February: Cotton – from source to shop



Aims

This month, two multi-national companies brought a business perspective into this debate. Cotton was used as a case study to look at how companies respond to the demands being placed on their supply chains and the greatest challenges they can see on the horizon.

We co-hosted this meeting with the Natural Capital Leaders Platform at the Cambridge Institute for Sustainability Leadership (CISL) who are developing a cotton focus for their Platform Members. This work also relates to the ESRC funded Nexus Network, which CISL is leading in collaboration with the University of Sussex and UEA.

<u>Witnesses</u>

Dr Chris Brown is the Sustainable Business Director at Asda, a British-based, American-owned supermarket chain. In 1999, Asda became a subsidiary of the American retail company Walmart and today is the UK's second-largest chain by market share.

Dr Helen Crowley is the Head of Sustainable Sourcing Innovation at Kering, a family-controlled, listed company and a world leader in apparel and accessories, which develops an ensemble of powerful brands. Focused on a single business, they design, manufacture and market desirable products across two fast growing segments: Luxury (including Gucci, Stella McCartney, Saint Laurent and Alexander McQueen) and Sport & Lifestyle (including Puma, Volcom, Cobra, Electric and Tretorn)

The challenges for cotton

The two witnesses highlighted the following challenges for the cotton and clothing industry including:

Low customer awareness of sustainability and environmental impacts compared to food commodities

Supply chains are currently very opaque and its complexity makes it very difficult to trace were a batch of cotton is coming from

A lack of clarity about the impacts of different production systems (organic vs. 'better' vs. conventional)

The lack of availability of financing systems to smallholder cotton farmers

Organic cotton farming in general is declining as there is not enough support for farmers and although here is a significant premium for it but smallholder farmers are not receiving that premium.

Developing meaningful impact indicators: A reductionist focus on a particular issues such as food miles, organic to child labour makes it difficult to know how different aspects of the system connect together.

Questions generated by the open discussion included:

- Where do we leverage to make cotton production better, both for the environment and for the people who grow and harvest it?
- How can smallholder farmers get access to good quality seed and what are the best seed varieties to grow in different areas?
- How can we unpick supply chains and create new business functions that allow tracebility throughout the cotton supply chain from source to shop?
- Choices about whether to choose organic or GM cultivation will become increasingly urgent as competition for land increases and land quality decreases. Can we develop indicators to help us to determine the impacts of different cotton production systems on the environment organic vs. 'better' vs. conventional and to make direct comparisons between them?
- There are cost issues associated with organic cotton as it is more expensive than conventional cotton. What incentives would farmers need in order to grow it and how do these vary from one region to another?
- Could we open questions of sustainability out to think about whether a commodity like cotton is sustainable more generally, rather than just concentrating on cotton production?



|--|

Chris Brown	Sustainable Business Director at Asda
Dr Helen Crowley	Head of Sustainable Sourcing Innovation at Kering

Dr Chris Brown

Sustainable Business Director at ASDA

Chris is the Sustainable Business Director at Asda. Previous to this, Chris worked in Government before joining the Meat and Livestock Commission as Beef Strategy Manager. He moved into retail as Agriculture Technologist with Marks and Spencer before Asda as Agriculture Development Manager with a remit to develop Asda's strategies and activities across all sectors of agriculture. His role has now been extended to become Head of Ethical and Sustainable Sourcing covering waste and resource management, communications and sourcing.

e-mail: chris.brown@asda.co.uk

Asda

Asda is a British-based, American-owned supermarket chain, which retails food, clothing, general merchandise, toys and financial services. It also has a mobile phone network Asda Mobile. In 1999, Asda became a subsidiary of the American retail company Walmart and today is the UK's second-largest chain by market share.

