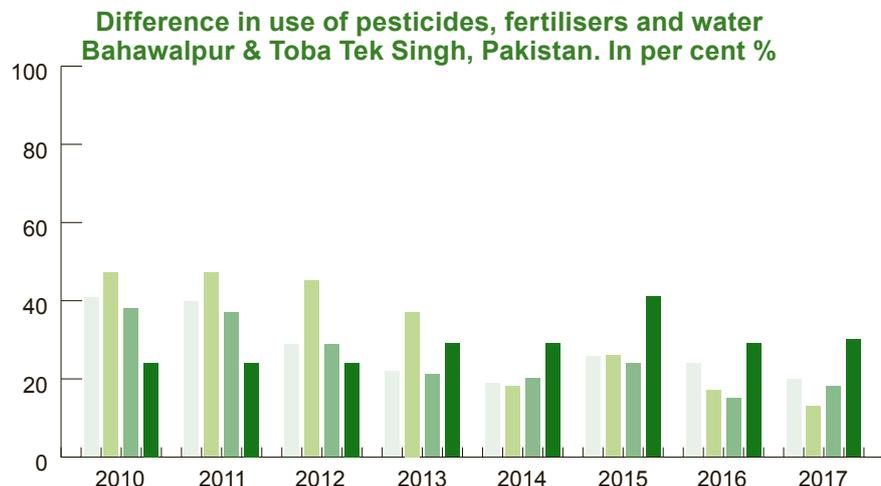
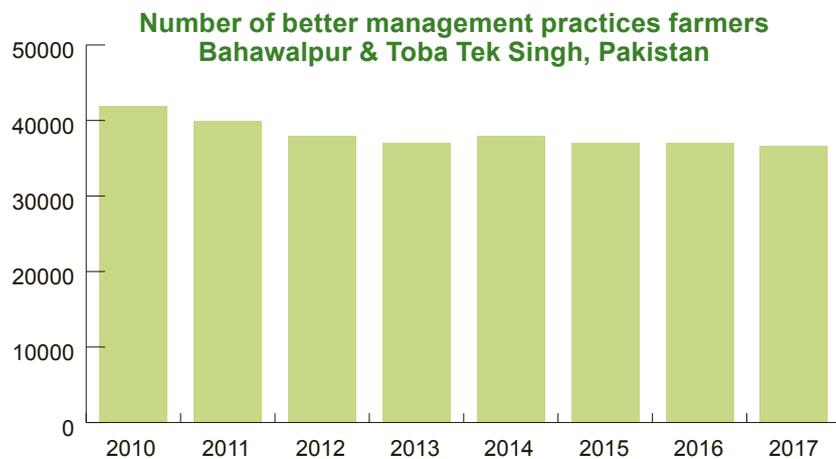


Average 2017 results Pakistan* (Bahawalpur and Toba Tek Singh, Punjab):

- 13% less pesticides
- 18% less water
- 20% less fertilisers
- 30% increase of farmers' gross margins
- ~ 37,000 farmers active



Results from Pakistan



* Data from these projects may differ from BCI due to the methodology for how data are collected and processed.



Each year, we have compared data on average use of pesticides, fertilisers and water by project farmers using Better Cotton practices and by farmers outside project areas using conventional production methods.



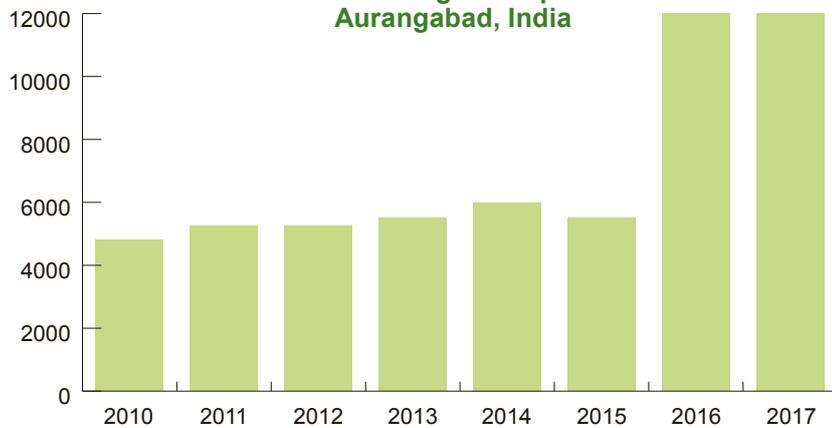
Average 2017 results India*

(Maharashtra):

