

FOOD SUSTAINABILITY

A GUIDE TO PRIVATE SECTOR ACTION



Table of contents

Forewords	2
Introduction	4
1. Water management	8
2. Agricultural inputs and infrastructure	12
3. Financial mechanisms and risk management instruments	18
4. Nutrition	24
5. Energy and biofuels	30
6. The role of Information and Communication Technology (ICT)	34
7. Job opportunities for rural low-income populations	38

Note:

This report is the outcome of a highly collaborative process involving a number of UN Agencies, Funds and Programmes and Bretton Woods institutions. Ms. Cecilie Arnesen Hultmann, of the United Nations Global Compact Office, served as Editor-in-Chief and Project Director of this report.

The report was designed by Tannaz Fassihi.

Disclaimer:

Neither the United Nations nor the Global Compact Office can make any representations concerning the accuracy of any of the information herein. The inclusion of company examples is intended solely to facilitate learning and does not constitute an endorsement by the United Nations of any of the individual companies described herein or of any of their policies or practices. The material in this publication may be quoted and used provided there is proper attribution.

Forewords



The first Millennium Development Goal (MDG) focuses on reducing poverty and hunger worldwide. While always acknowledged as important, this linkage of food production, access and nutrition to poverty reduction is now central to the world's discussion of progress towards the MDGs. While food prices appear to be stabilizing at levels below the peaks reached in early and mid-2008, the underlying factors driving higher prices – increasing global demand for food and fuel, reduced investments in production and stocks over the past decade, and the actual and potential impacts of climate change on production, are expected to maintain prices well above the historic low levels of just two years ago.

Even before the recent dramatic increase in food, grain and commodity prices, there were over 800 million hungry people in the world. Now, the sustained rise in food prices is expected to increase the number of poor and hungry people by at least another 100 million. It threatens to reverse critical gains made in reducing poverty and hunger and creates a host of political and security challenges. This needs a two-pronged approach in order to meet the immediate hunger and malnutrition needs with food and other nutrition assistance and safety net programs, as well as medium to longer term efforts to improve availability and access to food.



We have the opportunity to get back on-track towards achievement of the first MDG while meeting the world's food needs. To meet growing demand and further stabilize prices at levels which people can afford to feed themselves, food production will need to rise 50 percent by 2030. In order to meet that demand while increasing food security and making a significant dent in world poverty we need to: ensure that the two billion people who live and work on smallholder farms are involved in the supply response. Most of these hardworking smallholder farmers are poor, struggling to survive on less than two US dollars a day. To realize their productive potential, these farmers need help. They need secure access to land and water, and to microfinance to pay for seeds, tools and fertilizers, and to knowledge enabling improved production practices. They also need storage facilities to eliminate crop losses, roads and transportation to get their products to market, and the latest market information so they can get the best prices for what they sell. All this requires investment.



We urgently need new and stronger public-private partnerships to mobilize a new agricultural productivity revolution which includes smallholder farmers. These partnerships are critical in linking smallholders with suppliers and buyers, reducing transaction costs and facilitating training. In identifying and committing to the scaling up of action-oriented public-private partnerships, the UN Private Sector Forum would take an important step towards securing food for all in the foreseeable future.

The higher prices present major challenges, but they also present opportunities if they make agriculture attractive to the private sector and allow smallholder farmers to increase the elasticity of their supply response.

Dr. Jacques Diouf
Director-General
United Nations Food and
Agriculture Organization
Vice-Chairman
High-Level Task Force on the
Global Food Security Crisis

Mr. Lennart Båge
President
International Fund for
Agricultural Development

Ms. Josette Sheeran
Executive Director
World Food Programme



The deterioration of the global economic outlook – compounded by the impact of high food and energy prices – is adding to the development challenges in many countries. It is now clear that increased efforts will be required if the world is to meet the MDGs by 2015.

An important component of these increased efforts will have to be financed and supported by public resources, including ODA. But the contributions of a diversified and productive private sector, in both developed and developing countries, will also be critical. The innovation and ingenuity of private sector investment in the food and agricultural sector – the main source of livelihoods for many of the world's poor people – is especially urgent. A responsible approach to solving the current food crisis requires the promotion of business models and partnerships that both tackle food security and stimulate pro-poor growth, while also preserving the environment and mitigating climate change.

