



SCALING UP

GLOBAL FOOD SECURITY AND SUSTAINABLE AGRICULTURE



United Nations Global Compact

About the United Nations Global Compact

The United Nations Global Compact is a call to companies everywhere to voluntarily align their operations and strategies with ten universally-accepted principles in the areas of human rights, labour, environment and anti-corruption, and to take action in support of UN goals, including the Millennium Development Goals. The UN Global Compact is a leadership platform for the development, implementation, and disclosure of responsible corporate policies and practices. Launched in 2000, it is the largest corporate responsibility initiative in the world, with over 10,000 signatories based in 140 countries. For more information: www.unglobalcompact.org

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FOREWORD

With the world's population expected to grow from 7 billion to 9 billion, a growth of 30%, in the next four decades, the demand on our food and agriculture systems will be greater than ever. To ensure that we have sustainable agriculture and food security for all, the private sector must commit to working closely with governments and civil society. Within the United Nations Global Compact, there are many inspiring examples of corporate practices, from small companies to some of the largest, that have advanced food security and sustainable agriculture throughout the world. Many business, government, and civil society leaders are already working together to tackle difficult issues around this need, such as protecting our precious land and water resources and improving the nutritional quality of food. The challenge now is to create a movement that promotes these endeavors around the world and inspires a broader movement of all relevant stakeholders towards a future without hunger. The purpose of this document is to highlight leading edge practices in the private sector to encourage progress in food security and sustainable agriculture.

As companies increasingly focus their efforts on viable business practices, food security and sustainable agriculture, which improve the quality of life for all communities and increase economic stability for companies and individuals, must be a key component. Every actor along the agriculture supply chain, including farmers, traders, retailers, investors and consumers has a role to play in protecting the environment, ensuring economic opportunity, and improving food security. Agriculture occupies one-third of the land surface of the Earth, and is the central means of employment for much of the world's population, particularly women. The food and agriculture sector can play a leading role in reducing poverty and food insecurity by better incorporating smallholder farmers into their supply chains, while also supporting and investing in rural development initiatives that will enhance the health, education and infrastructure of poor communities.

This report, as well as the related sessions that take place at the Rio+20 Corporate Sustainability Forum, marks a new commitment by the UN Global Compact to contribute to advancing food security and sustainable agriculture. There are clear intersections with existing engagement platforms at the UN Global Compact, including Sustainable Energy for All, Caring for Climate, and the CEO Water Mandate.

We look forward to partnering with all relevant actors in this critical sector in order to advance food security and sustainable agriculture together.

Georg Kell
Executive Director
United Nations Global Compact



INTRODUCTION

The purpose of this report is to present the most salient and urgent issues facing the private sector in relation to food security and sustainable agriculture. We aim to showcase the best emerging practices and to inspire a broader movement of all relevant sectors and industries towards a more food secure and sustainable future. As the world's population continues to grow, and natural resources — including land and water — are diminishing in supply and quality, the global food industry is focused on implementing sustainable agricultural practices. This not only ensures their own prosperity into the next century, but also the health of the environment and communities on which their businesses rest.

The food and agriculture industry is a massive component of the global economy. It represents approximately 10% of global gross domestic production (\$70 trillion in 2011), more than 38% of the world's land is dedicated to agriculture, and 70% of the poorest families are employed in agriculture. The industry involves millions of businesses and feeds billions of people, all of which starts with the simple act of farming. The components of the industry range from poor, small farmers where agriculture is the main source of income and calories, to commercial farmers, traders, processors, manufacturers and investors working on a local, regional, and global scale, to retailers who sell food products in everything from street-side kiosks to big-box stores spread across the globe. Some of the largest private sector companies in the world are involved in the industry, from retailers like Carrefour and Tesco, who produce their own private label food brands, to manufacturers such as Nestlé and Unilever who make a wide-range of food products, to global traders and food processors such as Cargill, to agricultural input providers such as Netafim, to financing institutions like Rabobank and Standard Chartered Bank.

Industry leaders, such as Nestlé and Unilever, are working on multiple fronts to improve the lives and communities of poor farmers, while also engaging in leading edge practices on land and water management with their suppliers. Food and agriculture companies are also recognizing that prog-

ress will require working together through global associations and initiatives, such as the Sustainable Agriculture Initiative (SAI) and the World Economic Forum's "New Vision for Agriculture," and that closely collaborating with government and civil society is critical. But future progress, and a truly sustainable agriculture system that creates food security and environmental stewardship, will require that all food and agriculture companies, as well as investors, engage in sustainable agricultural practices.

Corporate sustainability

Corporate sustainability is a company's delivery of long-term value in financial, social, environmental and ethical terms. This means that companies respect and support human rights, ensure decent workplace and wage conditions, safeguard and restore the environment, and enact good corporate governance. Sustainable agriculture can be a core business practice, and while sustainable agriculture should be seen as part of core business, philanthropic endeavors can play an equally important role.

Food Security and Sustainable Agriculture

Sustainable agriculture, as it pertains to business, is defined by how a business organization conducts its direct or indirect operations in a way that is resource efficient, strengthens the resource base and environment on which agriculture depends, provides for basic human food needs, enhances the quality of life for farmers and society, and is economically viable.¹ A sustainable agriculture system meets the following criteria: land tenure is established; soil fertility is maintained and improved; water quality is enhanced; biodiversity is protected; farmers, farm workers, and all other actors in the agriculture supply chains earn livable incomes; food is affordable and nutritious; businesses can be competitive and efficient; and the use of energy and the discharge of waste are within the capacity of the earth to absorb forever.²

Sustainable agriculture systems, if properly implemented, can lead to poverty reduction, increased food security, and good environ-

mental stewardship on a global level. It can create shared value (food security, environmental sustainability and economic opportunity) for companies and the communities in which they work. When sustainable agriculture systems produce enough nutritious food to feed the world, and that food is accessible to the world's population, particularly the poorest, food security will follow.

The five pillars of food security and sustainable agriculture

In this publication, the Global Compact profiles five essential components of food security and sustainable agriculture:

- **Sustainable sourcing:**

This section highlights how the private sector is sustainably sourcing crops from small, medium and large (commercial)

farms. This section will also look at what criteria companies use to define sustainability, including certification and industry-led roundtables.

- **Improving land and water management:**

This section highlights private sector innovations and collaboration in better managing land and water resources, while growing sustainable agricultural production.

- **Enhancing nutrition:**

This section highlights unique private and public sector approaches to providing affordable and nutritious food products for the world's poorest families, as well as addressing the obesity epidemic.

1. The World Food Summit of 1996 defined food security as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life."

2 Sustainable Food Lab, <http://www.sustainablefoodlab.org/>

GRAPHIC OF THE FOOD AND AGRICULTURE INDUSTRY



AGRICULTURAL INPUTS:

Agricultural inputs are the products or services that go into farming to increase productivity, including: labor, fertilizer, seed, irrigation and equipment/machinery.

SUPPLIERS: Smallholder or subsistence farmers live primarily in the developing world, have limited or no access to resources, and are dependent on family labor. Smallholder farmers are the majority of the world's agriculturalists and constitute 70% of the world's poorest people, while producing a large share of global food. There are approximately 500 million smallholder farms globally.

COMMERCIAL FARMS:

Commercial farms are large operations that can be globally competitive, with access to capital, where the land size under cultivation can vary widely by crop and country, but rely on a local, wage labour for production. There are approximately 8 million commercial farms globally.

FARMER COOPS: Farmer or producer coops (unions, associations) pool their resources to buy agricultural inputs, plant crops, and harvest and distribute them. They can range in size from a few dozen individuals to thousands of farmers.

TRADERS: Traders purchase and distribute grains and other raw agricultural materials from suppliers. Traders can be small-scale business people who travel from farm-to-farm and buy commodities, or global corporations that are sourcing agricultural raw materials on a large scale.

PROCESSORS: Food processing companies transform raw ingredients into food for consumption by humans or animals.

RETAILERS: Retailers sell the food products created by processors to the consuming public.

CONSUMERS: Purchasers of food products.



UNITED NATIONS-BACKED PRINCIPLES FOR RESPONSIBLE INVESTMENT

The United Nations-backed Principles for Responsible Investment initiative (PRI) is a network of international investors working together to put the following six Principles for Responsible Investment into practice:

1. Incorporate Environmental, Social and Corporate Governance issues into investment analysis and decision-making processes;
2. Be active owners and incorporate Environmental, Social and Corporate Governance issues into our ownership policies and practices;
3. Seek appropriate disclosure on Environmental, Social and Corporate Governance issues by the entities in which we invest;
4. Promote acceptance and implementation of the Principles within the investment industry;
5. Work together to enhance our effectiveness in implementing the Principles;
6. Report on our activities and progress towards implementing the Principles.