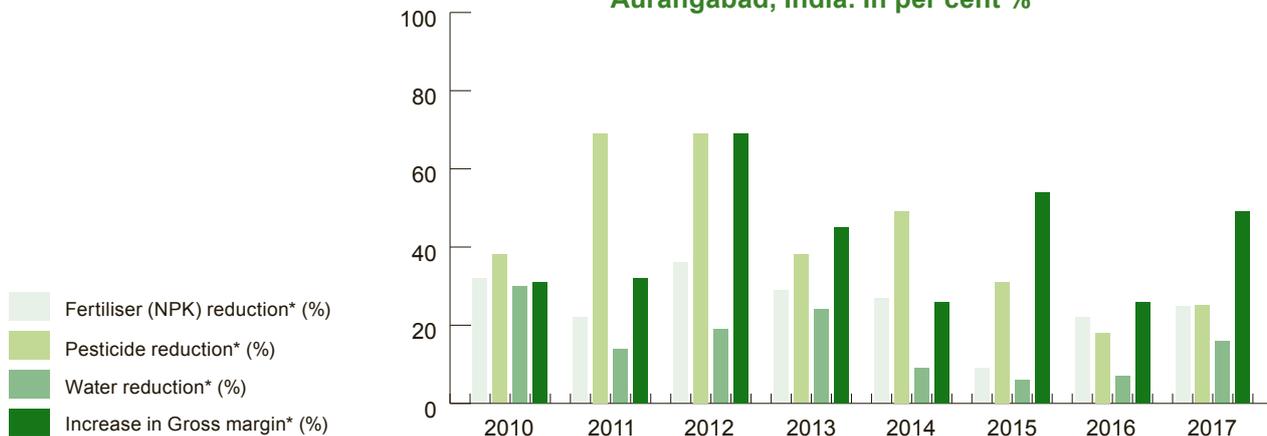
- 25% less pesticides
- 16% less water
- 25% less fertilisers
- 49% increase of farmers' gross margins
- ~ 12,000 farmers active

Results from India

Number of better management practices farmers Aurangabad, India



Difference in use of pesticides, fertilisers and water Aurangabad, India. In per cent %



FARMER STORIES

Today, through WWF and IKEA projects, more than 45,000 farmers in India and Pakistan are using

Better Cotton techniques that are better for both people and the environment. Here are just a few of their stories.

45,000 FARMERS

IN INDIA AND PAKISTAN ARE USING BETTER COTTON TECHNIQUES

From post-graduate student to local cotton leader

In 2012, Waqas Sohrab Khan was a post-graduate student in International Relations at Bahauddin Zakariya University in Multan, Pakistan, when unexpectedly his father, Haji Sohrab Khan, died. Waqas had never considered cotton farming or agriculture as an occupation but his father had grown cotton on 85 acres and earned a solid living for his family. When he died, there was no one to look after the farm. Even though Waqas had no agricultural training, as the eldest sibling, he decided to return to the family farm in Kacha Khu District, Khanewal, and take up his position as head of the family.

Leaving university and coming back to the land wasn't easy. Waqas had no one to turn to for guidance about cotton farming and began to lose hope. Fortunately, Umar Daraz, a fellow cotton farmer and friend whom Waqas had known since childhood, explained the Better Cotton approach to him and suggested he register as a member himself.

Waqas heard out about BCI in 2015 and in WWF's sustainable cotton initiative, found a cooperative team willing to offer insight and practical advice.

“Joining Better Cotton was a turning point in my new career as a cotton farmer. I began to understand the challenges of cotton farming and I could see the opportunity in adopting best practice over conventional methods and I soon has a good cotton crop.”

Through learning Better Cotton methods, Waqas was able to identify specific pests and use the right kind and amount of pesticide rather than following other farmers' examples and simply apply chemicals at the first sign of any kind of insect, good or bad. And he learnt how to use soil tests to identify crop needs for fertiliser.

In a relatively short time, Waqas found that he was growing cotton more successfully than other farmers, and soon many local farmers came to see him as a leader. Waqas has now expanded his farm by leasing another 40 acres and started to grow wheat, rice, maize and potato as well as cotton. He has ten permanent staff and a dozen daily waged workers. As part of meeting Better Cotton standards, he provides them with protective clothing and safety equipment, and uses all his crop waste to make compost.

Well-liked in his community, Waqas has now completed his post-graduate studies, married and had two children!

Natural pest control

Malik Abid Hussain is a small cotton farmer from Basti Malkan Moza Wahi Shah Muhammad Tehsil in Bahawalpur, Pakistan. Since 2014, with help from WWF, he has been farming nine acres following the Better Cotton Standard System approach.

He was first drawn to Better Cotton by BCI's mission to increase farmers' profitability and sustainability through innovative practices and techniques. Learning about habitat conservation, Malik Abid became interested in planting trees in field borders.

“Plantations have economic and environmental benefits. Trees serve as perches for birds, and the birds eat insects on the crop. I also plan to harvest and sell the trees when they are five years old which will bring me extra income.”



© WWF Pakistan

Waqas Sohrab Khan with BCI Chief Operating Officer Lena Staafgaard visiting Waqas' cotton field.



© WWF Pakistan

Malik Abid Hussain, cotton farmer from Pakistan

“In 2018, we successfully transitioned WWF’s Sustainable Cotton Initiative from the WWF and IKEA partnership to the BCI Growth and Innovation Fund. We have done that through building alliances with communities and stakeholders and enabling them to take ownership of the work. This has given us a great opportunity to develop a new and diverse portfolio of projects focused on agriculture, water, conservation and cotton quality. Our aim is to integrate landscape conservation, climate resilience, policy and technology, and address associated risks across the cotton supply chain.”