There are numerous ways that the private sector – at both a local and global level – can help, and is helping to, address the current food crisis. Businesses can help smallholder farmers access technical and commercial information and also facilitate access to financial and other markets. New farmer-centered approaches to private sector development, already underway by a range of stakeholders, can bring about coordinated delivery of essential services, as well as improved infrastructure, energy and access to water for irrigation. Further private sector investment in agricultural knowledge, science and technology can increase the adaptive capacity of farmland to changes in climate and enhance the resilience of crop systems through purposeful biodiversity management.

This guide showcases a variety of examples that demonstrate how the private sector can take concrete steps as part of their core business activities, individually or in partnership with their stakeholders, to help solve the food crisis. We hope that these examples will spur other businesses – large and small, global and local – to join our collective effort to tackle this challenge and achieve the MDGs.

Kemal Derviş
Administrator
United Nations Development
Programme



Never before have the objectives of the international community and the business world been so aligned. Critical common goals, such as building markets, combating corruption, safe-guarding the environment, improving food security and ensuring social inclusion, have resulted in unprecedented partnerships and openness among

business, government, civil society, labour and the United Nations. Many businesses recognize the need to collaborate with international actors in the current global context where social, environmental, political and economic challenges – whether occurring at home or in other regions – affect companies as never before.

We now realize that business, trade and investment are essential pillars for prosperity and peace. Simply put, without sufficient private investment, broad-based growth cannot occur. The private sector can best contribute to overcome the world's pressing challenges by being successful, investing in the areas where it is most needed, and doing so in a responsible manner.

With this in mind, the Global Compact seek to promote collaborative solutions through combining the best of the United Nations, such as moral authority and convening power, with the private sector's market-driven, solution-finding strength. It is a framework for business that commit to aligning their operations and strategies with the values of the UN through incorporating ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption. It also asks business to take concrete action in support of the broader peace and development goals of the UN – as a practical manifestation of good corporate citizenship which underscores a company's commitment to positive change.

With this guide, *Food Sustainability – A Guide to Private Sector Action*, we hope to demonstrate how responsible business can be a force for good and present practical ideas for how business can support the work of governments, the United Nations and other stakeholders to solve the current global food crisis.

Georg Kell
Executive Director
United Nations Global Compact

“The dramatic rise over the past twelve months in global food prices poses a threat to global food and nutrition security and creates a host of humanitarian, human rights, socio-economic, environmental, developmental, political and security-related challenges. **This global food crisis endangers millions of the world’s most vulnerable, and threatens to reverse critical gains made towards reducing poverty and hunger** as outlined in the Millennium Development Goals. It requires an urgent comprehensive, coherent, and coordinated response.”

“Comprehensive Framework for Action” (July 2008),
The UN Secretary-General’s High-Level Task Force on the Global Food Security Crisis.

The Global Food Security Crisis

The world has witnessed soaring food prices during the past two years. In the first six months of 2008, international food prices of all major food commodities reached their highest level in nearly 30 years. While currently stabilizing at levels below their early 2008 peaks, the underlying factors driving higher food prices are expected to maintain prices at well above their 2006 levels for at least another 10 to 15 years — the critical period in the world’s efforts to reduce poverty.

A range of factors have been identified as contributing to the crisis, including rapidly increasing energy prices, a lack of investments in the agricultural sector, rapidly rising demand for food arising from economic growth and higher incomes, trade-distorting subsidies, environmental degradation, subsidized production of bio-fuels that substitute food production, and the imposition of export restrictions leading to hoarding and panic buying.* These factors are being exacerbated by global climatic changes.

All of these factors are expected to keep food prices high for several years to come, posing a continuing challenge for the global community. Although the crisis impacts all countries, it affects low-income and food deficit countries the hardest. According to the World Bank, 36 countries, most in Sub-Saharan Africa, are in a food security crisis.

Today, more than 860 million people in the world are suffering from chronic hunger. As a result of the current crisis, an additional 100 million people are expected to be driven into poverty and hunger.

The need for urgent, comprehensive and coordinated action to address the food crisis and its root causes has been recognized. To this end, the High-Level Task Force on the Global Food Crisis (see box, following page) presented in July 2008 the Comprehensive Framework for Action (CFA) as a guide for global and local actors and as a catalyst for immediate response to the crisis.

Two sets of actions are presented in the Framework. The first focuses on meeting the *immediate needs* of vulnerable populations. The second set focuses on *building resilience* and contributing to global food and nutritional security.

While both sets of actions require urgent attention from all stakeholders, this guide focuses on how the private sector can support solutions to the long-term developmental aspects of the crisis.