- **Effectively using technology:**

This section highlights the important role that technology can play in improving food security and enhancing sustainable agriculture.

- **Reducing commodity price volatility:**

This section highlights the role that the private sector and public sector can play in reducing commodity price volatility, which negatively affects the poorest and most vulnerable populations.

These components do not encompass all sustainable practices that companies, civil society and government could employ, but they cover a wide range of critical activities that, when combined, make a significant improvement in the economic, social, and environmental practices of the food and agriculture sector. These components address several widely accepted goals within the private sector, such as improving land and water management, but also contain particular issues where significant disagreement continues, such as the use of genetically modified organisms or the optimal balance of synthetic fertilizer in improving agricultural yields.

This publication draws from previous outstanding work in the field of food security and sustainable agriculture including some yet-to-be published papers (see Annex 1). The publication also draws heavily from interviews with select companies including Sime Darby, Netafim, Nestlé, Unilever, Ferraro, Grupo Maggi, SABMiller, Illy, BASF, Syngenta, Campbell's Soup, and SEKEM.

Interviews were conducted with United Nations and civil society organizations, including the Global Alliance for Improved Nutrition (GAIN), the Rainforest Alliance, Conservation International, World Wildlife Fund US, Det Norske Veritas, the Sustainable Food Lab, the World Food Program, the United Nations High Level Task Force on Food Security, the International Finance Corporation, and the United Nations-backed Principles for Responsible Investment (PRI).

This report hopes to inspire businesses to take up the challenge of improving their practices, while acknowledging that even the most committed players have a long way to go to achieve 100% sustainability. It highlights the global momentum to improve food security and sustainable agriculture, which companies should leverage, while acknowledging that significant work remains ahead. Examples have

been drawn from both large and small companies and from Africa, Asia, Latin America, Europe and North America. Different commodities — from soy to cocoa to sorghum — are profiled, as are different sectors, including suppliers, traders, processors and retailers.

The Private Sector, Government and Civil Society Working Together

Business, government and civil society recognize today that successfully altering the agricultural landscape will require collaboration and a unity of purpose. A world with 1 billion hungry people and a deteriorating environment is not in anyone's long-term interest. The momentum to address these challenges, particularly since the global food crisis in 2008, has grown swiftly over the past five years.

There are numerous examples of this new collaboration. Grupo Maggi is working with Alianca da Terra, a Brazilian NGO, to encourage soy farmers to adopt sustainable practices in Brazil. Swiss RE is working with Oxfam, the Ethiopian government and the World Food Program to help drought-prone farmers in Ethiopia. Yara and the Norwegian government are working with the governments of Tanzania and Mozambique on catalyzing agricultural growth corridors in both African countries. The New Partnership for Africa's Development (NEPAD), a program of the African Union to address development issues on the continent, is spearheaded by African leaders with partners from across the globe including FAO, the African Development Bank, GAIN, and various business groups.

The challenge moving forward is to ensure these initiatives scale up from 'islands of success' to country-wide, continent-wide and global practices with the support and backing of governments, civil society and the communities they represent.

Private Sector

The private sector has enormous resources, global scale and the ability to influence their supply chain to improve food security and agricultural sustainability. Food and beverage companies, such as Nestlé (281,000 employees, 2010 revenue of \$109 billion) and Unilever (171,000 employees and \$46 billion in revenue), draw upon a vast network of suppliers ranging from smallholder farmers in India to major traders and food processors in Asia. Unilever alone sources raw materials

from more than 10,000 global suppliers.

This broad network of suppliers to the food and agriculture industry poses a challenge to ensure shared goals, values and compliance, but also an unprecedented opportunity to scale up sustainable agricultural practices. When these companies collaborate on sustainability initiatives, as 26 companies have through the World Economic Forum's "New Vision for Agriculture," the potential for significant progress increases.

Small farmers, who are between 1.5 billion and 2 billion people (500 million farms), represent the majority of the world's poor and also the largest producers of agriculture commodities globally. They offer the greatest opportunity for change as just minimal increases in productivity could make a significant dent in poverty and food insecurity globally.

Responsible agricultural investment from the private sector is also critical to scaling-up success globally. The agricultural system will require investors that are aware of the unique environmental, social and governance issues involved in the production and distribution of food.

The United-Nations backed Principles for Responsible Investment (PRI), initiated in 2005, established six principles for responsible investing that now serve as a framework for the international investment community.

The Principles were devised by the investment community. They reflect the view that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios and therefore must be given appropriate consideration by investors if they are to fulfil their fiduciary (or equivalent) duty. The Principles provide a voluntary framework by which all investors can incorporate ESG issues into their decision-making and ownership practices and so better align their objectives with those of society at large.

A growing body of research is starting to define what "responsible" investments look like and how these investments can positively lead to sustainable growth and avoid excessive commodity price volatility.

Investing long-term in farmland, for example, can bring needed capital flow to a sector that has suffered from decades of underinvestment (see Side Bar). Running successful commercial farms can contribute to food supply, better use of technology, good environmental stewardship, and put down-

PRINCIPLES FOR RESPONSIBLE INVESTMENT IN FARMLAND

In recent years, investment in farmland has emerged as a new asset class for institutional investors. The "Principles for Responsible Investment in Farmland" are designed to guide investors seeking to invest in farmland in a responsible manner.

1. Promote environmental sustainability;
2. Respect labour and human rights;
3. Respect existing land and resource rights;
4. Uphold high business and ethical standards;
5. Report on activities and progress towards implementing the principles and promoting the principles.

The three Rome-based United Nations food agencies – the Food and Agriculture Organization, the World Food Program and the International Fund for Agricultural Development – all have different core mandates, but are collectively dedicated to improving food security and sustainable agriculture, particularly for smallholder farmers. They work in partnership with the private sector, as well as governments and civil society.

FOOD AND AGRICULTURE ORGANIZATION

Established in 1945, FAO's mandate is to raise levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy. FAO is present in 130 countries and is led by Brazilian Jose Graziano da Silva, the Director General of FAO.

WORLD FOOD PROGRAM

Created in 1961, WFP is dedicated to saving lives in emergencies and restoring livelihoods after disasters. WFP is present in 73 countries and the Executive Director is Ertharin Cousin, a US national.

INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

Established in 1977, IFAD combats rural hunger and poverty in developing countries through low-interest loans and direct assistance. IFAD is present in 119 countries and the President is Kenayo Nwanze, a Nigerian.

ward pressure on prices, as well as translating into tax revenue for the local country.

Government

National governments provide the unifying leadership in order to focus policy and resources on reducing poverty, improving environmental protection, and building the infrastructure needed to support sustainable agricultural development. A healthier agriculture system will require the re-emergence of government as an innovative policy maker and investor to enable smart growth while protecting the interests of communities and the environment.

Government investment in rural agriculture declined precipitously from the early 1980s to the middle of this decade. The drop-off has placed the private sector in the lead on infrastructure investments, extensions services, storage, marketing and provision of inputs. Governments, however, are now beginning to reorient their policies and actions to better support food security and sustainable agriculture. This evolution has been present recently in Africa through the African Union's Comprehensive Africa Agriculture Development Process (CAADP), which brings together key stakeholders to improve agriculture on the continent. In addition, Brazil has made significant progress on reducing food insecurity through its Zero Hunger (Fome Zero) program and in Malawi, Tanzania and Rwanda; for example, recent policies that have eased farmers' access to seeds and agricultural inputs have helped produce bountiful harvest and generate economic growth (AGRA).

In wealthy countries, donor agencies, including the Swiss Agency for Development and Cooperation (SDC), the Japanese International Cooperation Agency (JICA), the German development agency (GIZ), the Canadian International Development Agency (CIDA), the US Agency for International Development (USAID), and the UK's Department for International Development (DFID), as well as dozens of others, have all played a supportive role.

Civil Society

Since the momentum to improve food security and sustainable agriculture has grown over the last 20 years, civil society groups have played a critical role in not only informing the thinking and practices of the private sector, but in implementing these practices by creating standards and providing training

and capacity building with farmers and other stakeholders. Civil society groups, including local and national non-profits, think tanks, international non-governmental organizations and major foundations, have catalyzed progress on sustainable agriculture and maintained critical partnerships with the private sector and governments to keep progress moving forward.

The Rainforest Alliance, Oxfam, Conservation International, World Wildlife Fund, UTZ Certified, Michigan State University, University of Life Sciences (Norway), the Bill and Melinda Gates Foundation, Alianca da Terra (Brazilian NGO), Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT), the International Rice Research Institute (IRRI), and Det Norske Veritas (DNV) are but a few of the civil society leaders making a difference in the food security and sustainable agriculture sector.