Hajra Atiq, Cotton Co-ordinator, WWF Pakistan



© WWF Pakistan

“Being a rural woman, I hesitated about talking to men and traveling alone, but after my own training and involvement in the training of other women I gained confidence. Initially, everybody objected to my traveling alone but now things have changed and everybody in the village has respect for me.”

Savings and earnings for the family

Ramesh Asaram Kale is a 49-year-old Better Cotton farmer from Wakhari village in Jalna, Maharashtra India. On his ten acres of land, he grows cotton, sorghum and millet.

Before joining WWF’s Better Cotton project in 2010, growing cotton was a financial risk. Sometimes, Ramesh would secure a good return for his efforts but on other occasions, he would lose money. Like many of his neighbours, he used to apply expensive fertiliser and pesticide that he bought from a local dealer without having full information about the needs of his crop.

Since Ramesh adopted Better Cotton practices, his costs have reduced by 60 per cent and his income has increased threefold. He also gets weather updates on his mobile. Overall, the programme has helped Ramesh cultivate cotton in a more sustainable and eco-friendly way, and he can now provide for his family’s needs.

Ramesh’s two sons, Suprasan and Kailash, his daughter-in-law Suman, and his wife, Kanchan, help him on the farm and all agree that Better Cotton has brought them some independence, more income and a more comfortable life, including the opportunity to earn enough to study. Ramesh’s youngest son, Kailash, is doing a Bachelor’s degree in Commerce.

From cotton-picker to trainer and community leader

Umul Baneen is a hard-working woman from Maqboolabad, a rural town in the heart of Punjab in Pakistan’s cotton-growing region.

As an early participant in WWF’s sustainable cotton initiative in 2005, she learnt about sowing, planting and picking cotton in a way that protects farming families’ health.

After her training, Umul Baneen wanted to help others. She knew she had the power to make a difference. And when she married in 2010, she was resolute about continuing her work even though it is not the norm for women to go out to work.

Umul is now a trainer with the Sustainable Development Organization (SDO), an implementing partner of WWF’s cotton programme, and also the only female trainer in the organisation and the first woman to work outside her village.

“Being a rural woman, I hesitated about talking to men and traveling alone, but after my own training and training other women I gained confidence. Initially, everybody objected to me traveling alone but things have changed and people in the village respect me.”

Her husband Zubair, who also works for SDO, supports her work. While Umul takes the lead on training women, he works with farmers to improve farming techniques such as laser levelling to reduce water use, healthy seed varieties and registered pesticides.

“Sometimes it’s hard to ask women to gather in one place so I can deliver training. So I go house-to-house and ask women where they’d feel most comfortable to get together. I keep track of who attends and who doesn’t. I visit those who don’t, to talk to them personally.”

At the start of her work as the field facilitator, women would not take Umul seriously and would joke about what she had to say. It was common to pick cotton with bare hands and feet but skin complaints meant gradually they started listening to her.

“When we go into a new area, we introduce ourselves and our work. People ask us how what we say will benefit them. We tell them we’re not there to give or take anything from them – we just ask them to listen and judge whether what we say will benefit them or not.”

INNOVATION FOR EVEN BETTER COTTON

After more than a decade of intensive in-the-field collaboration with farmers developing and promoting more sustainable cotton production, we are pursuing a dynamic set of new projects that build on and look beyond BCI and the basics of sustainable production.

“Our recipe for sustainability is a combination of continuously developing best practice standards, helping to strengthen national governance and exploring opportunities around new technology. Developing these in an integrated way will allow WWF and IKEA to share cutting-edge cotton sustainability with the whole cotton sector.”

Laila Petrie, Cotton & Textiles Lead, WWF

Post-harvest cotton at a ginning factory in Bahawalpur, Pakistan

These new projects are designed to accelerate sustainability within the cotton supply chain and tackle related challenges, including soil erosion, biodiversity loss, climate change and water scarcity.

We’ve put the foundations in place, and now we’re looking at what’s next and how we can make cotton even more sustainable, as well as exploring how our work on cotton can contribute to the UN Sustainable Development Goals.

Looking beyond the cotton field and engaging other actors in the supply chain, such as ginners in Pakistan, will help improve the quality of the cotton itself and stimulate uptake. And taking a more holistic approach, we will address resource stewardship in the wider landscape.

“My hope is that by 2020, we can do three things: reframe governance and policy-making around agricultural water use in a way that recognises it as a finite resource and prioritises equitable use to meet multiple needs; create a common compliance mechanism for cotton and timber that avoids duplication between BCI and FSC; and develop measures that protect vulnerable farmers from the impacts of climate change.” Pramod Singh, IKEA



© WWF Pakistan

“Monsoon rains can cause a lot of soil erosion in sloping watersheds. We’re bringing cotton and forestry standards together to identify commonalities and an approach to agroforestry that can help control erosion as well as providing timber that we can use in IKEA products.”

