

Resilient Supply Chains

Farmers & Food Industry Tackle the Shared Challenge of Climate Change

A Strategic Dialogue | Oct 19th, 2015 | Grand Connaught Rooms, London, UK

Introduction

On October 19th, 2015, industry leaders and other stakeholders participated in the strategic dialogue *Resilient Supply Chains: Farmers & Food Industry Tackle the Shared Challenge of Climate Change* in London, United Kingdom. The objective of the event was to raise awareness of the concrete and near-term climate change impacts on food companies' supply chains and highlight possible pathways toward strengthening resilience. The Strategic Dialogue identified opportunities to increase the resilience of smallholder farmers in developing countries, a key component of building supply chain resilience. The event focused needed attention on the immediate business relevance of climate change for the food industry and the business rationale for investing in resilient supply chains.

Co-organized by the World Bank, the International Finance Corporation (IFC), the UK Department of International Development (DFID), the World Business Council for Sustainable Development (WBCSD), the Swiss State Secretariat for Economic Affairs (SECO), and the Ministry of Foreign Affairs of the Netherlands, the Strategic Dialogue brought together more than 180 participants, including private sector representatives (mostly procurement and supply chain management professionals, as well as sustainability experts), farmers, development partners, and other stakeholders, including a number of UK-based NGOs and academics.



Picture 1 & 2: The Strategic Dialogue Resilient Supply Chains Farmers & Food Industry Tackle the Shared Challenge of Climate Change held on October 19th, 2015 at the Grand Connaught Rooms in London, United Kingdom.

Short Term – Income and Bottom Line Implications of More Volatility

Opening Remarks, David Kennedy, Director General, UK Department for International Development

David Kennedy, Director General, UK Department for International Development, delivered the opening remarks highlighting that investments in the agricultural sector are expected to increase, and that they represent a great opportunity to increase productivity, to develop markets, and to reduce poverty—an opportunity in which the private sector has a central role to play along with other actors. Kennedy explained that agriculture and activities related to agriculture are central to economic development, since 70% of the world population lives in rural areas and engages in agriculture, often in areas where productivity is low and links to markets are weak.

Such challenges can however be turned into opportunities to boost incomes and tackle poverty, with opportunities increased tenfold when links between farmers and local, national, regional, and international levels are strengthened. The business opportunity is clear not only when looking at the African food market, which currently represents \$300 billion and is expected to expand to \$1 trillion in the coming years, but also when looking beyond developing countries with a world food market worth \$12 trillion. Because global food demand is increasing while supply is challenged, particularly in context of climate change, Kennedy stressed the need to unlock yield gain potential to fill the gap. He explained that it is not just about poverty reduction but also about business opportunities, emphasizing that it is critical for the private sector to unlock that dynamic at every level, and for investors to work more closely with smallholders. By building storage facilities and value add processing facilities, the private sector will have a leverage effect and move food to markets all the way to retail. Not only does it make sense from a business standpoint but it also makes sense to do so in a socially and environmentally responsible way.

Emissions from the agricultural sector account for 10% of national emissions in the UK. While mitigating emissions is key to reducing temperature increases, Kennedy pointed out that we also need to prepare and adapt agricultural practices to a warmer world by increasing energy efficiency, improving water use, and building energy efficient infrastructure. When making growth diagnostics for regional and specific countries, agriculture is coming out as a key area of focus. Investments in the sector are expected to increase, and represent a great opportunity to increase productivity, to develop markets, and reduce poverty. Responsible investments represent a great opportunity to ensure this triple bottom line.

Keynote: Farmers, Food Industry & Climate Change, Ron Lewis, Senior Vice President, Supply Chain for Coca-Cola Enterprises, and previously Chief Procurement Officer of The Coca-Cola Company

Ron Lewis, Senior Vice President at Coca-Cola Enterprises delivered the keynote speech. Mr. Lewis stressed the opportunity for the private sector, civil society, and the public sector to work together. He highlighted the challenge of feeding the planet's 7 billion people, of which 2 billion are undernourished and 2 billion are over nourished, while too much food is thrown away. With population growth, he reminded the audience that we will need twice much food by 2050 compared to today, and that doubling output is a daunting challenge. Mr. Lewis was optimistic that these challenges could be overcome with strong collaboration from the private sector, civil society, and the public sector.