For more information about Asda and sustainability: http://your.asda.com/sustainability

Dr Helen Crowley

Head of Sustainable Sourcing Innovation at Kering

Dr. Helen Crowley joined Kering as the Conservation and Ecosystems Services Specialist in November 2011. Prior to Kering, Helen was Associate Director at the Wildlife Conservation Society for 11 years. She has a background in field-based conservation and development projects particularly in Africa and Madagascar, as well as market-based conservation initiatives and designing corporate-NGO partnerships. Helen has also worked as a consultant to several corporations where she was responsible for helping them implement sustainability strategies. During her tenure at Kering, Helen has been advising and supporting Kering's Luxury and Sport & Lifestyle

brands with a focus on innovative cross-cutting sustainability solutions, including sustainable sourcing and manufacturing processes, to help guide the Group's overall sustainability strategy and programme implementation.

e-mail: helen.crowley@kering.com

Kering

A family-controlled, listed company, Kering is a world leader in apparel and accessories, which develops an ensemble of powerful brands. Focused on a single business, they design, manufacture and market desirable products across two fast growing segments:

Luxury: Gucci, Bottega Veneta, Saint Laurent, Alexander McQueen, Balenciaga, Brioni, Christopher Kane, McQ, Stella McCartney, Tomas Maier, Sergio Rossi, Boucheron, Dodo, Girard-Perregaux, JEANRICHARD, Pomellato, Qeelin and Ulysse Nardin.

Sport & Lifestyle: Puma, Volcom, Cobra, Electric and Tretorn

More about the Kering group can be found here: http://www.kering.com/en/group/about-kering

For more information about Kering and sustainability: <u>http://www.kering.com/en/sustainability</u>







000 KERING



Setting the scene

Dr Chris Brown is the Sustainable Business Director at Asda, a British-based, American-owned supermarket chain. In 1999, Asda became a subsidiary of the American retail company Walmart and today is the UK's second-largest chain by market share.

Dr Helen Crowley is the Head of Sustainable Sourcing Innovation at Kering, a family-controlled, listed company and a world leader in apparel and accessories, which develops an ensemble of powerful brands. Focused on a single business, they design, manufacture and market desirable products across two fast growing segments:

Luxury: Gucci, Bottega Veneta, Saint Laurent, Alexander McQueen, Balenciaga, Brioni, Christopher Kane, McQ, Stella McCartney, Tomas Maier, Sergio Rossi, Boucheron, Dodo, Girard-Perregaux, JEANRICHARD, Pomellato, Qeelin and Ulysse Nardin

Sport & Lifestyle: Puma, Volcom, Cobra, Electric and Tretorn

Questions

Both of them were asked a series of questions related to sustainability, risk and the future supply of cotton:

- 1. What have the threats and pressures on cotton supply meant for your business?
- 2. What do you perceive as the biggest risks to your business when considering the competing demands from food security, energy and fibre supply?
- 3. What does the cotton industry/your business need to know to secure its supply and what gaps and burning issues do researchers need to focus on?
- 4. What are the key drivers/barriers for change in the cotton supply chain?

Parallel Forum (24th February)

Each group had a facilitator and a note-taker and everyone spent 20mins in each one:

- Table 1: Focusing on cotton Dai Morgan and Bhavna Sharma
- Table 2: How models help companies to look at supply chains Liz Curmi and Milica Vasiljevic
- Table 3:
 Framing natural capital and climate change in a business context with Nikki Bartlett and Jon

 Green + Marina Romanello
 Green + Marina Romanello



Word Cloud

Created by using Word It Out - <u>www.worditout.com</u> – based on the transcript of the meeting (edited to exclude non subject-specific words).

certification ecologically companies varieties resources resource premium quality modification impacts biodiversity environment important closedloop producers pricing capital business systems chains global trying question cost water yield brands natural society apparel time good **produc** GM inputs UK risk India land Australia crops people Seed carbon livelihood loss used work market company argue vears footprint buy material demand recycling sues system use crop areas impact world discussion social needs profit problem sustainable different value product working conventional genetic sourcing growing sustainability debate commodities traceability account consumption

Introductions by the witnesses

Helen Crowley, the Head of Sustainable Sourcing Innovation at Kering

"We are far from being 100% organic in Kering, but it is something we are looking at moving towards."