Srinivasan Krishnamurthy, IKEA, India

Agroforestry

Agroforestry is the integration of trees, crops and/or livestock on the same plot of land. Interaction between trees and crops and animals offers greater productivity, reduced soil erosion, less water pollution, and more habitat for wildlife. Tree roots also help cycle nutrients and store carbon, as well protecting crops from adverse weather.

All these benefits are particularly important for intensive cotton-growing wetland districts in Telangana, India, where we are exploring different agroforestry approaches. Our aim is to reduce soil erosion and improve productivity through reducing agrichemical use and increasing vegetative cover.

In support of an innovative cross-sector landscape approach, we are also trialling integration between cotton and forestry certification standards in agroforestry systems.

Wetlands provide important ecosystem services and benefits for communities.



© Mauri Rautkari / WWF



© Harish Segar / WWF

Nal Sarobar Ban Bird Sanctuary in Gujarat is a globally important site for flamingo and many migratory birds.

“Local farmers are using Better Cotton methods here for the first time in 2018. We want to explore whether or not BCI-recommended pesticides and chemicals really make a difference in helping to reduce impacts on local biodiversity. It’s a unique wetland site.”

Murli Dhar, WWF India

Wetland biodiversity

Wetlands around the world provide unique habitats for many kinds of wildlife and have immense socio-economic and cultural value for local communities. They are also under threat from increasing demand for freshwater and land for development and agriculture.

Understanding how agriculture impacts wetlands through chemical contamination and water use, and how standards can benefit high conservation value landscapes, are critical parts of cotton sustainability.

Nal Sarobar Ban Bird Sanctuary in Gujarat, India, is an important breeding site for many species of bird and one of 26 internationally important Ramsar wetland sites in India.

By introducing Better Cotton practices to areas around the sanctuary under intensive cotton production, we are aiming to improve water quality through testing greener agrichemicals and regulating water flow between irrigation canals and the sanctuary, as well reducing threats to biodiversity.

“Nal Sarobar Ban Bird Sanctuary in Gujarat is an important natural wetland surrounded by cotton and rice. It’s a globally important site for flamingo and many migratory birds from Eurasia. We’re looking at how we can reduce the impact of agricultural chemicals, as well as how we can enhance the biodiversity dimension in the Better Cotton standard.”

Srinivasan Krishnamurthy, IKEA, India

Climate and weather resilience

Around the world, climate change and extreme weather is becoming a significant challenge for the cotton sector. Through developing and promoting adaptation and mitigation techniques with local stakeholders, our aim is to reduce both crop and grower vulnerability, and improve farmer capacity to respond effectively to climate and weather risks.

In Jalna district in Maharashtra, India, we are testing different cotton varieties so that we can identify the best-performing varieties for weather-resilient cotton production.

“Small farms are often affected by adverse weather. This research-based project will help to identify which cotton varieties are most resistant to drought and high rainfall.”

Srinivasan Krishnamurthy, IKEA, India

“In India there are 550 varieties of cotton, each with a different response to climate. Our aim is to create viability in the face of any kind of weather. Cotton production is decreasing each year due weather variability. Our ambition is to inform policy-making and help farmers make better decisions.” Murli Dhar, WWF India

In Bahawalpur, Lodhran and Khanewal in Pakistan, we are strengthening climate-resilient cotton production.

“Our aim is to establish how much water is required based on crop needs, as well as the best means to irrigate and when. We need to regulate water at the community level based on what’s available in the system and help farmers agree between themselves how to allocate it according to overall user need.”

Arif Makhdum,
WWF Pakistan



© WWF Pakistan

Water stewardship and social development

Water scarcity is one of the biggest challenges we face. Today, nearly two billion people live in areas at risk from severe water scarcity, while two-thirds of the world’s population face water shortages for at least one month each year.

By transforming how we manage water across whole river basins and taking joint responsibility for shared resources we can reduce the risk of shortages, improve human health, and ensure everyone’s right to clean water.

In Bahawalpur, Lodhran and Multan in Pakistan, we are promoting water efficiency and community-based water management that support equitable use. We are providing training for farmers in practices such as laser land levelling, and organising water user groups to strengthen participation in irrigation management.

Technology and mechanisation

Farm technology and mechanisation can transform the lives of millions of rural families by increasing output and quality as well as by eliminating the drudgery of manual production. They support increased access to supply chains, improved incomes and new business opportunities. And through bringing greater efficiency, they also contribute to more sustainable global agricultural systems.

In Gujarat and Maharashtra states in India, we are developing a digital Decision Support System designed to alert farmers to adverse weather and support informed decision-making.

“Cotton Doctor is a smartphone app that digitises Better Cotton training and allows farmers to access satellite and vegetation data for their farms. It means they can access advice on optimum farming methods for their land, as well as offering their own observations, and it could revolutionise availability and access to Better Cotton techniques and training for thousands of farmers. This season alone we hope to reach around 120,000 farmers via the app.” Srinivasan Krishnamurthy, IKEA, India

From weather alerts to fertiliser and pesticide advisories, Cotton Doctor is proving popular among farmers in the cotton growing districts of Gujarat.