International Organizations

International organizations have also played a leading role in this transformation, including the United Nations Food and Agriculture Agency (FAO), the International Fund for Agricultural Development (IFAD), the World Food Program (WFP), the High Level Task Force on Global Food Security, the International Labour Organization (ILO), United Nations Conference on Trade and Development (UNCTAD), the International Food Policy and Research Institute (IFPRI), as well as the World Bank, its regional affiliates, and the Bank's private sector financing arm, the International Finance Corporation (IFC).



KEY PILLARS OF FOOD SECURITY AND SUSTAINABLE AGRICULTURE

1. Sustainable Sourcing

Sustainable sourcing, also called responsible sourcing or ethical sourcing, requires that every provider along a supply chain meet economic, environmental, and social standards that will ensure a healthy food and agriculture system well into the future. Numerous third-party certification schemes exist for measuring, reporting and defining sustainability at the farm level, including Organic, Fair Trade, Rainforest Alliance, and UTZ Certified, among others.

Industry groups and companies are also establishing their own set of principles and standards, often in coordination with civil society and local stakeholders. These include Unilever's Sustainable Agriculture Code, the Responsible Supply Chain Process used by Illy, and Conservation International's work with Starbucks Coffee on its sustainability program, Coffee and Farmer Equity practices (CAFE).

Some "cash crops", such as coffee, cocoa and tea, have a strong global demand that make them particularly attractive to the food industry, while basic grains, such as rice, corn, sorghum, and cassava, have smaller margins and are the staple foods grown by the majority of the world's poor.

Additionally, multi-stakeholder "Roundtables" have formed over the past decade to focus on a set of performance-based standards and practices by commodity groups (for example, palm oil, soy, and cocoa) that are widely traded around the world. These Roundtables jointly develop sustainable principles with civil society that are now leading to certification schemes.

Increasing sustainable sourcing

Food-related companies have made a commitment to sustainable sourcing partly because of an increase in consumer demand. Food companies, both large and small, are now making long-term commitments to sustainably source their raw agricultural materials. According to research by Daniele Giovannucci of the United Nations Department of Economic and Social Affairs, sustainable coffee exports, for example, grew

from 2% in 2002 to 9% in 2011, and bananas went from 3% sustainable exports in 2002 to 21% in 2010.

Unilever currently sources about 10% of its agricultural raw materials sustainably, but has committed to source 50% of them sustainably by 2015 and 100% by 2020. Last year, Ferrero pledged to sustainably source 100% of its palm oil by 2015 and all of its coffee and cocoa by 2020. And smaller companies, such as energy bar maker Clif Bar, announced this year that 100% of the cocoa ingredients for Clif Bars will be sourced from Rainforest Alliance Certified farms.

Sourcing from smallholder farmers

For the 70 % of the world's poor who live in rural areas, agriculture is the main source of income and employment — and they produce most of the world's food. Linking these smallholder farmers to markets, whether to local markets or regional supply chains, provides an avenue to reduce poverty and food insecurity, while increasing the global supply of food.

Public policy increasingly focuses on building the capacity and productivity of these 500 million farmers, while maintaining their limited carbon footprint. SABMiller, the world's second largest brewer, has nearly 30,000 small farmers in its supply chain, up from just 10,000 in 2008, while Syngenta is sourcing cocoa from 12,000 smallholders in West Africa.

CASE 1: DNV WITH ILLYCAFFÉ

Det Norske Veritas (DNV), a Norwegian foundation started in 1864, dedicates itself to helping clients improve their business performance. Last year, DNV teamed up with Illycaffè, a family-owned roaster based in Trieste, Italy, to create a new approach to monitoring the sustainability of Illy's supply chains. The approach, which DNV calls "Responsible Supply Chain Process", is being implemented with Illy's 800-1000 green coffee suppliers, half of whom are Brazilian farmers.

After engaging the suppliers, local NGOs, other eco-certification schemes, and cof-

ROUNDTABLE ON RESPONSIBLE SOY ASSOCIATION

"Roundtables" generally involve industry groups and NGOs that create a set of voluntary, commodity-specific sustainability standards. Roundtables exist for palm oil, cocoa, beef, biofuels, sugarcane, and other commodities. Below is an example of one such roundtable, on responsible soy.

The Roundtable on Responsible Soy Association (RTRS) is a multi-stakeholder initiative that aims to facilitate a global dialogue on soy production that is economically viable, socially equitable and environmentally sound. It provides stakeholders and interested parties — producers, social organizations and business and industry — with the opportunity to jointly develop global solutions leading to responsible soy production.

The RTRS standard for responsible soy production includes requirements to halt conversion of areas with high conservation value, to promote best management practices, to ensure fair working conditions, and to respect land tenure claims. A certification scheme for production and one for Chain of Custody have been implemented.

fee experts, DNV created a set of the best practices for the entire green coffee production process. A standard was created with approximately 150 requirements and then applied and verified along the entire Illy supply chain. Illy then hired and trained technicians to visit, collect data, and assist its coffee suppliers in the field. Illy sources from 14-15 countries globally, and so far 450 farms have been visited and the company plans to visit 100% of the supplier farms in 2012.

Anna Illy, a member of Illy's Executive Board, noted that some farmers have been supplying Illy for more than 20 years.

"We cannot rely on intermediaries", she said. "We go directly to the grower — otherwise there is no traceability. We select the best possible growers, we transfer knowledge to them, and then we buy directly from that grower even though we are paying more than the market price".

CASE 2: FERRERO

Ferrero, an Italian company and the fourth largest confectionary company in the world, with global brands such as Nutella, Ferrero Rocher, Kinder and Tic Tac, has more than 21,000 employees working across the globe with 18 factories relying on a constant supply of sugar, cocoa, coffee and palm oil. In May 2011, Ferrero pledged to sustainably source 100% of its palm oil by 2015 and all of its coffee by 2020, which means working closely with its suppliers to not only improve the working conditions of the farmers in its supply chain, but to also improve their living conditions "after work".

In April 2012, Ferrero announced its goal to achieve independent and credible third-party verification of the sourcing of all of its cocoa by 2020. This verification will aim to ensure, among other issues, that trafficking, child labor and forced adult labor will be eradicated from the plantations from which Ferrero sources its cocoa. Ferrero has found it effective to work with respected local and international NGOs when it invests in a community. Ferrero is currently working with the Rainforest Alliance and with UTZ on certification of its supply chain, but also with other certification schemes and partners. In Nigeria, Ferrero is working with Continaf, Oxfam Novib, Delfi, Fadu and Waff on improving the livelihoods of cocoa farmers.

CASE 3: UNILEVER

Unilever has been one of the global food companies at the forefront of integrating sustainability into their business practices. In November 2010, Unilever announced its Sustainable Living Plan, which sets out a range of targets to reach by 2020, including reducing its environmental impact, improving nutrition, reducing water use, and sustainably sourcing 100% of its agricultural raw materials. The initial focus of the sustainable sourcing program is on the top ten crops by volume: palm oil, paper and board, soy, sugar, tea, fruit and vegetables, sunflower oil, rapeseed oil, dairy and cocoa. Unilever has also committed to link more than 500,000 smallholder farmers and small-scale distributors to its supply chain by 2020.

Unilever is reporting on its progress every year against established benchmarks. Its first report was issued in April 2012. Unilever is also a leader in supporting broad-based, collaborative approaches to scaling-up sustainable business practices with leadership in the Sustainable Agriculture Initiative, the Sustainable Food Lab and the World Economic Forum's "New Vision for Agriculture" and as the co-chair of the B20 Working Group on Food Security for the G20.

"Much remains to be done. But businesses like ours no longer have a choice. Sustainable, equitable growth is the only acceptable model. It is also a very effective one. Growth and sustainability are not in conflict. There is no inherent contradiction between the two. In fact, in our experience, sustainability drives growth", said Paul Polman, Unilever's CEO. "But if we achieve our sustainability targets and no one else follows, we will have failed. Because of this we are working with other organizations, such as the Consumer Goods Forum, the World Economic Forum, the World Business Council for Sustainable Development, NGOs and governments, to drive concerted, cross-sector change".

CASE 4: SABMILLER

SABMiller, the second largest brewer in the world, has recently begun sourcing cassava from smallholder farmers in Mozambique in order to make a local beer called 'Impala'. SABMiller has brewing interests and distribution agreements in 75 countries, with

global brands such as Pilsner Uguell, Peroni, Grolsch and Miller Genuine Draft.

The brewer, through its partner, Cervejas de Mocambique, is providing smallholders with a guaranteed income, and working with non-profits, including the International Fertilizer Development Center (IFDC), to help train the farmers through sharing best practices and appropriate technology. SABMiller has also teamed with DADTCO (Dutch Agricultural Development and Trading Company) to provide mobile equipment, which allows the cassava to be processed immediately after harvest, preserving the integrity and freshness of the cassava's starch. Approximately 40,000 tons of raw cassava will be used annually in the production of the beer, with about half coming from commercial farms and the other half coming from 1500 smallholder farmers. To encourage this targeted economic development, the Mozambican government has also reduced the excise tax for the beer, which is brewed in Nampula in the north of Mozambique. The Dutch Directorate-General for International Cooperation (DGIS) has provided funding for the public/private partnership.