There are two pillars of Kering's sustainability strategy

- 1) Public targets, aimed at making the business more sustainable
- 2) Environmental Profit and Loss EP&L accounting

Initially these two approaches were developed in Puma, and they have been expanded across all of their brands and include indicators of land use change, water use, water quality, green house gas emissions and the state of the soil.

Most of work with the individual brands focuses on how to reduce their materials sourcing footprint. In these conversations, she finds monetising and EPL an amazing internal change management tool as it allows her to show and talk about what sustainability means, create baseline meaning and context about what it means to the business.

Cotton is important to Kering because it is a core product across all their brands. Cotton also represents a significant part of their Environmental Profit and Loss accounts, having the greatest impacts on water use and GhG emissions.



The risks associated with cotton, such as volatility in price, the prevalence of child labour, farmer suicides, integrity and quality of the product and traceability of the raw material are all business risks which are common across all apparel companies. Ultimately, Kering want to reduce their impact and their philosophy on sustainability asks: where can we, as a company, create positive outcomes?

Organic cotton production accounts for around 1% of global cotton production and does not allow the use of any GM seed, synthetic fertilisers or pesticides. She sees organic cotton as the gold standard for ecologically sustainable production. Kering therefore came together with a small group of like-minded companies to develop their own Life Cycle Assessment so that they can compare conventional cotton farming and organic cotton farming. According to the latest LCA, all measures, including nitrification, GHG, water, ecological impact are all better in organic farms. The EP&L also clearly showed environmental benefits. Social well being and social value (organic cotton) are also both very important elements to consider and she argued that organic can help with those too.

Chris Brown: Sustainable Business Director at Asda

"Cotton is not the fore-front issue at the moment. However, we are interested in investing time and resources in it because we believe that it may well become significant in the future."

Asda is the largest retailer of apparel in UK based on volume through its George brand. They are aware of the significance of cotton as a commodity:

- 20 million tonnes produced globally by 90 countries
- Takes up 2% arable land the equivalent to 1/3 of the area of the size of the maize crop
- In Africa and Asia, its production is largely dependent on smallholder farmers 100,000
- Large scale production is more common in Australia and North America

Cotton production is rising and has doubled over the last 40 years to meet increasing demand:

- Cotton is traditionally a toxic, thirsty crop requiring a lot of water, fertiliser and pesticides
- 80% of cotton worldwide is now GM, with as much as 95% on the Indian sub-continent

Although the 'nexus' debate is traditionally food/fuel, he believes that because of the importance of cotton as a crop, the debate should be centred on food/fuel and fibre. In general, he tends not to talk about sustainability internally, but instead talks about land and resource stewardship.

If cotton is to become more of a forefront issue in the future, Asda will handle it based on the experience from other commodities, such as palm-oil and soy. This experience has shown that unpicking a supply chain and getting to know farmers and producers are key factors in ensuring a more sustainable and de-risked supply.

The challenges for cotton

The two witnesses highlighted the following challenges for the cotton and clothing industry:

Low customer awareness: Despite the importance and prevalence of cotton, costumer's awareness on the importance of sustainability issues with cotton is low compared to food commodities.

Supply chain traceability: In the past, Asda looked at avoiding buying cotton from Uzbekistan due to problems with child labour, but they had to retreat from that as it proved to be too difficult. This is partly because the supply chains are very opaque at the moment – it is impossible to trance were a batch of cotton is coming from. This is unsurprising as the supply chains have developed with the goal of efficiency, not traceability. But that can change if there is a will and reason to unpick the supply chains.

A lack of clarity about the impacts of different production systems: Asda doesn't hold views on which cotton production system is better (organic vs. 'better' vs. conventional), however Chris himself does not hold much respect for organic farming.