Collaboration is needed to deepen relationships within the private sector to leverage existing standards (e.g., Rain Forest Alliance, Fair Trade), and to make it simple and convenient for all stakeholders to mainstream standards. Lewis emphasized that everything we need comes from farming communities and how essential it is

to work together with farmers. One good practice example of working together with farmers is Project Unnati in India, which is promoting large-scale adoption of ultra high-density farming practices leveraging drip irrigation. The project encourages sustainable, modern agricultural practices and has helped double mango yields, thereby increasing farmer incomes. Lewis also described Project Khula in South Africa, for which the Coca-Cola Company and WWF have partnered with a local growers association to strengthen and expand collaboration between commercial sugarcane growers and previously disadvantaged smallholder farmers. Coca-Cola has also partnered with TechnoServe and the Bill & Melinda Gates Foundation on Project Nurture, which aims at identifying new market opportunities, improving productivity and developing strong farmer business groups.

Climate change is no longer a debate. There is rather consensus that we all have a role to play, from producers who are adapting, innovating, and recognizing what is at stake, to companies and consumers ready to mainstream good standards at the end of the supply chain. One of the best ways to collaborate with a range of partners beyond communities and to balance demands beyond specific supply chains is through strategic partnerships. In order to get people on board, Lewis argues that we need to foster this new way of doing business. Citing the Citibank Resilient Finance Program, and the work Coca-Cola does with the British government and other corporations, Mr. Lewis emphasized how financial and development partners are essential to linking large corporations to farmers. By extending this triangular approach further down the supply chain, it is possible and highly desirable to leverage strong credit ratings throughout the value chain to extend finance to all.

Introduction: Agribusiness Supply Chains Under Increasing Pressure, Marc Sadler, Adviser, Agricultural Risk and Markets, The World Bank

World Bank Adviser Marc Sadler welcomed participants to the Strategic Dialogue and outlined key issues. At the top of the list is how to feed 9 billion people by 2050. We need to consider that today's consumers are not the same as 1980s consumers. They are wealthier, with more power to influence, and they are eating more animal proteins. To adapt, cropping systems need to produce much more feed to scale up production of animal proteins. Sadler stressed that we have reached a tipping point, which will change the global story of agriculture. He explained that Western agriculture was geared to feed Western consumers, and that the dynamic is shifting to Asia and Africa. Adding climate change to the picture, supply chain disruptions are becoming more frequent, while our ability to manage risks has declined.

Under a scenario of a 2-degree to 4-degree temperature increase, production systems will not be able to meet our future needs. In 2012, the corn crop was decimated but drought was not really the problem; rather, it was the result of extreme high temperatures during the crop's critical maturation period. Giving the example of Tysons, Mr. Sadler explained that stock prices fell precipitously when investors shorted corn stocks. He asked how to manage such challenges in the face of growing costs structures and increasingly price sensitive consumers.

Considering carbon emissions, Sadler explained that the absence of changes in agricultural practices - maintaining business as usual—would account for 70% of emissions in a 2-degree world. All other sectors, including manufacturing, are working on reducing their emissions. The agriculture sector is lagging behind and needs to catch up. Sadler pointed out that legislators will be pushing from behind and that this is not only a developed country issue as changes are also coming from the developing world.

According to Sadler, the challenge of climate change and its impacts on agriculture can be overcome with three simple solutions: 1st) raising productivity, 2nd) investing in resilience, and 3rd) reducing the carbon footprint.

Climate change needs to be more connected to the bottom line of food businesses, and the public sector has a role of connector to play in this regard. Climate change will heavily impact key supply chains, hence the need to build resilient supply chains. If not, the systems will fail, and farmers will fail. Mr. Sadler acknowledged that this conversation is challenging but necessary to drive behavioral changes. He concluded his remarks on a hopeful note that more and more corporations, pushed by equity markets and regulators, understand the scope of the challenge and are starting to take action.