The Role of Governments and the United Nations

Governments have the primary responsibility to address the impacts of the food crisis and to ensure a conducive environment for sustainable responses to increase the availability and access to food. Key actions include:

- Ensuring food assistance to the poor and other vulnerable groups.
- Strengthening safety nets to reduce vulnerability of these groups to current and future crises.
- Addressing trade, taxation and other policy

distortions which artificially raise food prices and/or undermine local food production and marketing incentives.

- Ensuring a stable macroeconomic environment to avoid the “inflation tax” on the poor and to provide a stable climate for investments by the poor and non-poor in agriculture and related activities.
- Targeting public investments financed from own budget and official development assistance (ODA) to strengthen rural infrastructure and markets, education and health and appropriate agricultural research and extension activities.
- Address distortions of the “rural investment climate”, including excessive regulations and local corruption.

The UN System has developed a comprehensive response to the crisis and numerous organizations are working to address both the immediate humanitarian aspects of the crisis and its root causes. The box on page 6 lists the leading UN agencies, funds and programmes and Bretton Woods institutions working on this issue.

The Role of Business

While government leadership is crucial for addressing the implications of the food crisis, business also has a vital role to play in partnership with others to develop and implement innovative responses. Achieving sustainable solutions to the crisis depends on the concerted commitment of all sectors.

Companies from a broad range of industry sectors have an impact on food security. These include agribusiness, finance, information and communications technology (ICT), manufacturing, transportation, retail, infrastructure, water and energy, extractive, life sciences and healthcare sectors. Many companies — both large and small, and from developed and developing countries - are already playing an active role both individually within their own value chains and collectively in partnership with other private sector enterprises and with governments and civil society organizations. Business leadership networks operating at national levels and globally, such as the United Nations Global Compact, International Chamber of Commerce (ICC), World Economic Forum (WEF), World Business Council for Sustainable Development (WBCSD), Business for Social

Responsibility (BSR) and International Business Leaders Forum (IBLF), have also established a variety of collective initiatives aimed at improving food security and sustainability.

The CFA outlines a number of areas along the food value chain where action is needed, and where companies can contribute:

Production

- Investing in and improving access to agricultural inputs such as locally adapted seeds, fertilizer and pesticides.
- Technology transfer and developing new locally adapted technology related to food production, processing and distribution.
- Strengthening market linkages and integrating local producers and smallholder farmers into supply chains — improving local capacity by assisting farmers and local businesses with knowledge, tools and resources.
- Providing improved access to financial institutions in rural areas (new financial services and markets that enable investment and reduce risks associated with food production).
- Improving access to information and telecommunication technology (market information and access).



THE HIGH-LEVEL TASK FORCE (HLTF) ON THE GLOBAL FOOD CRISIS

In April 2008, the Chief Executives Board of the United Nations established a High-Level Task Force on the Global Food Crisis, under the leadership of the UN Secretary-General. The HLTF brought together Heads of UN specialized agencies, funds and programmes, Bretton Woods institutions and relevant parts of the UN Secretariat. The aim of the HLTF was to create a prioritized plan of action for addressing the crisis and coordinate its implementation. The Comprehensive Framework for Action (CFA) responds to this request.
(www.un.org/issues/food/taskforce)

* The UN Secretary-General’s High-Level Task Force on the Global Food Security Crisis. Comprehensive Framework for Action (July 2008).

- Using environmentally-friendly business practices to preserve ecosystems and sustainable management of natural resources (including land and water management).
- Investing in and promoting research and development of non-food and multi-purpose crops, intercropping and other ways of combining food and fuel provision, alongside investment in renewable energy sources.

Infrastructure

- Investing in rural infrastructure such as roads, transportation, communication, electrification, irrigation and storage facilities targeted to support food production, marketing and distribution.

Retail

- “Branding” smallholder friendly production and sourcing to support price premiums benefiting both companies and smallholder communities.
- Processing and packaging essential foods in ways that make them more affordable and accessible to lower income consumers.

Consumption / Nutrition

- Improving food safety and nutrition (through investing in research and development of new products).
- Participate in awareness-raising campaigns around nutrition.

Enabling Environment

- Engaging in policy dialogues with stakeholders to ensure that the development of economic, regulatory and administrative policies that address the concerns of the private sector, and contribute to better functioning markets.
- Advocating increases in overseas development assistance for the smallholder agricultural sector, as well as for policies which improve land tenure, address rural financial market distortions, develop rural infrastructure and clarify contractual rights as part of improving rural investment climates.
- Engaging in public-private “partnerships for food” with stakeholders on critical local issues.