The lack of availability of financing systems to smallholder cotton farmers: One problem Asda recognises is the lack of availability of financing systems to small holder cotton farmers (to improve the agronomy practices, and overcome gaps between farmer costs and income). But unfortunately, until Asda gets into direct touch with their farmers, they feel there is not much they can do. In Chris's experience, drip-feed irrigation is too capital cost intensive for a commodity crop such as cotton. When drip-irrigation was put in place in Morocco, farmers transitioned from corn to horticulture, now producing vegetables and fruit. In his view, drip-irrigation is only compatible with high-value crops.

Organic cotton farming in general is declining as there is not enough support for farmers. There is a significant premium for it but smallholder farmers are not receiving that premium.



Developing meaningful impact indicators: When indicators are used, the reductionist focus on a particular issues, food miles, organic, child labour, then extremely difficult to know what effects that has on other aspects of the complicated system.

Their gaps and burning questions

- How can smallholder farmers get access to good quality seed?
- Looking at the best varieties to grow in different areas. If we are going to continue to grow cotton in India, what other locations are there?
- How can farmers best match growing cotton with other rotational crops?
- Integrity and visibility is needed throughout the supply chain and all actors need to be engaged in this discussion, including the farmers, spinners and ginners and retailers.
- How can we unpick supply chains and create new business functions that allow tracebility throughout the cotton supply chain from source to shop?
- There are cost issues associated with organic cotton as it is more expensive than conventional cotton. What incentives do farmers need in order to grow it and how do these vary from one region to another?
- Can we develop indicators to help us to determine the impacts of cotton production on the environment or will these in danger of being too simplistic?
- Could we open questions of sustainability out to think about whether a commodity like cotton is sustainable more generally, rather than just concentrating on cotton production?
- Given the world is the way it is, where do we leverage to make cotton production better, both for the environment and for the people who grow and harvest it?

Chris Brown is also keen to:

- Focus on natural capital sustainability (as opposed to social questions
- Be able to justify what production system to use and what approach to take based on evidence (organic being only one option there are also systems such as Fairtrade, Better Cotton)

Additional speakers adding their thoughts

Bryony Worthington (Labour Shadow Minister for Energy and Climate Change)

Although it seems to be a pre-set condition we'll be using cotton and production will stay the same, we should also ask:

- What is the trend in use and is it predicted to continue?
- What other fabrics can we use to replace it?
- What is cotton going to be used for in the future?
- How can we close the loop recycle and get the maximum benefit out of that?
- How can we look at the entire supply chain for cotton
- What impact is cotton production having on food production or energy provision?

Lydia Smith (NIAB Innovation Farm)

Quality of production: She found it saddening that discussions that look at sustainability of cotton production tend to be polarised into talking organic production and conventional production in very black and white terms.

The role of Genetically Modified cotton: There are two transformations.

- 1) BT cotton contains a small amount of chemical coming from a bacillus preventing insect predation and reducing pesticide use
- Roundup ready allows the plants to withstand Roundup herbicide. Cotton growers can therefore spray their fields with Roundup herbicide to control weeds without damaging the cotton plants and need to use less herbicides/

Although organic farming reduces pesticide and herbicide use, both of these types of GM cotton do as well. For example, in Australia, 100% of cotton is GM and farmers have reduced their pesticide and herbicide inputs by 80% and biodiversity is increasing.



Low input farming is another approach and the Soil Association has been involved in the certification of low input farming in the UK. She argues that this results in input reductions, increases in biodiversity and toxic reduction.

Quality of cotton: The genetics of cotton varieties are more important than the way you drive the agronomy of cotton. Plant genetics should therefore be where you go to create higher quality cotton.

Howard Griffiths

Is there really a conflict between what companies who sell cotton products want and what the people who are buying them want? As with any debate it may just come down to cost. How much can you charge for your product? He can imagine that when you go to the supermarket in 20 years, there will be many types of cotton offered - organic, non-organic, Gm wheat - founded on ideologies rather than practicalities.

Whether we will be growing cotton in 20-50 years depends on the extent to which we can improve the agromony of water use and salinization.

Choices about whether to choose organic or GM cultivation will become increasingly urgent as competition for land increases and land quality decreases.