Panel Session: Production Losses and Supply Chain Disruptions Driven by Climate Change Induced Volatility

- Panelists:**
- Biswaranjan Sen, Vice President Procurement - Chemicals, Unilever, and Co-Chair, Roundtable on Sustainable Palm Oil (RSPO)
 - Chris Brett, Senior Vice President, Head of Corporate Responsibility & Sustainability, OLAM
 - Chris Brown, Senior Director Sustainable Business, ASDA
 - Daniel Gad, Owner and General Manager, Omega Farms Plc.
 - Fred Yoder, Farmer, Plain City, Ohio, US, and White House Champion for Change
 - Trevor Maynard, Head of Exposure Management & Reinsurance Team, Lloyd's of London

Panelists discussed current challenges, strategies, and costs related to making agricultural supply chains more resilient to climate change-induced amplification of weather variability. Some central themes across the discussion highlighted a shared recognition that there was no silver bullet, that adaptation and mitigation investments need to be driven by the right economic incentives, and that stronger resilience will come only via collaborative efforts and an equitable sharing of associated costs.

Panelists agreed that most farmers are not in a position to absorb the costs of adapting their production systems; but neither can the private sector alone. Finding ways to incentivize farmers via certification (e.g., organic, sustainable production), ecosystem services (e.g., REDD+), and similar mechanisms is important but these are costly and difficult to implement in practice. Consumers are not always ready to pay resulting price premiums for a more sustainable or safer products. Thus, cost-sharing arrangements are important and this is where the public sector can play a strong role. One example is a USAID-backed initiative to set up needed soil laboratories in Cote d'Ivoire and elsewhere in the region to support ongoing and future research. Policy makers can also help level the playing field through smart regulations that stimulate the right adaptation and mitigation investments. However, regulators need to be careful not to raise the costs of doing business.

The North American Climate Smart Agriculture Alliance is currently conducting a three-year outreach and engagement program with agricultural organizations (e.g., fertilizer industry, food companies, commodity traders), opinion leaders, and other stakeholder to figure out how to work collaboratively in the near-term to



Picture 3 (left to right): Moderator Charlotte Smith, Daniel Gad, Fred Yoder, Chris Brett, Biswaranjan Sen, Chris Brown, and Trevor Maynard.

discover and upscale high-value climate change adaptation and mitigation services. The biggest driver of behavioral change is economics; it has to put money in the pocket of farmers. Also important is leveraging the trust between farmers to change attitudes and behaviors.

For OLAM, meeting the challenge of climate change is largely about safeguarding the viability of the company's smallholder supplier base and keeping capital intensive and fixed processing units in sourcing countries operational with sufficient throughput. In some countries, like Ghana, this means training smallholder cocoa farmers to integrate shade trees to increase the water retention capacity of soils, all while enhancing soil quality and increasing yields. In other countries, it's about transitioning to less water-intensive crops, such as converting dairy to almond production in water-stressed climates like California.

Medium Term – Increasing Costs and Regulatory Risk

Lunch Talk: Climate Change Driven Regulatory Risk & Shifts in Cost Structures, Aidan Cotter, CEO, Bord Bia

Launched in 2012, Origin Green is committed to an inclusive approach to sustainability that recognizes the importance of all perspectives. The program aims to have 100% of Irish food and drink exports on the road to sustainability by the end of 2016, a target measured by company sign-ups. Origin Green is the only sustainability program that operates on a national scale, uniting government, the private sector and food producers through Bord Bia, the Irish Food Board.

Origin Green started with beef and expanded to other industries, securing accreditation for sustainability models and prioritizing biodiversity. The journey has led to the development of a model that lets firms calculate the footprint of a farm, two online databases, and a feedback loop with farmers to allow them to improve performance. Working business-to-business Origin Green has created an informed audience and gained traction because farmers and companies understand the economic rationale—better utilization of scarce resources—and can deliver value to customers and the market.

Companies working with Origin Green members can count on a proven, independently verified, commitment to sustainability. According to Cotter, in the future, Origin Green products will be given market preference. And while a premium is not expected, it is possible, because once sustainability is measurable, it can be factored in the valuation of businesses.