© Jamie Pittock / WWF

From weather alerts to fertiliser and pesticide advisories, Cotton Doctor is proving popular among farmers in the cotton growing districts of Gujarat.

“We’re creating a dynamic digital advisory system using remote sensing and information from the field that can create tailored advisories for farmers on weather and crop treatments via SMS and smartphone. We’d like to provide it to all farmers in the state of Gujarat.”

Murli Dhar, WWF India

“Technology is set to play a big role. Smart phones and satellites have the potential to revolutionise pest control and efficient use of water by helping predict needs at a granular level. As the challenges and solutions become more sophisticated, empowering farmers to do more is critical and exciting. Offering farmers clear data takes the guesswork out of farming.” Laila Petrie, Cotton & Textiles Lead, WWF

In Rahim Yar Khan in Punjab, Pakistan, we are testing picking, ginning and de-linting machines that support greater mechanisation of cotton production and have the potential to transform and improve smallholder and farmer livelihoods.

“We’re introducing small picking machines to support women working in the fields, and using new technology to better regulate water use in the fields.” Arif Makhdum, WWF Pakistan

Post-harvest improvements

Looking beyond the cotton fields and developing better practices for post-harvest operators and processes in the cotton supply chain will help us improve both cotton quality and overall sector sustainability. Their adoption and promotion by cotton traders and policymakers should also help increase market uptake of more sustainable cotton.

In cotton producing districts in Pakistan, we are moving beyond BCI implementation by developing standards for post-harvest processes and operators such as ginners.

“At the moment, Better Cotton only addresses one part of a long supply chain. In our Boll to Bale project, we’re piloting new approaches with ginners and spinners on energy use, water and decent work. We want to make the whole supply chain green, go beyond voluntary standards and transform markets. Strengthening relationships between farms and gins will accelerate uptake of Better Cotton and improve product quality as well.”

Arif Makhdum, WWF Pakistan

“Challenges in cotton production vary a lot from country to country. In Pakistan, the part of the supply chain between farmers and ginners is very informal, which affects both quality and uptake. Just growing cotton in a way that’s good for the environment isn’t enough to secure market share. It also needs to be good quality. And for that to happen, we need to engage often ignored traders, handlers, and storage and transportation workers in better practices. We hope to develop standards which can be adopted by these often-unseen actors.”

Rizwan Syed, IKEA, Pakistan.



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Increased support for innovation to accelerate market transformation



© Ahsan Shah

Poor handling can reduce the value of raw cotton by up to 30%.

Now that BCI is well-established, we are increasing support for innovation that pushes the boundaries of cotton sustainability beyond BCI.

As a first step, we need to encourage more supply chain actors to engage in better practices and help catalyse further uptake of more sustainable cotton. To accelerate market transformation, we need to tackle wider systemic challenges in the cotton value chain and address policy and governance for resource management at landscape level.

“As our founder Ingvar Kamprad used to say, ‘Most things remain undone. A glorious future!’ Reaching 100 per cent is not sufficient. Before we can make more sustainable cotton the norm, we need to engage the post-harvest supply chain to reduce contamination and improve quality and uptake – poor handling can reduce the value of raw cotton by up to 30 per cent. And in the long-term, it is vital that we address the major challenge of pre- and post-consumer waste so that we can extend the life of fibre.” Pramod Singh, IKEA



© Ahsan Shah

A deeper exploration of the links between cotton, water, agriculture, soil health and carbon sequestration shows us that overall ecosystem health and biodiversity, as well as activities like agroforestry, have an important role to play in conservation and also present new business opportunities for cotton farmers.

Linking these aspects, we are expanding better practice horizons. A more integrated approach will help farmers and policymakers in key cotton-producing regions. Our aim is to mainstream best practice globally. Regulators and policymakers have a key role to play in this transition, and we are engaging closely with decision-makers in project regions.

“My hope is that players along the whole value chain come to recognise the business case for sustainability as a profit driver and market differentiator, and that we can really start to scale up better practices and technological innovation with government and policy support. We need to embed our learning within the political institutions that have ultimate responsibility for creating change. I believe we are now at an exciting turning point where we can make this vision a reality.” Laila Petrie, Cotton & Textiles Lead, WWF

“Government policy used to be to produce more cotton at any cost but our advocacy work has helped decision-makers realise that ecosystem services are more important, and that if we lose them, we lose cotton as well. The partnership has brought a lot of change in Pakistan and Better Cotton has just become part of federal government policy.”

Arif Makhdum,
WWF Pakistan



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Examining fibre quality by hand-stapling, a manual process to check length, strength and micro-naira.



Cotton Doctor provides farmers with a digital Decision Support System that alerts to adverse weather as well as current soil conditions. The system's moisture sensors, for example, offer huge potential to save water.



© Anders Envall, Vingalund

"I give 100% to all new technological advances in the hope that they will help me increase my cotton yields."

Nivrutti Ghule,
Maharashtra, India

Using smart phones to boost cotton yields

Nivrutti Ghule is a 40-year-old cotton farmer from Wakhari near Jalna in Maharashtra. If he has to leave his village, he no longer has misgivings about whether his cotton plants will be tended to properly in his absence.