Key points people took away from the witnesses in the Original Forum

Organic cotton versus other production methods and certification

- There also seemed to be another elephant in the room re: organic cotton vs better cotton the two speakers seemed to fundamentally disagree here but didn't want the conversation to be overtaken by this debate. Chris highlighted the need to focus on the "impact" of cotton. Perhaps the topic for further research?
- Aliso Smith found Helen's assertion of organic cotton being the "best" unsatisfactory given that the
 system she described is so limited. As Lydia Smith said, it seems very unfortunate that people who are
 clearly passionate about environmentally friendly methods of agriculture are ideologically opposed to GM
 (or other technological approaches to plant breeding such as TILLING), even if the methods are shown to
 reduce inputs. The Bt example is particularly ironic since the Soil Association promotes spraying it on
 organic crops as a 'natural' insecticide.
- Since Helen was so certain organic cotton is more sustainable, I think it would be important to establish if
 this is realistic goal or an irrelevance. Organic farming is only a few % of current production. What %
 could convert to organic? Much cotton is farmed in areas where it would not be viable, or at least
 productive- inefficient rotation crops or inability to fertilise organically. I suspect actually very little cotton
 could be grown with such positive environmental credentials as the small amount that is currently grown.
 In that case, we should focus on the more important question of minimising the impact of the
 conventional farming- through minimisation of demand (c.f minimising food wastage and low energy light
 bulbs), and use of best practice farming methods -GM, drip watering.
- Does certification of the product actually prevent the development of intermediate production systems that might combine best aspects of the organic and conventional systems?
- Should we focus on organic cotton when most of the population uses conventional cotton? If yes, how slower organic cotton grows and are there any additional risks compared to conventional cotton?

Sustainable consumption versus reducing consumption

• Sue raised "an elephant in the room" – sustainable consumption vs reducing consumption? Helen said they focus on working to improve their production system and make better products, less so/ not on changing people's behaviour, where people make their own individual choices.

Lifecycle analysis and supply chains

- Finally (a fourth point I realise...) I really liked Sue's comment on the "secret life of a cotton t-shirt" it could be a great concept for an article. That is the need to understand the lifecycle of cotton products how does it come into being and how does it get thrown away? .eg. worn out or is it that it is not "cool" to wear it anymore?
- My main take-away was that there is complexity around each step in the chain and opportunities for unwanted feedback and side effects. I suspect the answer relates to a combination of intelligent proselytising for sustainable solutions, good intelligence about each point in the chain and its lateral links to other issues, and some sort of Sustainability Assessment on every step, including questions about the secondary relationships of the activity concerned to others. All of which is very heavy duty, so a further element needs to be a sort of sustainability entrepreneurialism to provide the energy and impetus



needed. Taxing "bads" might help to drive the process along, if vested interests (cotton-vested interests? sorry) can be overcome politically.

- The issue about financing small scale producers to become more efficient and to develop separate supply chain processes. I would have expected that institutions could be developed to allocate finance for this so is it prevented by high transactions costs or is small scale simply not competitive.
- Is it true that the price premium doesn't get down to the initial producers. Is this an issue of a lack of competition in the supply chain or something else?
- Unfortunately we didn't have time to talk about the workers in the cotton industry, the working conditions in East Asia and children involvement in the production chain.

Economic costs and incentives

- Do we really need to rely on valuations of external costs that are derived without knowledge of the methodology and assumptions used?
- Who absorbs the risk in the production chain and who has a profit elasticity according to the cotton prices set in the stock market? There are three different components here. I suppose that the risk is absorbed by the producer (see cotton producer suicides), the profit elasticity will be found in the final product and especially in expensive brands and the stock market price is a parameter that effects every part of the process.
- Interesting that Helen was incredibly enthusiastic about monetising impacts as an internal management tool and create a baseline understanding for sustainability in the company

Summaries of the group discussions in the Parallel Forum

Group 1: Cotton and supply chains: (by Bhavna Sharma)

To develop sustainable cotton, a clearer picture of all aspects of production is essential to reduce impacts and increase the sustainability of the industry. To drive corporate change toward sustainable production, the benefits and opportunities for industry need to be developed. Companies need to define their vision of what is sustainable in terms of the cotton industry. Based on these principles and criteria, researchers can develop metrics and new methods. Current sustainable production is limited to a niche scale and large advances in all aspects are needed to scale up. While the cotton industry is well established, the methods of practice are not widely known and need to be evaluated and standardised within the system. With an evidence based argument, new standards of practice can be promoted and adopted.