Table Top Discussion 1: Barriers to Success

During the Strategic Dialogue, participants contributed to the debates by taking part in collective work. Each table was assigned to name and briefly describe the three most important barriers to success in taking climate change into account more widely and building more resilient supply chains. Below are the barriers the results:

1. Information and knowledge (data, methodology, technology)
 - Models for farmers to prove better opportunities.
 - Farmer to farmer knowledge transfer
 - Collection of models of success
 - Data access
 - Targeted communication to farmers/ education
 - Business case
2. Risk
 - Risk identification
 - Risk monitoring
 - Risk management
3. Behavioral change
 - Incentives
 - Agreement on set targets/milestones
 - Ownership/buy-in from industry and farmers
 - Education of consumers
 - Discounting future benefits
4. Partnerships/Relationships
 - Connecting actors (s/holders – retailers and producers)
 - Relationships and trust building
 - Reluctance on pre-competitive cooperation.
5. Gender
 - Lack of utilization of women
6. Finance and prices
 - Access and affordability
 - Lack of transfer and reflection of environmental cost to prices
 - Distortion due to subsidies, concentration, etc.
 - Who pays for the changes and the issues?
7. Policy
 - Changes required
 - Disclosure required
 - Incentivize change
 - Anti-trust legislation
8. Complexity of agricultural supply chains

Presentation: Climate Risk in the Food Industry – Investors’ Perspectives, Frances Way, Co-Chief, CDP

Co-Chief of CDP Frances Way spoke to attendees about how CDP is seeking to transform the way the world does business through measurement and information. CDP collects and publishes information on climate change, forests, and water from publically listed companies, their suppliers, and the world’s largest cities. Recent analysis of CDP data shows that a high number of companies in the Food, Beverage, and Tobacco (FBT) sector do very little to mitigate the emissions from production in their supply chains. Since agricultural production causes 10-14% of global GHG emissions, this suggests that 10% of global GHG emissions, “the forgotten 10%,” are unaccounted for, leaving businesses exposed to substantial regulatory and reputational risks.

These risks create an incentive for FBT companies to measure, report, and reduce agricultural emissions in their supply chains. Implementing agricultural management practices to cut emissions, or engaging with suppliers to adopt them, can create additional benefits. FBT companies implementing these practices through knowledge sharing and procurement policies have reported soil quality improvements, financial savings, yield increases, and biodiversity increases.

CDP’s analysis of disclosures from 5,500 companies indicates that taking a long-term approach to building business resilience is crucial to reducing emissions in agricultural supply chains. Collaboration with suppliers, industry peers, and policymakers is also a key component of promoting sustainable practices in agriculture and raw material sourcing.

Longer Term- Strategic Commodities Under Pressure

Panel Session: Vulnerability in the Supplier Base - Looking Towards the Future

- Panelists:**
- Ceris Jones, Climate Change Adviser, UK National Farmers Union (NFU)
 - David Bright, Head of Economic Justice Programme development, Oxfam UK, and OI Programme Development Coordinator, Oxfam International
 - Diane Holdorf, Chief Sustainability Officer, and Vice President of Environmental Stewardship, Health and Safety, Kellogg Company
 - Mark Buckingham, Spokesman, Monsanto UK
 - Michael Fernandez, Senior Director of Global Public Policy, MARS Incorporated
 - Simon Winter, Senior Vice President, Development, TechnoServe, and Senior Fellow, Mossavar-Rahmani Center for Business and Government at Harvard’s Kennedy School

Panelists provided comment on longer-term climate change trends and discussed how to provide enough for consumer needs and securing access to the supply of commodities for their products going forward. Some central themes across the discussion highlighted a shared recognition that there is a shift in the supply base.

Panelists provided comment on longer-term climate change trends and discussed how to provide enough food for consumer needs and how to secure access to the supply of commodities for their products going forward. The discussion highlighted a shared recognition that there is a shift in the supply base, and that there is no silver bullets in regard to solutions to increase food supply in the context of climate change. All speakers agreed that the business driver for action is that farmers will always be part of the food business, and that it is not just about training or interventions as success will have to be backed up by real business opportunities and an indication of

available pathways into the future. An outstanding question, however, is how to measure resilience and how to manage the challenge of increasing resilience..