SABMiller has similar local-sourcing strategies in Uganda (sorghum and barley), South Sudan (cassava), Zambia (sorghum and barley) and Tanzania (barley) and has committed to increase local raw material sourcing in Africa to 50% over the next two years.

"By creating market opportunities for subsistence farmers in our value chains, we are able to increase their productivity allowing them to feed their families and generate an income for the first time", said Mark Bowman, Managing Director of SABMiller Africa.

Bowman noted that by buying crops locally, SABMiller can "reduce transport costs, shorten supply lines and ensure high-quality raw material for our breweries" while "having a positive impact on both our business and the communities where we operate".

CASE 5: SUSTAINABLE AGRICULTURE INITIATIVE

The Sustainable Agriculture Initiative (SAI) Platform is an industry initiative comprised of some of the world's largest food companies who seek to support the development of sustainable agriculture worldwide. Created



in 2002 by Nestlé, Unilever and Danone, SAI recognizes that food companies are the biggest purchasers of agricultural raw materials in the world and that by working together they bring scale, resources and expertise to the challenge of creating more sustainable food systems.

Today, the SAI Platform counts over 30 members, including Coca Cola, Kraft Foods, Heineken and McDonalds, who all agree that sustainable agriculture is "a productive, competitive and efficient way to produce agricultural products, while at the same time protecting and improving the natural environment and social/economic conditions of local communities".

CASE 6: RAINFOREST ALLIANCE

The Rainforest Alliance's Sustainable Agriculture program began in 1992 in Costa Rica and now spans 36 tropical countries. Rainforest Alliance certification is based on the three pillars of sustainability: environmental protection, social equity and economic viability. These pillars can be applied to over 100 different crops. Farms are certified to the comprehensive standards of the Sustainable Agriculture Network (SAN) - a coalition of NGOs that is coordinated by the Rainforest Alliance.

Certified farms curb deforestation, conserve soil and water, reduce waste, minimize use of agrochemicals and provide habitat for

Fair Trade certification ensures that suppliers are following environmentally-sound agricultural practices and are fairly compensated, whether they are smallholder farmers or wage employees. In 2011, 827 producer organizations in 58 developing countries were Fair Trade certified.

wildlife. In addition, workers benefit from safe working conditions, just wages, respectable housing and access to healthcare and education for their children. Over two million farmers, farm workers and their families have benefited from Rainforest Alliance certification. Major food and agriculture companies working with the Rainforest Alliance include Wal-Mart, McDonald's, Unilever, Kraft, Costco, and Whole Foods.

CASE 7: ANDRÉ MAGGI GROUP

The André Maggi Group is among the largest Brazilian commodities exporters and is also one of the most important soybean producers in the world. The Group has 12 commercial farms in the Mato Grosso state, along the western border of Brazil, which produced 450,000 tons of soybeans in the 2011/2012 crop (as well as 300,000 tons of maize).

The farms, which range in size from 1200 hectares to 80,000 hectares, are in compliance with the environmental regulations of the International Organization for Standardization (ISO 140001), a non-profit that develops standards for industry in many areas, including the environment. The André Maggi Group farms were also the first to receive the certification from the Round Table on Responsible Soy (RTRS), which mandates compliance with local and national laws, responsible labour standards, strong community relations, environmental responsibility and good agricultural practices in the cultivation of soy. On these farms, which employ more than 1,500 people, André Maggi Group ensures that all employees have access to health care, life insurance, a private pension and educational assistance.

In addition to the 12 corporate farms, another 2000 independent farmers supply André Maggi Group with soybeans. These small to medium-sized suppliers are all certified for complying with Brazilian law, which includes no child or slave labour, no interference with Indian lands, protected areas or environmental deforestation.

The company is also working with The Nature Conservancy (TNC) on legal compliances issues, as well as with Aliança da Terra, a Brazilian NGO, in certifying their supply chain. Aliança da Terra provides economic

incentives to encourage farmers and ranchers in the Amazon Rainforest to practice sustainable forest management.

CASE 8: THE COCA-COLA COMPANY, TECHNOSERVE AND THE BILL AND MELINDA GATES FOUNDATION

In 2010, The Coca-Cola Company, TechnoServe, and the Bill & Melinda Gates Foundation launched Project Nurture. The four-year, \$11.5 million partnership program is designed to enable more than 50,000 smallholder fruit farmers in Kenya and Uganda to double their income by 2014. The Gates Foundation contributed \$7.5 million, while The Coca-Cola Company invested \$4 million (plus an additional \$1.5 million in technical expertise and in-kind infrastructure).

The program works with mango and passion fruit farmers to enable them to increase their incomes by improving the productivity and competitiveness of their fruit. It also links them to new markets, such as those provided by Coca-Cola's locally produced juices, as well as fresh domestic and fresh export markets. Project Nurture offers training programs, facilitates financial services, and, through TechnoServe, helps smallholder farmers organize into business groups to access agricultural inputs and market channels for their mangoes and passion fruits. Training programs are also conducted on crop protocols, offering mango and passion fruit farmers technical support in crop husbandry and agronomic practices such as pruning, plant nutrition, post harvest handling and grading.

As of January 2012, the project has mobilized and trained almost 40,000 mango and passion fruit farmers, of which more than 17,000 are women. As a result of this project, Minute Maid Mango Nectar was the first product to use locally sourced juice (Mgowe mango variety). The project was then launched in Kenya in September 2010 and in Uganda in May 2011. In addition, more than 18,000 metric tons of fresh fruit from this project have been harvested and sold.

Overall, The Coca-Cola Company is seeking to create a successful business model in Kenya and Uganda through Project Nurture that can be replicated in other markets. By 2020, Coca-Cola seeks to triple its global juice business.

2. Improve Land and Water Management

Land and water are the basis of agricultural production and both are a diminishing global resource. Environmentally sound use of these natural resources will be a critical component of building a sustainable agriculture system globally, as well as ensuring that farmers have access to the land and water they need to grow crops. Scientists, global leaders, and the public are increasingly calling for better and more efficient use of these key resources – and warning of dire consequences to the earth if we continue to degrade both land and water.

Agriculture accounts for approximately 70% of all withdrawn fresh water. Thus, the judicious management of water resources, from irrigation to industrial and consumer use, will play a key role in improving food security and sustainable agriculture. Moving from flood irrigation, which can waste large amounts of water, to more targeted and efficient forms of irrigation will be important. Poor, smallholder farmers, many of whom rely on sporadic rainfall for farming, often do not have access to irrigation schemes and will need to be included in government and private sector investment in infrastructural improvements moving forward. Better land and water management requires farmers to have access to a range of agricultural solutions, including education and training to gain necessary skills, and markets in which to sell.

Agriculture already occupies nearly 40% of the land's surface, and key global commodities, such as sugar and palm oil, are expanding their footprint globally.

Land management brings with it an equal set of challenging and vexing issues. Poor farming practices leave soil vulnerable to be swept away by wind and rain. Better farming practices can halt and even reverse the process of soil degradation. At the same time, farmers need to use existing farmland more efficiently and investors need to make responsible agricultural investments.

Responsible investments, particularly in farmland, can lead to sustainable growth and

improved food security. Long-term investing in farmland, however, should not be confused with short-term, speculative “land-grabs” where investors are looking for quick returns at the expense of the local population and food supply. Sustainable farming solutions include not tilling the land, crop rotations, bringing vegetation back to degraded land and planting vegetation around fields to prevent erosion.

The private sector, civil society and governments are increasingly focused on improving land and water use as a fundamental component of sustainable agriculture with positive developments involving different crops and different regions of the world. For example, Australian growers mapped their water footprint for wheat, barley and oats so that the food processing industry had a benchmark to work against; the Brazilian government in the state of Piauí is supporting efficient drip irrigation for smallholder farmers; Barrilla reduced water use in their pasta factories worldwide by 17%; and Nestlé is reducing pesticide use by 50% through apple pest management in the US.

CASE 1: NETAFIM

Founded in 1965, Netafim is a global drip irrigation company with operations in more than 100 countries. Drip irrigation is a slow, precise application of water and nutrients directly to the plants' roots using a tubing system. Drip irrigation conserves water that might otherwise be lost to non-growth areas, runoff, sun or wind.