Models for sustainable cotton should explore the multi-crop and crop rotation to optimise methods of production in terms of seeds, irrigation, chemicals, and land use. Additional areas of research include development of productivity predictions to explore the required inputs and ideal geographical locations for growth. Current leading producers include China, India and the United States, and there is a lack of understanding of how climate change may affect the yields in these regions.

To reduce risk and increased yield, a global trend is emerging to utilise genetically modified seeds, with the majority of cotton produced today being genetically modified. Further research and identification on the types of seeds used and their associated benefits should be conducted. Comparison of the current production methods available (conventional, GM, and organic) will provide the advantages and disadvantages, as well as serve to evaluate risk. The producer has limited profits and assumes all risk, representing the weakest part of the supply chain. Further understanding of the economics of the different types of production and the potential impacts of climate change are needed at both a small and large scale.

To evaluate the production process, transparency is needed, not only for accountability but also for researchers to effectively develop alternative solutions. Supply chain traceability would allow for evaluation of environmental and economic issues. Furthermore, the information collected would allow for development of certifications. Focused on risk, sustainability and profit, models will reveal critical nodes and where metrics can be applied. While it may be easier to account for some parameters and effects (i.e. resources, profit), social aspects may be harder to capture. One billion people rely on the cotton industry and small changes in the production have the potential to impact approximately one hundred million farmers and a quarter of a million workers. Modelling must also focus on the social and economic constraints that need to be considered while increasing the sustainability of the field. Increased transparency will also allow greater understanding of the natural capital costs. Water is the major input in cotton production and represents the highest cost in terms of natural capital. The consumption of resources is dependent on the end-product due to the differences in



manufacturing and the efficiency of the process. A resource map would provide comparison of the utilisation of resources and indicate the efficiency of the different processes and associated impacts.

Cotton represents 40-45% of the EU textile market and the largest global consumer is China. While alternatives have been developed (i.e. rayon, viscose, Lyocell) the processing methods do not necessarily produce a more sustainable product in comparison to cotton. Demand is a complex topic and should investigate the types of applications or products, consumer awareness and behaviour. Consumer demand in driving the sustainability is increasing, however the scope is limited to specific groups and interests. In effort to achieve broader impact, the industry should focus on high street and develop commercial hooks that will drive sustainable cotton production. For example, the business case for sale of both organic and conventional cotton products, which provides the consumer with options. Additionally, extending the lifespan of cotton products would be a more effective use of resources, and could be reflected in increased cost rather than the cheaper but less durable model for products. Recycling of cotton products is a niche market. Challenges include the need for processing to address mixed materials, embedded pesticides and other chemicals. Furthermore, the processing results in shorter fibres which have limited applications. Development of new processing methods is necessary to develop a market for recycled material.

Group 2: Framing Natural Capital and Climate Change in a Business Context (by Jon Green)

The private sector is made up of a multitude of actors, all with different goals and values. Within it, there are many sectors, companies and individuals all very different. The language of someone working in procurement is likely to be very different to that of someone in the sustainability office, even within the same company.

One of the most effective ways that CISL engages with business and natural capital is by looking at impacts and dependencies through the lens of a single commodity supply chain. This grounds the discussion in a tangible product and can be effective in highlighting, particularly, the risks, vulnerabilities and costs associated with degraded natural capital.

Language

There is a drive within engineering to move from 'sustainability' to 'resilience'. However, resilience still suffers from problem of meaning different things to different people (e.g. engineering resilience vs ecological resilience). But, does resilience deal so well with efficiency (i.e. does it build in more redundancy than is necessary)? If so, how can this be dealt with under current economic models.

