



The challenge of a changing climate

ASDA



At Asda we're committed to delivering great value and quality to our customers, while making sure we treat suppliers fairly and reduce waste and harm to the environment.

We have an enduring and heartfelt commitment to sustainability, which goes hand-in-hand with our promise to deliver low cost every day and our mission to be Britain's most trusted retailer.

Our programme aims to bolster Asda's resilience to the risks of climate change. We've carried out what we believe is a wide ranging analysis of long term climate trends and the implications for our supply chains and business operations. Now we're going to implement a framework to adapt to these.

We know that this century will see changes in climate that we have to deal with; in fact some of these impacts have already been seen, with extreme weather events disrupting communities, infrastructure and businesses right across Britain.

The role of responsible business is to adapt to change, help others to do so, and work with suppliers and customers to make sure we cut carbon emissions and deliver a more stable climate future for our children.

Asda is proud to take a lead.

Chris Brown,
Senior Director, Sustainable Business, Asda



What's going on?

Asda is committed to saving our customers money, every day. With this in mind, and in the face of a changing climate, we took the decision to examine the drivers that underpin our supply chain – the things that affect the price, quality and availability of our products – and how future changes in climate might impact upon them.

Working with specialists from PwC's climate change and risk assessment teams, we have mapped our climate risks and developed a 'Climate Adaptation Framework'. This has enabled us to find out to what extent our fresh produce, processed food lines, distribution systems and stores will be affected by climate change.

We believe it's the UK's broadest study on the future impacts of climate change on a multinational supply chain.

Bringing it home

No longer is climate change a subject just for environmentalists, it is already having an impact on businesses around the world and across all sectors.

In fact, in 2011 economic and insured losses caused by natural catastrophes reached an all time high, with extreme weather events accounting for over 90% of all recorded disasters.¹ Just think back to the start of 2014, when extreme flooding caused severe problems across much of the UK.

Here's a snapshot of some of the impacts the climate has had on the food business around the world:



And what exactly is happening? Extreme storms, flooding, drought... it's a taste of things to come, and global food security and critical infrastructure are set to suffer unless we put serious efforts into adaptation.

- Record losses from global disasters (\$148 bn)¹
- Global agribusiness and food business, Bunge, lost \$56m in a quarter due to droughts in its main growing areas in 2010¹

- UK wheat crop one of the worst for decades²
- The US Government slashed its forecast for drought-hit corn production by 17%, raising fears of a new global food crisis³

- Weetabix halts production of some breakfast cereals as a result of poor quality wheat harvests⁴
- Freeland NL source iceberg lettuce from the US for the first time in 30 years due to lack of supplies from Spain and the Netherlands⁵

1. Cheeseman, G. M. 2012. Climate Change Poses Many Business Risks. Triple Pundit. 27 July.

2. BBC News. 2013. British farmers face worst wheat harvest for a decade. 09 August.

3. Macalister, T. 2012. US slashes corn production forecast as drought raises crisis fears. The Guardian. 10 August.

4. Neate, R. 2013. Weetabix supplies hit by dismal harvest. The Guardian. 22 April.

5. Fresh Plaza. 2013. Iceberg lettuce in short supply, Freeland to import from Egypt and USA. 08 May.

We're on it...

Here at Asda, we have recognised the potential impacts from a changing climate and have already started working on our resilience strategy. In fact, we're leading the way in terms of climate resilience.

In 2014, we're taking everything we've learnt from our research and analysis and bringing the issues to the fore across our stores, depots, suppliers and stakeholders.



2012

2012

- Mapped our global produce supply chain
- Prioritised our thinking that issues are affecting us now, not 10 years in the future

2013

Delivered Climate Resilience Framework to:

- Map risks across our food business and our own UK operational sites
- Direct and signpost future activity across potentially thousands of product
- Started colleague engagement on operational risks with real data
- Initiated water scarcity project with CPSL

2014

- Working with the Environment Agency to test their Climate Ready Supply Chain Guidance
- In-depth analysis with Walmart and IPL on several specific fresh product lines
- Starting to shape the debate with key stakeholders

2014

- Leverage SSE further to drive direct action on the ground with growers
- Deep diving into key affected stores
- Carry out study across general merchandise



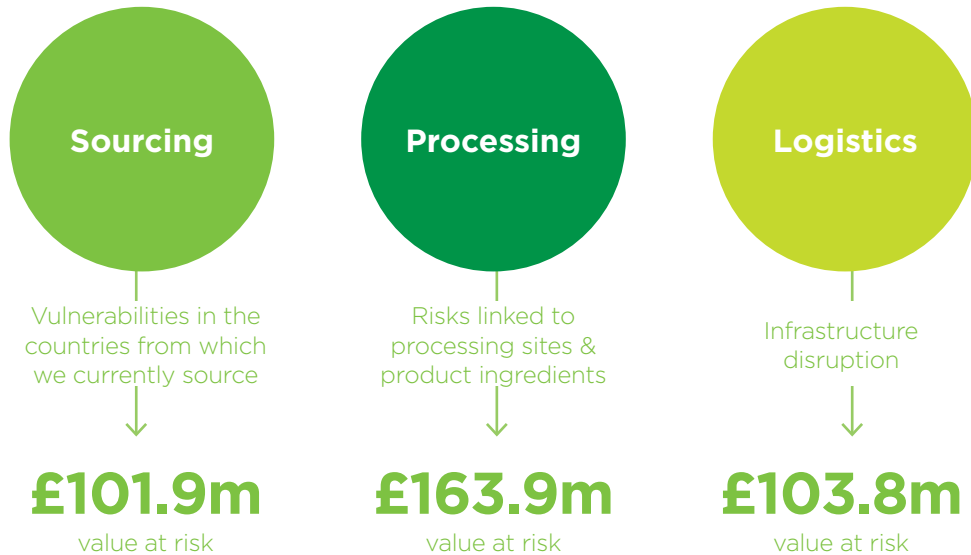
5%

Our research has found that only 5% of our fresh produce will not be affected by changes in the climate.