Partnering with Brazil's Ministry of Integration and Companhia de Desenvolvimento dos Vales do São Francisco e do Parnaíba (CODEVASF), the development agency of the State of Piauí, Netafim installed its Family Drip System on small-scale farms where growers are suffering from low-productivity and barely meeting their subsistence needs. The project provides smallholder farmers with greater food security by improving yields (squash, watermelon, eggplants) through targeted drip irrigation.

The Piaui project, which includes more than 1000 farmers, is now being expanded to neighboring municipalities.

CASE 2: SIME DARBY

Sime Darby, based in Malaysia, is the largest palm oil producing company in the world with approximately 5-6% of the global market. The company was created in 2007 via the merger of 8 separate companies and has about 100,000 employees, with 70% working in the plantation business.

Palm oil is a commodity that is found in the vast majority of processed food products globally and is a common ingredient in margarine, shortening and cooking oil. What started out as a West African crop became popular in Asia in the 1970s and has exploded in global production since the early 1990s with Indonesia and Malaysia as the two largest producers. The area under palm

oil cultivation has increased by 43% globally since 1990. The oil palm, which is also used for non-food crops such as soap, is also grown in Nigeria, Colombia, Kenya, Ghana, and Benin, among other countries.

Sime Darby recognized the potential environmental harm of massive oil palm expansion, as well as labor issues that afflicted the industry, and helped initiate the Roundtable on Sustainable Palm Oil (RSPO) in 2004. RSPO founding members recognized that the development of new plantations had “resulted in the conversion of large areas of forests with high conservation value” and had “threatened the rich biodiversity in these ecosystems”. Use of fire for preparation of land for oil palm planting on a large scale has been reported to contribute to the problem of forest fires in the late 1990s. The expansion of oil palm plantations has also given rise to social conflicts between indigenous communities and growers in some



places. Sime Darby has now certified 74% of its oil palm plantations in Malaysia and Indonesia, and has implemented a zero burn policy for clearing land and for waste disposal. Hence sustainable palm oil is seen as a way forward to continue to supply the world with its much needed vegetable oil without harming the planet and its people". RSPO is committed to "promoting the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders".

While the vast majority of the palm oil production is carried out on large, commercial farms, Sime Darby is also working with smallholders in Indonesia and looking into establishing smallholder programs in Liberia, where it is introducing its best management practices to increase yields.

CASE 3: NESTLÉ

Last year, as part of its efforts to improve water management in agriculture in many rural areas around the world, Nestlé completed a study in the Indian town of Moga, in alliance with the International Water Management Institute (IWMI). This study focused on the water footprint of milk and other local crops in the Moga Punjab region, and the results will help local authorities and stakeholders to improve water efficiency and maximize the economic benefits from scarce resources.

CASE 4: CAMPBELL SOUP

The Campbell Soup Company, the world's leading soup maker and a manufacturer of simple meals, baked snacks and beverages, was founded in 1869, and is now an \$8 billion company that has operations across the globe with major markets in the North America, Asia, Latin America and Europe. In North America alone, Campbell's has 20 brands, 7000 employees and 11 productions, including two tomato processing plants in California. Many of Campbell's products such as soups, sauces and beverages rely heavily on vegetables, including carrots, celery, mushrooms and jalapeno peppers, as the basis of these products. But no vegetable is more important to Campbell's than tomatoes, which it uses as a base in its Prego pasta sauces, V8 juices, Pace salsas and, of course, the iconic Campbell's tomato soup.

As Campbell's began working on its new sustainable agriculture program last year, it realized that targeting their most important crop for improved sustainability would bring long-term benefits. The tomatoes are now grown by more than 50 family farms throughout California's Central Valley, many by third-generation farmers who are contracted suppliers to Campbell's. They are sourced from farms located close to the plants to minimize transportation distance and the associated fuel use. In 2011, the average distance from the field to the plant was 35 miles. Protecting the land and improving water management have quickly become top-tier issues for the company.

Reducing the amount of chemical fertilizer used, which can contaminate surface and ground water and contribute to greenhouse gas emissions, is one component of Campbell's approach to soil management. Campbell's is benchmarking current fertilizer use by its growers and working with them to ensure the recommended amounts of fertilizer are used — not more, not less.

"Through a soil test a farmer can determine if they need to add fertilizer and, if so, how much", said Dan Sonke, Campbell's Manager of Agricultural Sustainability Programs. "Often farmers assume they need X amount of nitrogen based on previous use, but they can find (through the test) that the soil may be carrying over some nitrogen from the previous winter". Campbell's also encourages increasing the amount of organic matter in the soil when economical, using composted manures, cover crops and conservation tillage.

Campbell's tracks the amount of water applied per crop and advocates adopting drip irrigation to increase the efficient use of water, which is a critical issue in California's dry Central Valley. Drip irrigation helps reduce run-off, which can contaminate groundwater through the sediment, fertilizers or pesticides the water may be carrying. In 2011, approximately 29% of the acres producing tomatoes for the company used drip irrigation.

Overall, Campbell's has committed to reducing water use by 20% for its top agricultural ingredients and by 2020 they will be working in collaboration with suppliers, civil society, the United Nations and research universities.

WATER

- Freshwater consumption worldwide has more than doubled since World War II and is expected to rise another 25 percent by 2030.
- More than one-third of the world's population live in water-stressed countries and by 2025 the number is expected to rise to two-thirds.
- Almost 900 million people worldwide do not have access to safe drinking water and up to 5 million people die each year from water-related illnesses.
- Climate change is leading to more frequent extreme weather events, such as droughts and floods, which disproportionately affect poor people living in marginalized areas.

CASE 5: MONSANTO

Monsanto partnered with Conservation International, Brazilian farmers and local residents in a 5-year commitment to protect biodiversity in Brazil. The Cerrado and Atlantic Forest regions are rich in biological diversity but are at risk due to agricultural expansion and urbanization. The partnership provides farmers with information about why it is important to conserve parts of the forested area they own. It also provides practices and tools to help farmers increase their agricultural productivity on existing land, so they can earn their livelihood without cutting down critical forest areas.

In the second year, the Cerrado corridor implemented land use protocols on farms and developed plans to support forestry protection areas and carbon projects. In the Atlantic Forest region, over 31,500 hectares were protected and the target area was further expanded. Training stakeholders in forest recovery and developing expertise on environmental services to train and prepare local populations helped achieve progress.

CASE 6: SYNGENTA

In 2010, Syngenta established partnerships with smallholder cooperatives, NGOs and cocoa traders in Cameroon to provide agronomic training emphasizing safety, post-harvest practices and financing. Since the selected cooperatives are linked to cocoa traders and the food value chain, the aim of the “Camcoa 300” project is to increase yields and quality of cocoa beans, while integrating growers into the supply chain to help increase financial security. In turn, Syngenta increases market share and loyalty.

Through December 2011, 550 growers spanning 1,650 hectares have been trained. Farmers have opened more than 160 saving

accounts. The aim is to train a total of 12,000 growers by mid-2013 to improve yields by 40% and to get consistent, better quality beans.

CASE 7: SEKEM GROUP

SEKEM, an Egyptian agribusiness group that was founded in 1977, includes a variety of companies that sell organic food, textiles and medicinal herbs to markets around the world, including Germany, France, the Netherlands and the US. SEKEM's founders are dedicated to sustainable agriculture and regularly partner with NGOs and international organizations on development-related projects. SEKEM also donates 10% of its annual profits to the SEKEM Development Foundation, which provides medical care and education for local communities in Egypt surrounding SEKEM.

Because of SEKEM's location in the desert, the company focuses on irrigation efficiency. In October 2011, a joint research project was started between SEKEM for Land Reclamation (a subsidiary of SEKEM) and Hydrip GmbH in Austria. The research project, partially funded by the DEG (Deutsche Entwicklungsgesellschaft), is focusing on “water-efficient irrigation technologies”. In a field trial on the SEKEM farm in Belbeis, Egypt, two crops were planted with different combinations of drip and subsurface irrigation and different kinds of soil conditioners as well as state-of-the-art monitoring and measuring technologies. At the end of this project, the partners are expecting to provide the Egyptian market with new solutions for efficient irrigation of reclaimed desert lands, directly addressing the water scarcity challenge in Egypt.

3. Improve Nutrition

Governments, civil society and the private sector will have to work together to address three challenges of malnutrition – under-nutrition, micronutrient deficiency and overnutrition – by reshaping the food and agriculture system to focus on not merely increasing production globally, but increasing the nutritional quality of food and access to it by the poorest families.