Thanks to the Cotton Doctor app, with a simple click of his phone, he can feed in the time and duration he wants his cotton saplings to be watered, automatically activating his water pump via a SIM card fixed to an automatic irrigation switch in his field.

Cotton Doctor provides farmers with a digital Decision Support System that alerts to about adverse weather as well as current soil conditions. The system's moisture sensors, for example, offer huge potential to save water.

"I receive regular SMS alerts with weather updates and how to monitor soil nutrients throughout the growing season. I used to delay cotton picking as long as possible but with alerts that rains are coming, we pick the cotton on time and store it safely indoors. I also used to use too much water which destroyed the crops but with information from the app, I've cut down tremendously on water wastage."

Cotton Doctor also helps with pest control. An infestation of pink bollworm, a common pest that attacks cotton plants, devastated cotton production in 2017.

"Cotton farmers lost 60-90 per cent of their total produce last year. But with this app, we know when pink bollworm is likely to attack our plants and at what temperature the infestation may occur. And SMS alerts recommend appropriate sprays to eliminate the pest."

At the start of the project, 6,000 cotton fields were geo-tagged to support weather-based advisories. And using their phones, farmers can also upload pictures and videos of their plants, and ask questions about sapling growth or the most effective manure and pesticides.

Data collected via the app on land, crop variety and sowing date is processed and subsequently offered via its dashboard to give all users information on crop, farm and water management.

So far, nearly 5,000 farmers have registered, and if the cotton sector grows and maintains the system, many more will benefit in the future.

6,000

**COTTON FIELDS
WERE GEO-TAGGED
AT THE START
OF THE PROJECT**

GINNERS - BOLL TO BALE

Our early partnership work with post-harvest processes in India and Pakistan is already showing promise. Incentivising spinners to use Better Cotton is best done through ensuring provision of high-quality lint. And how cotton is transported after harvest and how ginnerers handle the cotton is critical in maintaining that quality.

Ginning innovation with WWF's boll to bale team

ONLY 6%

**TRASH BALES IN THE
LAST GINNING
SEASON AND
INCREASED QUALITY**

Malik Muhammad Aijaz Nazam Awan followed in his father's footsteps, joining the family business, Nazam Cotton Industry, in cotton ginning and cotton import and export.

With an MBA in finance from Punjab University, his philosophy is 'never tire of doing more' and he is responsible for procurement and production. Now a successful local businessman, he is also Chairman of the Bahawalpur Chamber of Commerce and Industry.

Not a man to miss a business opportunity, when he was approached by WWF's B2B Team about improving and developing best practices in his ginning operation in 2014, he realised he had nothing to lose.

Following WWF advice, Malik has managed to reduce production waste significantly – with only 6 per cent trash bales in the last ginning season – and increase the quality of his product.

His efforts to increase the value of their cotton in international market has met with a wonderful response from textile industry.

"On advice from WWF's boll to bale team, we've brought the suction fan out of the ginning hall and been able to reduce the power of electric motor from 75 HP to 50 HP, decrease energy consumption decrease as well as noise and dust levels. And this year, I plan to replace the conduit with a conveyor belt and install it outside the main hall, as well as replace older fluorescent and conventional energy-savers with newer LED lights, all of which will offer similar benefits."

Malik now plans to lease another factory and implement similar measures with the help of WWF's Boll to Bale team.



Muhammad Saleem, a 23-year-old gin worker, works in a ginning unit at the Mian Cotton Factory - part of the Better Cotton project in Bahawalpur, Punjab, Pakistan.

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LOOKING AHEAD

Companies that use large volumes of cotton in their products have a key role to play in accelerating further expansion of the sustainable cotton market.



© Asim Hafeez / WWF-UK

An employee shows yarn bobbins at the Artistic Milliners, a fabric and garments supplier - part of the Better Cotton project in Karachi, Pakistan.

Recommendations for businesses using cotton

The Sustainable Cotton Ranking highlights a number of opportunities for improvement. Companies should start or continue sourcing more sustainable cotton and, as a priority:

- adopt policies on overall cotton sustainability
- report transparently each year on policies, strategies and targets, as well as performance and progress
- set public targets for more sustainable cotton sourcing by 2020, including the percentage of Better Cotton, organic, Fairtrade, CmiA and verified recycled cotton

Companies should also:

- gather as much information as possible on cotton sourcing locations
- calculate the volume of cotton used by the business annually and make it public
- develop a company-wide plan for applying policies and meeting sourcing targets, involving all relevant departments
- join organisations such as BCI and/or Textile Exchange
- seek advice from standards organisations, NGOs and peers in their sector

Beyond company performance

In the journey toward a truly sustainable cotton market, there is still tremendous scope for many companies to make commitments, source more sustainably and improve supply chains. Nevertheless, bringing sustainable cotton to scale requires system-wide change that addresses governance and resource stewardship at the landscape level.

As we implement our current projects, WWF and IKEA are actively exploring these opportunities with national government, local administrations, communities and other sectors.