As outlined in the “Framework for Business Engagement with the United Nations”^{**}, there are three main ways for business to contrib-

ute to UN goals: through their core business operations and value chains; through social investments and philanthropy; and through engaging in public advocacy, policy dialogues and strengthening institutions. This guide explores the different ways in which the private sector can support government efforts and contribute to a sustainable solution to the food crisis.

For businesses, making a profit and “doing the right thing” are not mutually exclusive. Contributing to food sustainability and the MDGs not only helps create a safer and more prosperous world. It also helps secure future commercial success in new markets and build a more profitable business environment. In fact, business simply cannot thrive if society fails. In environments that lack adequate economic, political and social institutions for development, achieving success can demand innovative business approaches that serve both corporate and societal interests.

Introduction to this guide

“Food Sustainability – A Guide to Private Sector Action” has been prepared on the occasion of the first United Nations Private Sector Forum, taking place at United Nations Headquarters in New York, on 24 September 2008.

The guide has been produced by the United Nations Global Compact Office in close collaboration with the lead organizers of the Forum’s roundtable discussions: the Food and Agriculture Organization (FAO), the International Finance Corporation (IFC), the International Fund for Agricultural Development (IFAD), the International Labour Organization (ILO), the Global Alliance for ICT and Development of the Department of Economic and Social Affairs (UNDESA-GAID), the UN Development Programme (UNDP), the UN Environment Programme (UNEP), the UN Office for Partnerships (UNOP), the UN Industrial Development Organization (UNIDO), the World Bank (WB), and the World Food Programme (WFP).

The thematic structure of the guide follows the topics of the Forum’s roundtable discussions:

1. Water management
2. Agricultural inputs and infrastructure
3. Financial mechanisms and risk management instruments

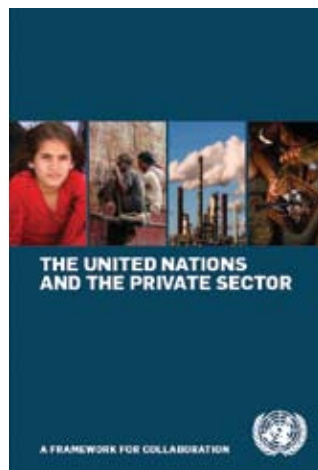
4. Nutrition
5. Energy and biofuels
6. The role of Information and Communication Technology
7. Job opportunities for rural low-income populations

Section introductions frame the issue at hand in the broader context of food sustainability, outlining key challenges and suggesting actions that companies can take to make a positive contribution. They are supported by illustrative examples profiling different ways in which companies around the world are taking action on food sustainability – individually, collectively or in partnership with other stakeholders.

The examples are aimed to be illustrative rather than comprehensive, and drawing from a sample of both developing country companies and multinational corporations. They have been submitted by companies invited to attend the 2008 UN Private Sector Forum and by the UN agencies, funds and programs working on these issues, and are designed to inspire broader commitments and actions by the business community.

UN AGENCIES, FUNDS AND PROGRAMMES AND BRETTON WOODS INSTITUTIONS INVOLVED IN THE RESPONSE TO THE FOOD CRISIS:

Food and Agriculture Organization (FAO)	UN Conference on Trade and Development (UNCTAD)	World Food Programme (WFP)
International Finance Corporation (IFC)	UN Development Programme (UNDP)	World Health Organizations (WTO)
International Fund for Agricultural Development (IFAD)	UN Environment Programme (UNEP)	Department of Economic and Social Affairs (DESA)
International Monetary Fund (IMF)	Office of the High Commissioner for Human Rights (OHCHR)	Department of Political Affairs (DPA)
UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS)	Office of the UN High Commissioner for Refugees (UNHCR)	Department of Public Information (DPI)
	UN Children’s Fund (UNICEF)	Department of Peacekeeping Operations (DPKO)
	World Bank (WB)	



^{**} The United Nations and the Private Sector: A Framework for Collaboration (UN Global Compact Office, September 2008).



1 Water Management

The current international food crisis has a direct and important relationship with another resource crisis that is generally much less reported and understood: the global water crisis. As a result of population trends, urbanization, climate change and other factors, a growing number of regions around the world face significant water shortages — causing great suffering in humanitarian, social, environmental, and economic terms. It is projected that, on current trends, approximately two thirds of humanity will live in water-stressed regions by 2025.