Malnutrition is the number one health risk worldwide. FAO reports that there were 925 million undernourished people in 2010, with 98% living in the developing world. Furthermore, nearly 2 billion people worldwide lack the vitamins and minerals necessary to lead healthy and productive lives. Vitamin A, iodine, folic acid, iron and zinc deficiencies weaken bodies and hinder economic development. In addition, another 1 billion people suffer from being overweight and obese (overnutrition). Overnutrition causes, worldwide, 2.8 million deaths per year and contributes to significant health problems. While overnutrition was initially a problem exclusively reserved for high-income and middle-income countries, deaths from obesity are expected to increase by over 20% in Africa, South-East Asia and the Eastern Mediterranean by 2020. In countries such as India and China, the impact of obesity is expected to surge in the next few years (Olivier De Schutter, p. 6).

But progress is underway. The Secretary General's High Level Task Force on Food Security is highlighting the link between agriculture, food systems and national nutritional outcomes. The Scaling-Up Nutrition (SUN) initiative now has 27 member countries and The Bill and Melinda Gates Foundation and the Global Alliance to Improve Nutrition have just launched an "Access to Nutrition Index" which will rate food and beverage companies' performance in providing nutritious products to consumers. GAIN's Business Alliance also includes more than 600 companies that are sharing their best practices and lessons learned that address underserved populations through market-based solutions. These companies include Groupe Danone, Ajinomoto,

Groupe Bel, Firmenich, and The Coca-Cola Company among others. The purpose of the initiative will be to challenge companies to improve their nutrition practices.

With micronutrient fortification, companies such as BASF and DSM, are bringing their expertise, capacity and resources to support governments, non-profits and United Nations agencies working with vulnerable populations. Companies like DuPont are working with traditional staple crops, such as sorghum, to enhance its nutritional value as it grows, while PepsiCo, with global brands such as Frito Lay and Quaker Oats, is increasing the whole grains, fruits and vegetables, nuts, and seeds in its product portfolio, recognizing the increasing challenge of obesity globally.

CASE 1: BASF (VITAMIN A DEFICIENCY) WITH GIZ

SAFO, the Strategic Alliance for the Fortification of Oil and Other Staple Foods, is a development partnership between BASF and the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry of Economic Cooperation and Development. SAFO aims to improve access for people living in poverty to affordable fortified staple foods such as oil, flour and sugar, thereby improving their intake of vitamin A.

More than 2 billion people worldwide suffer from malnutrition. Vitamin A deficiency is one of the most devastating types of malnutrition, affecting 250 million pre-school children worldwide, which is between 40% and 60% of the children in developing countries. Vitamin A deficiency causes blindness and weakens immune systems. Vitamin A is contained in fruits, vegetables and dairy products, but often these foods are not affordable for those living at the base of the economic pyramid in countries suffering from poverty and malnutrition.

BASF assists local food producers with technical and analytical expertise to safely fortify staple foods with essential nutrients and

supports the development of business models for low-income groups. GIZ supports research studies in order to gather malnutrition data and enables public sector partners to translate this data into policies and regulations as well as to install local food quality control systems with specifically developed Vitamin A field test kits.

CASE 2: GAIN

The Global Alliance for Improved Nutrition (GAIN) is an alliance driven by the vision of a world without malnutrition. Created in 2002 at a Special Session of the United Nations General Assembly on Children, GAIN supports public-private partnerships to increase access to the missing nutrients in diets necessary for people, communities and economies to be stronger and healthier.

In less than a decade, GAIN has been able to scale up its operations by investing in and working alongside more than 600 companies in more than 30 countries, reaching 530 million people with nutritionally enhanced food products. Half of the beneficiaries are women and children.

GAIN has also committed to developing business partnerships in order to increase private sector investments in nutrition. In 2005, GAIN established the Business Alliance to mobilize business to play a greater role in combating malnutrition and facilitate business partnerships.

GAIN has recently focused on enhancing the quality of the agricultural value chain by improving the nutritional content of crops from production to consumption. Efforts are now underway to investigate the feasibility of farmers using more nutritious inputs such as nutrient-rich seeds and micronutrient enhanced fertilizers to increase the nutritional

quality of staple grains as they grow and assess how to strengthen the supply chain for commodities that make up nutrient rich foods for infants and young children.

“It’s critical that we get nutritious food into the agricultural supply chain”, said Bonnie McClafferty, Director of Agriculture and Nutrition at GAIN. “We have to link agriculture and nutrition at every step”.

CASE 3: SCALING-UP NUTRITION (SUN)

Scaling-Up Nutrition (SUN) is a political movement that grew in response to the continued high-levels of undernutrition in the world and the uneven progress towards the Millennium Development Goals to halve poverty and hunger by 2013. SUN is designed to support the international commitments to improve nutrition by ensuring that support to countries is well-aligned and effective, which has contributed to measureable results.

The multi-stakeholder movement, which focuses on the critical window of opportunity between pregnancy and a child’s second year, currently has 27 member countries, as well as civil society groups, donors, businesses and international organizations. SUN promotes the implementation of evidenced-based nutrition interventions, scaling-up successful practices, as well as integrating nutrition goals into broader efforts in critical sectors such as public health, social protection, and food and agriculture.

To support SUN, the Irish and US governments initiated the 1000 Days Partnership advocacy effort to encourage investment and strengthen policies to improve early nutrition (the first ‘1000 Days’ of life), which has attracted numerous other backers.



4. Technology to Improve Food Security and Sustainable Agriculture

Improving global food security and sustainable agriculture requires a mix of environmental, social and economic investments that can all be supported and transformed by innovation and new technology.

Technology comes in many forms, from the complex to the simple. One form, genetically modified organisms, has resulted in both revolutionary advances as well as considerable controversy. Other technology, such as ICT applications that improve communication and information-sharing, on-farm mechanized processing equipment, hermetic storage, and drip irrigation is already changing agricultural practices on both large and small-scale farms. Innovative new production methods are also being introduced, such as the System of Rice Intensification (SRI), which uses cover crops and green manure to improve soil fertility. Appropriate and cost-effective technology plays a catalyzing role in improving sustainable agricultural yields, reducing crop losses, improving distribution networks, and providing real-time weather and market information to farmers.

While many large, highly-capitalized commercial farms are benefitting from technological advancements across the globe, poor smallholder farmers are often too difficult to reach, the equipment is too expensive, or there is little access to training or follow-up resources for wide-scale adoption. However, this trend is starting to change as the private sector, civil society and governments are investing more in technology solutions that work in remote areas, are affordable, ecologically sustainable and are packaged with adequate support and follow-up for the farmers using them.

Since technological innovation is critical for on-farm use, it can also support more efficient financial transactions, better health care, and improved education access — all of which support rural development and the health of fragile communities where both poor, smallholder farmers live as well as large, commercial farm labourers.

CASE 1: SDC, ALLIANZ AND SARMAP

Technology that was designed to monitor crop production and damage from natural disasters around the world will soon help some of the smallest and poorest rice farmers in Asia recover after their crops are destroyed by droughts or floods. An innovative partnership between Allianz Reinsurance, an arm of the international insurance group; the German development organization GIZ, the International Rice Research Institute IRRI; sarmap, a Swiss-based remote sensing company; and the Swiss Agency for Development and Cooperation (SDC) have developed an innovative 3-year project that will focus on rice: the most important staple crop in Asia. Using satellite technology (from the European Space Agency), researchers, scientists and government officials can estimate the expected production for a crop on a weekly basis and, when coupled with crop insurance for small-scale farmers, serves as a hedge against the increasing frequency of natural disasters due to climate change. Since rice is also one of the most widely grown crops in the world, it is the most important crop for the poor, and more than 3.5 billion people depend on it globally. The project will target 5 million smallholder rice farmers in Bangladesh, Cambodia, India, Indonesia, Thailand, the Philippines and Vietnam.

In addition to helping small farmers with micro insurance, the CHF 12 million project, entitled the “Remote sensing-based Information and Insurance for Crops in Emerging economies” (RIICE) will also give governments the data they need to make informed policy choices in agriculture.

“Agriculture plays an important role in providing food security in developing countries. Therefore, it is important that governments and development organizations have maximum transparency on expected and actual crop yields so that they can make better policy decisions”, said Martin Dahinden, Director-General of SDC. “RIICE will help governments in Asia mitigate risks to food security while at the same time protect farm-

ers from the financial losses that occur due to natural catastrophes”.

Both IRRI and sarmap will work closely with partner institutes in each country to build their capacity to map and monitor rice production.

“By transferring their farmers’ financial risks to the private insurance sector, governments can mitigate the financial shocks of natural catastrophes to both their and their farmer’s budgets”, added Michael Anthony, the Project Coordinator of RIICE from Allianz Re.

CASE 2: VODAFONE

Vodafone Farmers Club, launched in collaboration with the Turkish Ministry of Agriculture and Rural Affairs, is a mobile price plan, which helps farmers in Turkey gain access to information and agriculture discounts aimed at boosting their livelihoods. The plan provides SMS alerts with government information on new regulations and available financial support, as well as the weather forecast and local market prices tailored to provide information for their location and produce.