Evaluating risk

Thanks to our work to date, and largely due to the Climate Adaptation Framework we developed with PwC, we have mapped the risks that climate change poses across our entire trading operations.

This lets us see what lies ahead for sourcing, processing and logistics in the face of IPCC (Intergovernmental Panel on Climate Change) projections for 2 and 4 degree global temperature shifts.



What does it mean?

We know there are some food and product ranges that are already at risk. And we know that there are some that will fall into that 'at risk' category with a changing climate.

Risks to food



Whether food sourcing, processing or transportation, there is a risk to all aspects of our operations - just how much this could be is well into the millions of pounds. We looked at a sample of our products, which allowed us to draw informed conclusions about our wider portfolio.

What happens next?

Knowing what is at risk means we can look at more detail into the most vulnerable products, as well as developing a climate awareness programme for category directors where high risk has been identified.

Risks to stores and depots



As part of the PwC study, 23 stores and 19 distribution centres were analysed for temperature, precipitation and flood risk.

As well as the risks posed by climate change, we also examined the risk associated with the locations of our stores and distribution centres.

What happens next?

We have identified those most at risk and are now looking further into the individual situations, as well as liaising with the Environment Agency to conduct full flood risk impacts for all our stores and distribution centres.

All this information will help us to develop plans to make sure we can continue delivering the service our customers want and need in those areas.

Spotlight on our suppliers

Alongside the work we're doing to become more resilient to climate change, our suppliers are also developing some innovative strategies.



Wyke Farms

Somerset-based Wyke Farms is the largest independent cheese maker in the country. It's also the first cheddar brand to be 100% self-sufficient in green electrical energy.

As part of Wyke Farms' commitment to working in synergy with its surroundings, it has built an on-site biogas plant, installed solar technology, reduced packaging, set up a waste water recycling system and uses electric vehicles to reduce its impact on the environment.

The largest investment was the biogas plant. It is made up of three 7,000m³ digester vessels, which convert all biodegradable waste from the farm and dairy into energy. People are also able to take a look around the plant with a visitor centre and guided tours – it's all about passing on knowledge and helping others to be more sustainable.

Savings of over £1mpa in energy costs.

Saving over 5m kgs of new CO₂ per year.

Re-using 85% of waste water.

Zero road traffic and haulage costs associated with waste removal.

The biogas plant produces heat for the dairy, in addition to producing the power.

Phase 2 of the biogas plant is underway and expected to save and generate up to £2m of biogas per year – effectively meaning Wyke Farms can operate 'off-grid'.



2 Sisters Food Group

2 Sisters Food Group faced a challenge at its Carlisle factory with water being wasted during the operation of a potato processing system. Water for cooling products was being supplied in greater quantities than actually needed. Not only did this mean water was wasted, it also created excess effluent, which was costly to treat.

The solution: sub-metering was installed on equipment and water usage was monitored to establish the optimum flow required. The 2 Sisters team then developed a control system to deliver the exact quantity of water needed. This system was built by site engineers in partnership with a local company and ABB Instrumentation, and installed on site.

The system was so successful that 2 Sisters ordered four more to cover other similar equipment on site.

Five initial control systems reduced water consumption and effluent production by 25.6% per tonne of finished product.

The control system is now installed as standard on any new equipment requiring a specified volume of water.

Internal staff played a key part in assessment and design.

Key to success was the engagement and involvement of people who maintain and operate the site.

ABB Instrumentation believes it's the first time this type of system had been used for this application in the UK.

So, what are we going to do?

Our response all depends on the severity of risk...

High climate risk area?

- Consider the other risks alongside climate change, and develop an appropriate response.

Medium climate risk area?

- Highlight a mix of simple measures and alternative crops.
- Develop partnerships to reduce risk.

Low climate risk area?

- Help to find simple measures to help farmers adapt.

Working with our suppliers

We're going to work closely with our suppliers on Asda's Sustain & Save Exchange and develop a Working Group to identify solutions, strengthen their resilience and adapt to a changing climate.

Working with our partners

We're also working with leading organisations in the field of climate change. We're the lead business partner working with the Environment Agency to test the Climate Ready Guidance with our suppliers; and we're continuing our involvement with the Cambridge Institute for Sustainable Leadership on the East Anglia water scarcity project.

The work we have done to understand the risks for our food supplies, processing, logistics and distribution centres has already been invaluable.

We are now looking to repeat this study for our stores, general merchandise and home shopping.

This will enable us to create a more complete picture of the risks of a changing climate on all our operations.



About Asda

Founded in the 1960s in Yorkshire, Asda is one of Britain's leading retailers. It has 180,000 dedicated Asda colleagues serving customers from 580 stores.

Its main office is in Leeds, Yorkshire and its George clothing division is in Lutterworth, Leicestershire.

More than 18 million people shop at Asda stores every week and 98% of UK homes are served by www.ASDA.com.

Asda joined Walmart, the world's number one retailer, in 1999.

Find out more about sustainability at Asda:
your.asda.com/sustainability