Long-term challenges for farmers and companies are not so different, and a gap exists in the finance, policy, and training needs to ensure these issues are successfully addressed. Companies need to work in supply chains and get their improved technology into farmers' hands and continue to foster partnership and collaboration. Working with farmers to increase their productivity, companies such as Mars Inc. have realized that technology and capacity building efforts have worked. Mr. Fernandez pointed out the need to further longer-term partnerships, as there will not be a strengthening of the actors in the supplier base if farmers are expected to solve vulnerabilities by themselves.

Financial institutions and investors need to begin to consider longer term financing for investment in climate change management. Mr. Winter explained that building assets through savings is one such management option, along with investment in infrastructure and diversification. He emphasized the last by explaining that the need to develop additionality and integrate with funding is crucial, and that science and research should be more systemic about addressing longer-term practices. The dialogue with donors and funders is also often confused, while they constitute vital partners to link smallholder farmers to major companies.



Picture 4 (left to right): Moderator Charlotte Smith, Diane Holdorf, Mark Buckingham, Michael Fernandez, Ceris Jones, Simon Winter, and David Bright.

With climate change, we are moving into uncharted territory with the increased risk of severe and extreme events and trends of unseasoned extreme events. There is a need for more consistent climate risk evaluations, which need to consider both cash crops and staple crops, and should include the whole system and point to potential opportunities.

There is also an issue of scale, as the agriculture sector needs to be transformed at a macro level along with landscapes and governance. Mr. Bright highlighted the need for national institutional body to bring everyone together and have the conversation on adaptation and transformation, especially in countries where the critical risk is youth leaving the farm. To keep people farming we need to build up resilience through underlying benefits for the communities. Public Private Partnerships may be once such solution ; supporting the grower base and working with governments. It is important that it is made clear that it is possible to make a profit to attract young people. Demonstration of better opportunities through expanding market access and technology in farming may see youth come back into farming, as a business rather than subsistence.

The Opportunity — Resilient Supply Chains Linking Farmers and Food Industry

Panel Session: How to Build Supply Chain Resilience

- Panelists:**
- Agnes Kalibata, President, Alliance for a Green Revolution in Africa (AGRA)
 - Mahadevan Ramachandran, Deputy Director of Procurement, World Food Programme (WFP)
 - Michale Andrade, Agribusiness Head, HDFC Bank
 - Nicko Debenham, Vice President Global Cocoa Sustainability, and Managing Director, Biolands, Barry Callebaut
 - Richard Bramley, Farmer in the Yorkshire, UK, and a member of the NFU
 - Sean de Cleene, Senior Vice-President, Global Initiatives, Strategy and Business Development, Yara International

Based on their experiences working on sustainability issues on behalf of private sector companies, panelists discussed the business case for building resilience in agricultural supply chains. Key themes emerged in the panelists' remarks, in particular, the need to include all supply chain actors in the business case. One aspect of inclusion is creating market opportunities for farmers to ensure proper returns on investments in resilience.

Panelists highlighted the importance of B2B collaboration to strengthen processes and engage suppliers, as well as collaboration between the public and private sectors to incentivize investments. Sean de Cleene from Yara International noted that business models have started to change to reflect the need for collaboration. Yara never used to work with actors downstream from the farm, but the company has now been doing B2B with processors and retailers for a few years.

In the long-term the business case for building resilience is clear, however, in the short term demonstrating the business case can be challenging. Nicko Debenham from Barry Callebaut pointed out the need to evaluate the impacts of what's already been done and to understand what worked and what did not. Panelists agreed that creating scale in the industry requires trust among supply chain actors and consumer behavior change.



Picture 5 (left to right): Moderator Charlotte Smith, Agnes Kalibata, Sean de Cleene, Nicko Debenham, Richard Bramley, Michael Andrade, Mahadevan Ramachandran.

Table Top Discussion 2: Building Resilient Supply Chains

Each table discussed what it would take to make resilient supply chains a reality, by identifying necessary actions, processes. Attendees also discussed what they will individually and collectively change in their approach, based on the conference presentations, and what they will do differently in the near future.