Vodafone is partnering with Şekerbank, an agricultural bank, enabling farmers to pay their entire mobile bill once a year after the harvest, and subscribers to the service receive reduced handset prices and discounts on farm machinery. Vodafone has trained more than 100,000 farmers to use mobile technology and more than 600,000 people have signed up for the service.

CASE 3: ENEL

Enel, an Italian energy company, and the World Food Program (WFP) are using green technology to address the impact of climate change on food insecurity while also reducing WFP’s carbon footprint.

The main components of the Enel-WFP agreement are twofold:

First, Enel is supporting high-efficiency cooking stoves for WFP’s work with schools, community centers and poor households who are cooking WFP food rations. Enel and WFP will use “green” stoves to develop a business model to generate carbon emission reduction credits.

Second, Enel will install solar panels to cut greenhouse gas emissions at the United Nations Humanitarian Response Depots (UNHRD), which are managed by WFP. The pilot sites are located in Brindisi (Italy), Panama City (Panama), Dubai (UAE) and Accra (Ghana). UNHRDs are used to pre-position, store and handle emergency supplies and support equipment, allowing the humanitarian community to deliver emergency relief items as soon as they are needed.

Using green technology to reduce the carbon footprint of large humanitarian agencies like WFP can reduce costs, improve the environment, and enhance the health of the poorest families who use cooking stoves every day.

5. Reducing commodity price volatility

Agricultural commodities have long been characterized by volatile price fluctuations due to global surges in supply and demand as farmers cope with the weather and try to predict future needs. Weather-related incidents, such as droughts, floods and hurricanes, are increasing as climate change leads to more crop losses. But that long-term volatility, in the range of 11% to 20% since 1990, took a dramatic turn in 2008, with food prices spiking by more than 30%, causing hardship for the world's poor, while leading to destabilizing uncertainty for farmers, consumers and policy makers.

Since commodity prices are still volatile largely because it can take a considerable amount of time for agricultural production to recover after natural disasters and subsequent market fluctuations, price instability is still a factor in today's global markets.

Other factors play a strong role in price volatility. The world's growing population is increasing its demand for food. By 2050, the world's population will increase from 7 billion to 9 billion people, and the demand for food is expected to increase between 70% and 100%.

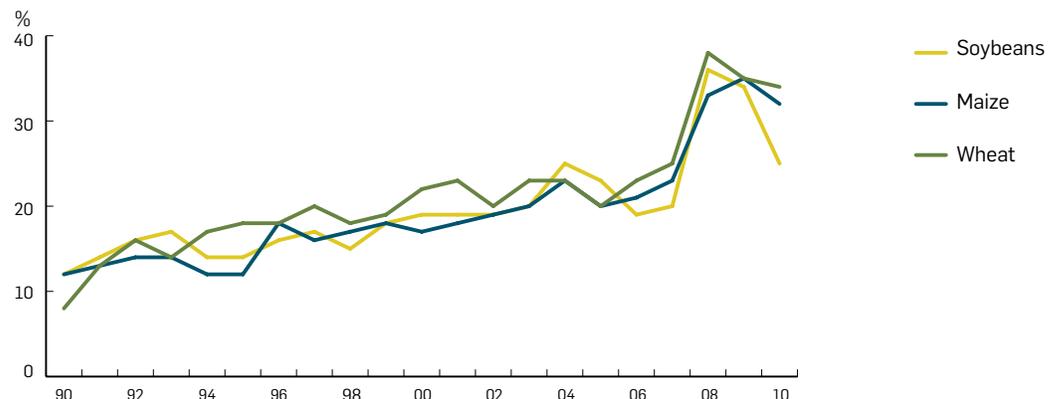
Rising food prices has severely affected income distribution and poverty, especially in low-income economies. The loss in real

income as a result of higher food prices is a particularly acute problem for low-income countries where households spend a large share of their income on food. A depreciating US dollar has also contributed to price increases, as trade in many agricultural commodities is denominated in USD, and speculative investment in financial derivative markets for agricultural commodities also played a role. The poorer population's inability to purchase food due to higher prices can cause social instability.

High-oil prices are also driving up commodity prices, as oil is used not only in transport, but in the production of agricultural inputs such as fertilizer. Storage facilities are inadequate in many parts of the globe leading to high post-harvest losses and an inability for governments to hold buffer stocks or emergency reserves. In addition, raising bio-fuel production is putting pressure on land traditionally used for food. Nearly 20% of the global sugar cane crop is now used for biofuels, as is 9% of the vegetable oil and coarse grains and 4% for sugar beet. Government export restrictions and hoarding have also amplified price movements and, in some cases, provoked price increases.

Even when volatile prices fall, they pose significant problems for farmers and other actors in the food chain who risk losing

IMPLIED VOLATILITIES (ANNUAL), 1990-2010



their crops or investments if the commodity price falls while they are locked into strategies dependent on higher price levels. Poor smallholders who do not have access to credit may have difficulty financing the crucial inputs needed to plant again. Most farmers in the developing world are not able to carry over income from one season to another. Thus, the welfare of the family and the viability of the farm are often threatened by excessive volatility.

Governments, the private sector and civil society can all contribute to reducing commodity price volatility by focusing on constructive policies and investments.

Increasing agricultural production, which requires better integrating smallholder farmers, will fundamentally alter the balance between agricultural supply and demand, lessening the price pressure. Both public and private sector investment in agriculture will increase food security and help farmers cope better with volatility when it occurs.

Foreign governments and investors can responsibly invest in sustainable agriculture helping poorer countries increase productivity and inclusiveness. Depending on the country and the crop, reducing food waste due to post-harvest losses could contribute an increase of 10%-15% in agricultural commodity production.

Better market information is critical because it informs farmers, investors and government policy makers about crop supply, demand, stocks and export availability. Reducing import barriers helps buffer against localized price fluctuations, while reducing subsidies for biofuels could lessen the pressure on food supplies when global food prices are high. Better risk management tools, such as weather indexed-base crop insurance, would also help mitigate price volatility.

Finally, creating national safety nets for the poorest families can help them ride-out a period of high food prices with government support. This could be in the form of cash transfers, school feeding programs, job creation programs, or nutrition schemes.

Commodity price volatility, which has increased in the last five years and has devas-

tating impacts on food security and national economies, can be mitigated through smart government policies, long-term agricultural investment, and a pro-poor focus to protect the most vulnerable.

CASE 1: APG ASSET MANAGEMENT

APG, a Dutch asset management firm, invests the pensions of more than 4.5 million people with a strong focus on responsible investments. The company invests in a variety of asset classes, including equities, fix-income securities, real estate, hedge funds, and commodities. APG administers over 30% of all collective pension schemes in the Netherlands, and works for more than 30,000 employers.

APG, with \$300 billion euro under management, has formulated principles in which they assess investments based on environmental or social factors, such as child labour, trade union freedom and good corporate governance. APG also uses its influence to encourage the companies it invests in to comply with corporate social responsibility guidelines through use of its voting rights at shareholder meetings. APG monitors how these companies score on sustainability and corporate governance and whether they continue to act in accordance with the principles of the United Nations Global Compact.

Before investing in commodities, APG takes a variety of issues into consideration, including the environment (climate change, water management and biodiversity, for example) and social issues (human rights, working conditions and safety). All new investments in the commodity asset class require a formal assessment by the Environment, Social and Governance (ESG) team before decisions are made.

The goal is to ensure that all external managers follow APG's principles for responsible investing. This helps APG reduce the financial risks in their investments and helps contribute to better compliance with international environmental and social standards. All of APG investments in forestry, for example, must be certified by the Forest Stewardship Council or an equivalent.

Examples of APG responsible investments in commodities include:

The Equator Principles (EPs) are a credit risk management framework for determining, assessing and managing environmental and social risk in project finance transactions. The EPs are based on the IFC Performance Standards on social and environmental sustainability and on the World Bank Group Environmental, Health, and Safety Guidelines.

- APG asked an agricultural company in Argentina to adhere to the guidelines developed by the Roundtable on Responsible Soy;
- APG asked a biomass power fund to participate in the Roundtable on Sustainable Biofuels;
- APG included the standards for environmental and social performance from the International Finance Corporation in the contract with an investor in African mines;
- A livestock farm in Australia honoured APG's request to engage in a new process led by the World Wildlife Fund to develop sustainability standards for beef production.

CASE 2: STANDARD CHARTERED

Standard Chartered has more than 85,000 employees, and is a leading international bank focused on Asia, Africa and the Middle East. The bank is committed to building a sustainable business and promoting positive social and economic impact in the communities where it operates.

Standard Chartered supports both commercial and small-scale farmers. The Bank uses traditional forms of collateral in the form of farmers' physical assets (for example, land and infrastructure) as well as Standard Chartered's own Input Financing Model. Furthering access to finance is a key component of the bank's sustainable business model. This includes extending financing and training to support microfinance, small and medium enterprises (SMEs), Islamic finance and agriculture financing.