Inclusive approaches to managing shared resources through mechanisms such as farmer water management groups, can play a powerful role in solving environmental challenges and, through aligning efforts, ensure improved performance by some is not negated by others' poor practice.

Research and innovation is more powerful when supported by multiple organisations and individuals. And ultimately, solutions at a landscape level rely on policymakers and regulators bringing best practice to scale, incentivising improvement, and facilitating the management of shared resources.

“IKEA wants to drive change beyond its own interest. Looking at non-cotton suppliers and products that originate in the same area allows us to explore circularity and closed loop approaches, as well as to consider big questions around equitable land use for food, cotton and biodiversity in the face of climate change and water risk.”

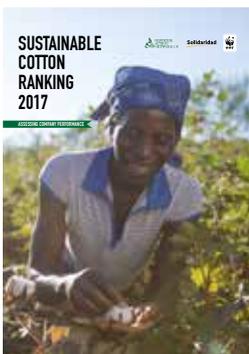
Laila Petrie, Cotton & Textiles Lead, WWF

“BCI is a leading cotton sustainability initiative in terms of scale, market connection and change potential but we still have a huge journey ahead. Even if BCI achieves its target of a 30% market share by 2020, and with other initiatives in play, we've still got 65% of the market being fed by conventional production. We also need to address enabling conditions like better national governance, as well as improving performance on water stewardship, biodiversity and HHPs, if we want to achieve long-term sustainability.”

Pramod Singh, IKEA

SUSTAINABLE COTTON RANKING #1

The Sustainable Cotton Ranking 2017, produced independently for Pesticide Action Network UK, Solidaridad and WWF, offers an insight into how 75 companies from all continents are performing on sustainable cotton based on scores for policy, traceability and actual uptake of sustainable cotton.



The Sustainable Cotton Ranking report 2017
sustainablecottonranking.org/

IKEA scores in the Cotton Ranking Report 2017

IKEA has topped the Cotton Ranking in both the 2016 and 2017 editions, setting an example for other companies to follow.

In the 2017 ranking, IKEA scored 76.7 points out of 100, showing overall best sustainability performance on cotton production. IKEA also demonstrated progress in policy, uptake and traceability, making it one of the few companies to improve in all areas since 2016.

Most notably, the scope of IKEA's water policy and human rights due diligence procedures were extended to include the cotton cultivation stage. Only the traceability score is low in comparison – the company does not publish a list of suppliers.

“We've enjoyed being number one in the Cotton Ranking and it encourages other brands and retailers to take up the sustainable cotton journey but it's important that there's a mechanism to fast track that journey. Despite not scoring well on traceability because we don't disclose our supplier lists, we're the only company to go beyond the already excellent BCI mass balance¹ system and ensure our products are actually made from Better Cotton.”
Pramod Singh, IKEA

Water positive and the IWAY code of conduct

Beyond sourcing certified cotton and promoting uptake of Better Cotton with WWF, IKEA is committed to becoming 'water positive' by 2020, including improving supply chain impact in water-stressed areas and engaging in water management programmes in some countries of origin for its cotton. IKEA's supplier code of conduct, IWAY, includes provisions on forced and child labour, and it audits suppliers and sub-suppliers regularly. Currently, it has no corporate policy addressing Highly Hazardous Pesticides although their use within cotton cultivation is a focus of collaboration with BCI and WWF.



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¹ Mass balance is a volume-tracking system that, for ease of purchase, allows Better Cotton to be substituted or mixed with conventional cotton while the quantity of physical cotton sold with a Better Cotton claim cannot exceed the quantity of cotton purchased with a Better Cotton claim.



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100 per cent sustainable cotton

Since 2015, by its own criteria, IKEA has sourced 100 per cent of the cotton used in its products from more sustainable sources. Besides Better Cotton and recycled cotton, these sources include cotton standards such as e3 and ‘Towards Better Cotton’ (a standard developed by IKEA for farmers on their way to meeting Better Cotton principles and criteria) not recognised in the Cotton Ranking.

IN 2017

THE BREAKDOWN
WAS 77% BETTER
COTTON, 17%
RECYCLED COTTON
AND 6% OTHER

In 2016, the breakdown was 69.4 per cent Better Cotton, 17.8 per cent recycled cotton and 12.9 per cent other, making overall uptake of more sustainable cotton 87.3 per cent as measured by the criteria of the Cotton Ranking – the highest percentage of all companies assessed. In 2017, the breakdown was 77 per cent Better Cotton, 17 per cent recycled cotton and 6 per cent other.

“Sourcing more sustainable cotton at the scale IKEA has done is a potential game-changer for the global cotton market because it demonstrates the clear business case for sustainability and the viability of meeting ambitious raw material targets. We need more companies to follow IKEA’s lead.” Laila Petrie, Cotton & Textiles Lead, WWF

Traceability

In FY 2016, IKEA sourced 131,000 MT of cotton and specified 82.2 per cent of sources in its sustainability report. In FY 2017, this increased to 145,000 MT. IKEA does not publish information on supply chain relationships for final products, fabric or yarn manufacturing.