1. Collaboration and partnerships
 - a. Collaboration between the private sector and public sector
 - b. Financial intuitions more involved and aware of the needs of farmers
 - c. Collaborative policies
 - d. Involvement of business, technology, and operation leaders
2. Common regulatory and legislative standards
 - a. Government should facilitate business-driven types of partnerships
 - b. Government should foster cooperation with the private sector as results will create public goods
 - c. Further develop and harmonize existing resilience standards, and encourage the adoption of such standards
3. Investment in long-term adaptation capacity, rather than short-term strategies that focus only on immediate business needs
 - a. Value-based solution production approaches
4. Information sharing and knowledge exchange
 - a. Improved accessibility and share of information between the different actors
 - b. Increased transparency
5. Risk evaluation and assessment
 - a. Implementation of systematic risk evaluation
 - b. Implementation of common frameworks for risk assessment
 - c. Build the "culture of risk" as risk steaming from climate change is the new normal
6. Consumers should be aware and involved in these processes

IFC - Solutions in Practice

Tania Kaddeche, Global Head, Agribusiness and Forestry, International Finance Corporation (IFC)

Based on IFC interaction with private sector stakeholders, the message from the agriculture and food industries is clear: climate volatility and variability is not just a medium- to long-term issue, but a current issue that necessitates planning and risk mitigation today. Kaddeche explained that with climate change, various supply chains are at more immediate risk, and often localized or periodic risks. In the medium-to-longer term, she foresees the variability and multi-regional nature of volatility as crucial threats affecting more supply chains. To remain strategic sourcing partners, more and more supply chain partners are being asked to manage many of these risks. The traditional tools, such as geographic diversification and technology (e.g., irrigation), are still possible levers, but can be expensive and force organizations to commit to long-term assets.

Kaddeche emphasized the need for renewed ways of doing business, where development partners –IFC being one of them, along with financial actors, have a role to play in connecting farmers and food companies. One example she cited is a partnership with the private sector to address the coffee rust challenge in Central America. IFC with GAFSP, in conjunction with the Inter-American Development Bank, Ecom, and Starbucks developed an innovative model for providing affordable, long-term financing and technical assistance to coffee

farmers affected by the rust so they can renovate their farms and add rust-resistant coffee plants. This collaborative effort will help secure coffee supply and jobs in Nicaragua for years to come, eradicating some of the decreased yields that the fungus has already wrought on the lives of small farmers.

Closing Remarks

Peter White, Chief Operating Officer, World Business Council for Sustainable Development (WBCSD)

In September, the United Nations adopted a new set of global Sustainable Development Goals (SDGs). Developed jointly by GRI, the UN Global Compact and WBCSD, the SDG Compass's aims to guide companies in taking a strategic approach to the SDGs and enhancing their contribution to sustainable development through core business activities. Today's discussions confirmed the essential role of business in addressing sustainable development challenges, and the need for the food sector to facilitate farmers' adaptation to climate change to secure supply as well as to address poverty.



Picture 6: Participants discussing during the second Table Top Discussion of the Resilient Supply Chains Dialogue.

In light of the upcoming COP 21 to be held in Paris in December, Mr. White explained why a low-carbon economy 'is an opportunity for business.' There is a growing market for companies that are able to develop, deliver, and scale up relevant technologies and solutions. He mentioned that the business sector has been invited to attend the COP for the first time, and can be a driving force in the fight against climate change. He highlighted WBCSD's Low Carbon Technology Partnership initiative, a joint public and private initiative to accelerate low-carbon technology development. Climate-Smart Agriculture (CSA) is one of the solutions that the WBCSD and its member companies have identified as critical to reach the two degree Celsius target.

Food companies have a role to play in developing solutions that promote production systems that sustainably increase productivity, improve agricultural systems' resilience (adaptation), reduce greenhouse gas emissions (mitigation), and enhance achievement of national food security and development goals. . The WBCSD CSA Working Group is seeking to support the business response to this challenge. While there is still the need to foster and expand collective action in order to achieve a 'climate-smart' agricultural system worldwide, CSA solutions represent a key solution that companies should collectively work on with farmers, governments, development partners and financial institutions.

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