The Input Finance Model uses a farmer's commodity as collateral (maize, wheat, soya, rice) rather than traditional fixed assets, thereby empowering the farmer by increasing his/her funding potential as well as freeing up physical assets for additional financing ventures. In Africa, the bank is developing structured financial solutions to promote agricultural development; in Tanzania, Standard Chartered uses a cooperative approach, where more than 75 small-scale farmers within one area collaborate under the management of a local rice milling company, to gain access to the latest developments in seeds, agricultural machinery and technical know-how. This input financing structure gives previous subsistence farmers direct benefit from pooled resources and helps them produce rice

on a commercial scale, accessing new farming skills, commercial pricing and ultimately, increasing their income potential.

Standard Chartered The Bank applies governance standards in evaluating and financing agricultural projects. Farmers must comply with local agricultural and labour practices, and projects must adhere to the internationally accepted Equator Principles as well as apply strict avoidance measures to Ramsar accredited wetland areas.

Standard Chartered also has strategic partnerships with governments, NGOs and other private sector actors. For example, the Bank partnered with the German Development Bank (DEG) to provide 100 million euro in financing and guarantees to the continent's agricultural sector over a three-year period. The program, AgroAfrica, aims to increase the level of commercial farming skills, advance mechanization of farming, sustainably utilize the arable land available and ultimately contribute to the food supply.

CASE 3: WORLD BANK, AGRICULTURAL PULL MECHANISM (AGPM)

The World Bank has recently implemented the Agricultural Pull Mechanism (AGPM) Initiative to enhance smallholder welfare and food security for the poor and vulnerable in developing countries by increasing investments in agricultural innovation and adoption. The Bank is doing this by developing financial incentives (i.e., "pull mechanisms") for the private sector to research, develop and deliver products and services that will improve smallholder agriculture.

Pull mechanisms are designed to overcome market failures, and encourage private and public sector innovators to develop products and services that they would not otherwise bring to the market. Well-crafted pull mechanisms can be used to close the gap between the demand for socially desirable goods and services and their supply by the private sector in developing countries.

The idea of applying "pull mechanisms" in agriculture was launched at the June 2010 G20 summit in Toronto, where leaders committed to finding incentives to harness the private sector for agricultural innovation.



In order to investigate these mechanisms further, Canada, the United States, the United Kingdom and the Bill & Melinda Gates Foundation are collaborating with like-minded donors, supported by World Bank staff through the scoping phase. Through October 2011, the World Bank has solicited pull mechanism ideas in the areas of (1) Inputs/Increasing Yields, (2) Outputs/Post-harvest Management, (3) Livestock, and (4) Nutrition – and more will be solicited in 2012.

Managed by IFC, the Private Sector Window supports private initiatives to improve governance, productivity and competitiveness in the agribusiness sector in low-income countries by providing short and long term loans, credit guarantees, equity investments and advisory services. The first investment of the Private Sector Window was approved on 19 April 2012 and IFC plans to launch the second public call for proposals during this year.

CASE 4: INTERNATIONAL FINANCE CORPORATION, GLOBAL AGRICULTURE AND FOOD SECURITY PROGRAM (GAFSP)

The Global Agriculture and Food Security Program (GAFSP) is a multilateral mechanism to assist in the implementation of pledges made by the global community to support investments in agriculture and food security.

6. RECOMMENDATIONS

Given the scale of the global food security and sustainable agriculture challenge, the international community needs to expand and deepen its effort to accelerate progress.

The Scaling-Up Nutrition movement is now being pursued by an increasing number of poorer nations and a broad coalition of civil society organizations, business groups and development partners. The World Economic Forum's "New Vision for Agriculture" is incorporating some of the leading businesses in the world to create economic opportunity, environmental stability and food security. Donors, United Nations agencies, the World Bank, and the International Finance Corporation are all pursuing investment policies to improve agricultural productivity globally, in partnership with government, the private sector and civil society.

However, long-term and consistent progress towards global food security and sustainable agriculture fundamentally requires national government leadership to create the enabling environment for communities, the private sec-

tor and political institutions to succeed.

While some governments have made important strides in recent years, more needs to be done. Agriculture is a livelihood for 86% of rural people in the world – 1.3 billion smallholders and landless workers. According to FAO, the rate of agricultural production is expected to fall to 1.5% between now and 2030, and to .9% between 2030 and 2050. Meanwhile the population will increase by 34% in that time and the number of food insecure people in the world today is increasing.³ Overcoming these trends will require the private sector, civil society and governments to work together, with government leadership critical for success.

Below are some key public policy recommendations to strengthen global food security and sustainable agriculture:

3. "Price Volatility in Food and Agricultural Markets: Policy Responses" Policy Report including contributions by FAO, IFAD, OECD, UNCTAD, WFP, the World Bank, the WTO, ICPRI, and the UN High Level Task Force on Global Food Security.



1) Invest in agricultural productivity, particularly among smallholder farmers

- Governments should invest more in agricultural research and development;
- Governments should invest more in agricultural institutions, extension services, and infrastructure such as roads, ports, storage and irrigation systems;
- Governments should focus investment in rural development in sectors such as education (particularly for girls), health care and clean water;
- Governments should enforce, in a consistent and predictable manner, labor, human rights and environmental standards.

2) Improve the quality and access to nutritional food.

- Government policy should build nutrition into all sectors: agriculture, value chains, safety nets, public health and education;
- Within agriculture, government policy should focus on the nutritional value of food from 'farm to fork', which includes production, processing, marketing, purchase, preparation and consumption;
- Governments should focus on enabling all people to secure year-round access to the varieties of food required for good nutrition

3) Protect and enhance the environment while improving agricultural productivity

- Government policy should encourage integrated management of food, energy, water and land with full accounting of these inputs;
- Government policy should prioritize programs to diversify agricultural production as a means for managing soils, water and biodiversity.

4) Support technological innovation that is applicable and accessible to poor farmers

- Establish policy frameworks that attract investment in technology and facilitate sustainable agricultural development;
- Assist in scaling-up effective pilot projects where technology has increased food security and sustainable agriculture.

5) Reduce commodity price volatility

- Governments should invest in increasing agricultural production to buffer against large swings in supply and demand;
- Governments should improve data sources on crop supply, demand, stocks, weather and market information so policy makers and farmers have the information they need in order to respond before prices spike;
- Governments should balance food and energy needs, e.g. biofuels, with a particular focus on enhancing food security;
- Governments should reduce trade barriers to serve as a buffer against localized price fluctuations; create and enhance national safety net programs and emergency food reserves to assist the most vulnerable during periods of rapid commodity price increases; and invest in risk management tools for producers.

6) Reporting

- Governments should support the development of corporate transparency and reporting guidelines for sustainable agriculture and encourage all businesses to make food security and sustainable agriculture a business priority.

7. CONCLUSION

It is clear that momentum, particularly since the 2008 global food crisis, is building in the food and agriculture sector to adopt more sustainable agriculture practices that lead to food security, economic opportunity, and environmental sustainability.

Governments, through inclusive public policy and targeted investments, can create the enabling environment to enhance food security and improve sustainable agriculture at a local and national level. Civil society can provide the local experience and expertise to drive good decision making based not only on data and input, but the wishes of local communities and their particular needs, and consumers can increasingly demand that the food and beverages they consume be sustainably sourced.

In the business sector, there are leading companies that are scaling-up new initiatives, committing to aggressive sustainability goals, and providing examples of best practices that other companies can follow. These companies have moved beyond certification schemes and CSR reporting in order to embed sustainable practices in their core business. They are not only pushing their supplier net-

work to improve practices, but aggressively working with smallholder farmers — and the communities they live in — to provide training, finance, and a fair and consistent buyer for the farmer's harvest.

Other companies, who may not be as far along, can use these examples as motivation to push forward their own commitments and build towards a future where every food and agriculture company is conducting business in a sustainable manner.

The challenge moving forward will be to incorporate more small and medium sized businesses into this global momentum, particularly those based in Africa, Asia and Latin America.

Working together with government, civil society and the private sector, a sustainable agriculture system that improves the environment, economic outcomes, and social structures is feasible. There is an extraordinary amount of work to do, but momentum and commitment is growing from all sides.



ANNEX 1

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The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS

- Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2 make sure that they are not complicit in human rights abuses.

LABOUR

- Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4 the elimination of all forms of forced and compulsory labour;
- Principle 5 the effective abolition of child labour; and
- Principle 6 the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

- Principle 7 Businesses should support a precautionary approach to environmental challenges;
- Principle 8 undertake initiatives to promote greater environmental responsibility; and
- Principle 9 encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

- Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