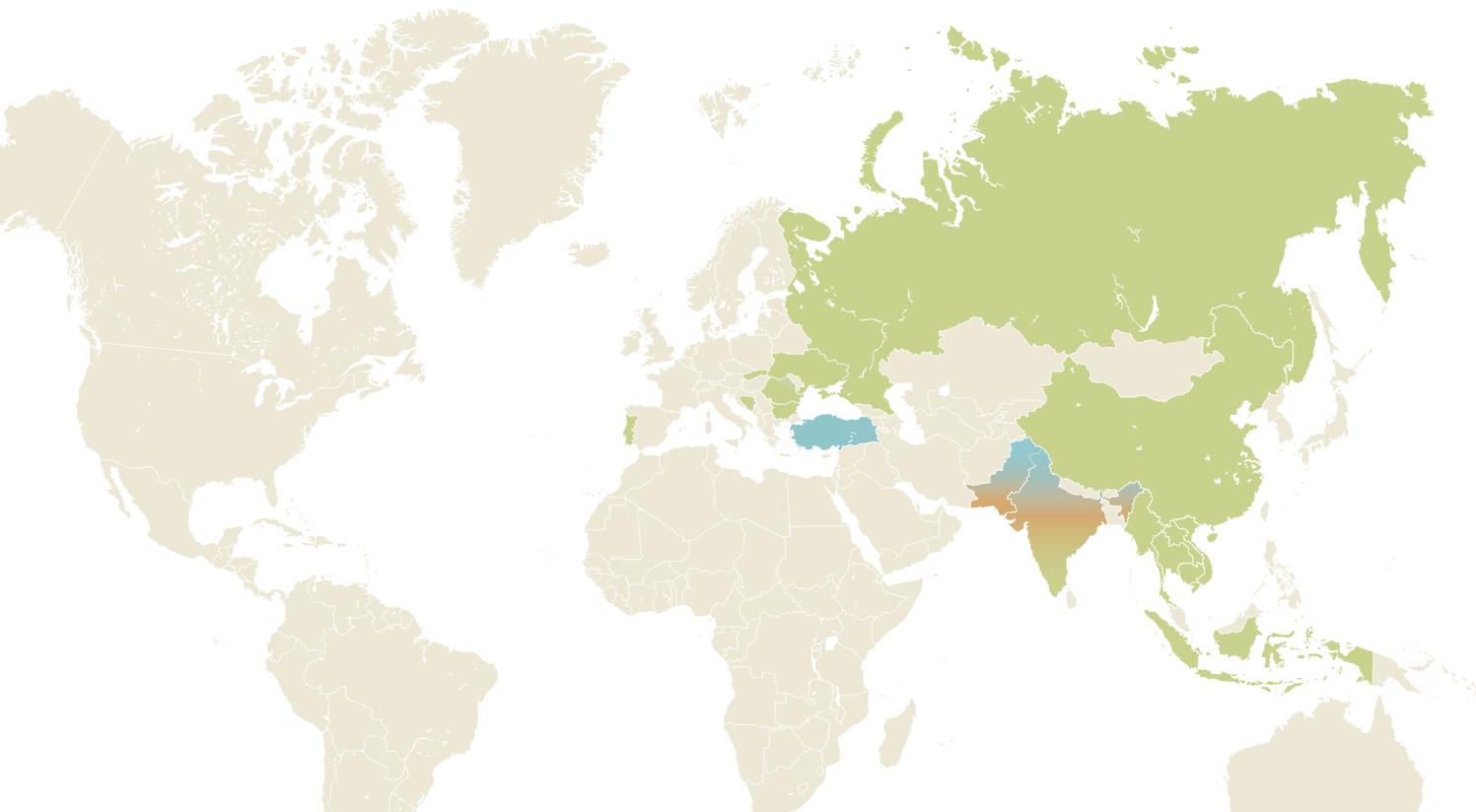
Beyond more sustainable cotton sourcing

Besides cotton, IKEA uses many other materials in its products. Each presents a unique sustainability challenge. Building on its target of sourcing all cotton from more sustainable sources, the company is now taking a wider perspective on material use and has set ambitious new sustainability targets.

“We reached our initial target of only using more sustainable cotton in all our products in 2015. Now we’re also looking beyond cotton at the whole basket of materials we use, and setting targets for circularity. Our ambition is to use only recycled and renewable materials.” Lena Pripp Kovac, Sustainability Manager IKEA of Sweden

IKEA and WWF partnership for change

WWF and IKEA have worked together since 2002. Today the partnership runs projects in 17 countries supporting responsible forest management, more sustainable cotton production, and good water stewardship.



Countries where WWF and IKEA are working with forests:
 Bosnia-Herzegovina, Bulgaria, Cambodia, China, India, Indonesia, Laos, Myanmar, Portugal, Romania, Russia, Slovakia, Thailand, Ukraine and Vietnam

Countries where WWF and IKEA are working with water:
 India and Pakistan (water impact reduction)
 Turkey and India (multi-stakeholder collective action)

Countries where WWF and IKEA are working with cotton:
 India and Pakistan

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