Agriculture accounts for approximately 70 percent of all fresh water withdrawn. Thus, it is clear that the judicious management of water resources — from irrigation to industrial and consumer use — will play a key role in moving from a state of food crisis to one of food sustainability. In other words, in order to satisfy the needs related to food production and productivity in the 21st century, a greater emphasis on water sustainability — from water use to sanitation — will be crucial.

Irrigation, clearly, must be an area of focus. Today, many regions of the world, for instance, continue to rely on flood irrigation — wasting vast amounts of water in the process. Smallholder farms, in particular, need access to improved irrigation methods. At the same time, non-agricultural industries are also significant users of water and therefore have a positive role to play in terms of water management — in direct operations and throughout their supply chains. As well, enhanced water-use efficiency and conservation efforts by consumers and households can also alleviate pressure on increasingly scarce water resources.

The private sector — through both individual and collective efforts — is increasingly making water sustainability a business priority. Through efforts such as the United Nations Global Compact's CEO Water Mandate, and the WBCDS's and WEF's related water initiative, increasing numbers of business leaders are taking action, in partnership with a range of global and local stakeholders. They recognize that in order to operate in a sustainable manner, and contribute to the realization of the Millennium Development Goals, companies have a responsibility to make water-resources management an imperative.

The global food crisis adds a greater sense of urgency to the corporate water agenda, stretching companies — even those in non-agricultural and non-food

industries — to think of ways in which their efforts can further advance the goal of food sustainability.

Suggested Actions for Business:

- Companies should adopt a comprehensive view of their water use, examining their total “water footprint”, that is, across the entire value chain.
- Companies operating in communities and areas of water stress should examine how they can play a role in helping to protect and manage the area watershed — thus broadening the prevailing narrow view of water management.
- Companies should explore partnerships with United Nations agencies and relevant international organizations that are focusing on the issues of water and sanitation.
- Companies should build closer ties with civil society organizations, especially at the regional and local levels, and work with communities to encourage the development and use of new water-management technologies — including efficient irrigation methods, new plant varieties, drought resistance, and water efficiency.
- Companies should exercise “business statesmanship” by being advocates for water sustainability in global and local public policy dialogues, and encourage governments to fulfill their pledges with respect to water-related objectives and goals.
- Chief executive officers and their companies should endorse international water sustainability initiatives such as the United Nations Global Compact's CEO Water Mandate and become actively involved in related business-oriented initiatives from bodies such as the World Economic Forum, the World Business Council for Sustainable Development and the Global Water Challenge.



Technology for Improved Water Efficiency

Water efficiency is one of the greatest environmental challenges facing the agricultural sector. Farmers need assistance to develop precise and efficient irrigation methods that help conserve water sources in the struggle against water scarcity. Advanced irrigation methods can also enable farmers to reduce water sources pollution. This can also positively impact food supply. More efficient irrigation methods can increase yield with the same water and soil resources that result in more crop per water/soil unit. New technology further enables irrigation of crops in areas that traditionally relied mainly on rain.

Netafim delivers Sustainable Water Man-

agement solutions addressing current water challenges. Since inception, the company has pioneered innovative, low-volume irrigation systems and has developed new drip irrigation methods, which helps minimize water resources depletion, significantly reduces usage of nutrients and crop protection material and therefore prevents water sources pollution. These advanced irrigation methods, coupled with agronomic know-how, enable irrigation of areas that suffer from water shortage and accessibility, increase yield per soil and water unit, and preserve soil fertility by preventing soil erosion.

Company:
Netafim

Sector:
Industrial Engineering

Headquarters:
Israel

Global Compact
signatory since 2008

Company:
Nestlé

Sector:
Food & Beverages

Headquarters:
Switzerland

Global Compact
signatory since 2001

Spreading Best Practices at the Local Level

Nestlé, one of the world's largest food-and-nutrition companies, has a stated business objective of manufacturing and marketing its products in ways that create value that can be sustained over the long term for shareholders, employees, customers, and business partners. The company manufactures, when possible, in countries from which it sources commodities, rather than exporting the raw materials.

A company-wide effort to reduce water consumption was initiated in 1997, and has achieved significant efficiencies. Nestlé's first objective is to minimize the volume of water used in its direct operations and in its supply chain. Secondly, the company invests in plants to treat water after it has been used in manufacturing, returning cleaned water to the local ecosystem. Nestlé had reduced water withdrawal in its direct operations by 28 percent since 1998, even as production volume increased by 76 percent.