Private sector have used changes in terminology to gain traction. For instance, rather than referring to "energy efficiency", Velus Windows are now selling by referring to "warm and healthy homes".

Businesses should care

If natural capital is truly important in providing material benefits to a company, then they surely would be interested. So if there is a good evidence base that sustainable rubber production is linked to higher profits, then businesses will act..no?

BUT:

- 1. Companies may simply invest elsewhere (i.e. hedging their bets/diversifying could increase their resilience and financial sustainability, but won't contribute to improving their environmental sustainability/performance).
- 2. The timescales for loss of benefits may be too far off. Short-termism can be a problem. Businesses are worried about acute risks slower or longer-term risks do not have such traction. Accounting has an important role here. Accountancy has driven efficiency decisions, but if timeframe is <1year, then this will effect *what* efficiency measures can be invested in.
- 3. So long as businesses are doing as well as competitors, then there is little incentive to act.

What motivates businesses to (e.g.) join a certification scheme?

A multitude of reasons, including:

- 1. Individuals within a business that genuinely care
- 2. The history/longevity of the company can affect sustainability planning
- 3. Ownership and structure
- 4. Shareholders
- 5. NGOs especially for brand image
- 6. Leadership
- 7. Financing responsible financing may become a more important factor as lenders increasingly require evidence of good natural capital management. Financing may also be a mechanism by which consensus at management level can be translated to action at ground level with business units.



It isn't always just about profit maximisation and to suggest that is naïve and can offend/alienate some business people.

Greenwashing

How much do companies care about natural capital vs. actually just implementing because worried about their image. Does this matter if greenwashing is actually resulting in a positive impact?

Hydrocarbon industry

Does not really need to invest in brand image around natural capital because:

- 1. Hydrocarbons are so integral to our economies and lives
- 2. Brand image has little to do with the choice that people make. Largely it is to do with price.
- 3. This, then, drives the culture within businesses.

Roundtable for Sustainable Palm Oil example

Consumer demand is not meeting supply – only 50% of product was sold at higher premium. This links to:

- 1. Whether price premiums actually obstruct the mainstreaming of more sustainable methods that could bring whole industry along (example of Better Cotton Initiative, which absorbs the higher costs of production in order to maximise demand for BCI cotton)?
- 2. Whether companies, who are clearly good at manipulating consumer demand, should be doing more to encourage change in consumer behaviour towards demanding higher sustainability? Currently companies are not good at recognising this and proactively changing demand.

More thoughts on demand

Demand is crucial to the solution (e.g. of meat consumption and climate change). However, this is not necessarily a problem for business. Needs to be reframed as an opportunity to do other things. How do we help businesses/individuals to find their role in the solution (rather than just confrontation).

Effecting change

We need solutions instead of just problems. If we know what needs to change, then:

- 1. We need to identify what motivates business to change
- 2. We need to provide alternatives

But it isn't always win-win. Who is responsible when someone loses. How do we manage this. When there are going to be losers (e.g. decreased profits), companies are keen to engage on (at least) a level playing field so that their competitors face the same constraints.

Collaboration can also be a useful tool, sometimes private sector collaborations can drive policy change. However, competition law can make this difficult, particularly when dealing with quantities and prices (danger of creating a cartel).

Is change driven at the bottom or the top of a supply chain? Enhanced sustainability could be pushed up from the bottom or pulled up from the top. Most examples appear to be the latter. Linked to bottle-necks/power. Tend to be fewer retailers/commodity traders. Cooperatives may help if producers want to push change from the bottom, but much harder to mainstream.

What are the biggest drivers for business?

Arguably, companies are more interested in increasing revenue (new markets, new products) than increasing efficiency (which can also reduce costs), unless there are risks to having high costs or unless the company has limited resources (e.g. during financial crises etc).

Group 3: The role of models in visualising and understanding supply chains

[notes to come]