At the same time, the company is involved in range of local projects around the world, designed to share knowledge and improve both access to water and the efficient use of water resources. These include working with milk producers in South Africa to use more efficient tillage practices as well as night-



time and computerized irrigation systems; teaching Vietnamese coffee farmers efficient irrigation techniques; and supporting local government efforts to help farmers in Shuangcheng, China, to store farm effluent correctly to avoid contaminating groundwater.

The Importance of Community Action

Company:
IGACOS

Sector:
Water Utility

Headquarters:
Philippines

The IGACOS Water District, a privately-owned water utility in the Island Garden City of Samal, Philippines, undertook a water-supply improvement project in Barangay Tagbitanag, a village located approximately four kilometers from the city center and not presently part of the utility's franchise area. The village has a population of approximately 3000 people, comprised of 457 households. Prior to the project, women and children were forced to travel significant distances to fetch water from areas sources.

With a modest amount of seed money (US\$8,500) provided by UN-Habitat's MDG Localization Project, and a counterpart fund (US\$1,000) from the city government, the

IGACOS Water District provided technical direction to volunteers in an effort to dig trenches and lay water pipes, while also constructing a pump house. The IGACOS Water District also conducted capability-building workshops for community leaders in order to determine water rates, and assist in maintenance and collections.

As a result of these initiatives, water was provided to an elementary school and a high school, while the main pump provided water for families and a neighboring commercial mango orchard. The new system also provided water for vegetable plots that could not have existed previously due to water shortages.

Achieving Zero Water Footprint

In 2007, The Coca-Cola Company announced its response to the global water shortage crisis. The goal of the company's water strategy is to return to communities and nature the equivalent amount of water that it uses in all of its beverages and production. The ambitious strategy involves reducing the amount of water used to produce beverages, recycling the water used for manufacturing processes, and replenishing water in communities and nature through locally relevant projects.

Coca-Cola is engaged in over 100 projects in 49 countries around the world as part of their community water partnership program. The projects include a wide range of locally relevant initiatives, such as watershed protection, expanding drinking water access, rain water harvesting, reforestation and agricultural water use efficiency.

One of these projects is the *Water for my School* project in El Salvador. Along with Fondo Nacional Ambiental de El Salvador

(FONAES), Coca-Cola is helping to enable access to clean water and sanitation in the Nejapa municipality by constructing rainwater harvesting systems, tiled toilets, and septic tanks. To date, two schools have been completed, providing over 1,000 students with access to clean water and improved sanitation. Additional school initiatives are continuing.

In Malawi, the *Mulanje Mountain Community Water Management* is another project in progress. By improving access to potable water for household and irrigation use, this project supports the rehabilitation of system infrastructure in targeted areas, strengthening community water governance, and promoting biodiversity conservation in the Mt. Mulanje watershed. Small-scale drip irrigation equipment and training has been provided to 150 households and over 17,000 people are benefiting from access to improved water supply.

Company:
The Coca-Cola Company

Sector:
Food & Beverages

Headquarters:
USA

Global Compact
signatory since 2006



COLLECTIVE ACTION: The Ceo Water Mandate

Launched by the Secretary-General in July 2007, the United Nations Global Compact's CEO Water Mandate offers a unique action platform to share best and emerging practices and to forge multi-stakeholder partnerships to address the problems of access to water and sanitation.

The CEO Water Mandate seeks to make a positive impact with respect to the emerging global water crisis by mobilizing a critical mass of business leaders to advance water sustainability solutions – in partnership with the United Nations, civil society organizations, governments, and other stakeholders.

The CEO Water Mandate covers six areas: Direct Operations; Supply Chain and Watershed Management; Collective Action; Public Policy; Community Engagement; and Transparency.

Endorsers of The CEO Water Mandate recognize that through individual and collective action they can contribute to the vision of the UN Global Compact and the realization of the Millennium Development Goals.

Since its launch, The CEO Water Mandate has convened two working conferences – in March 2008 (New York), which focused on general implementation; and August 2008 (Stockholm), which addressed managing water in supply chains. The third working conference is scheduled to take place in Istanbul in March 2009, with a focus on water and public policy.

2 Agricultural Inputs and Infrastructure

The already unacceptably high number of hungry people in the world has increased as a result of rising food prices. To reduce the number of undernourished in the world and meet growing demands, global food production needs to double by 2030. Production increases must occur mainly in developing countries where the poor and hungry live, and where 95 percent of the projected population increase will occur.

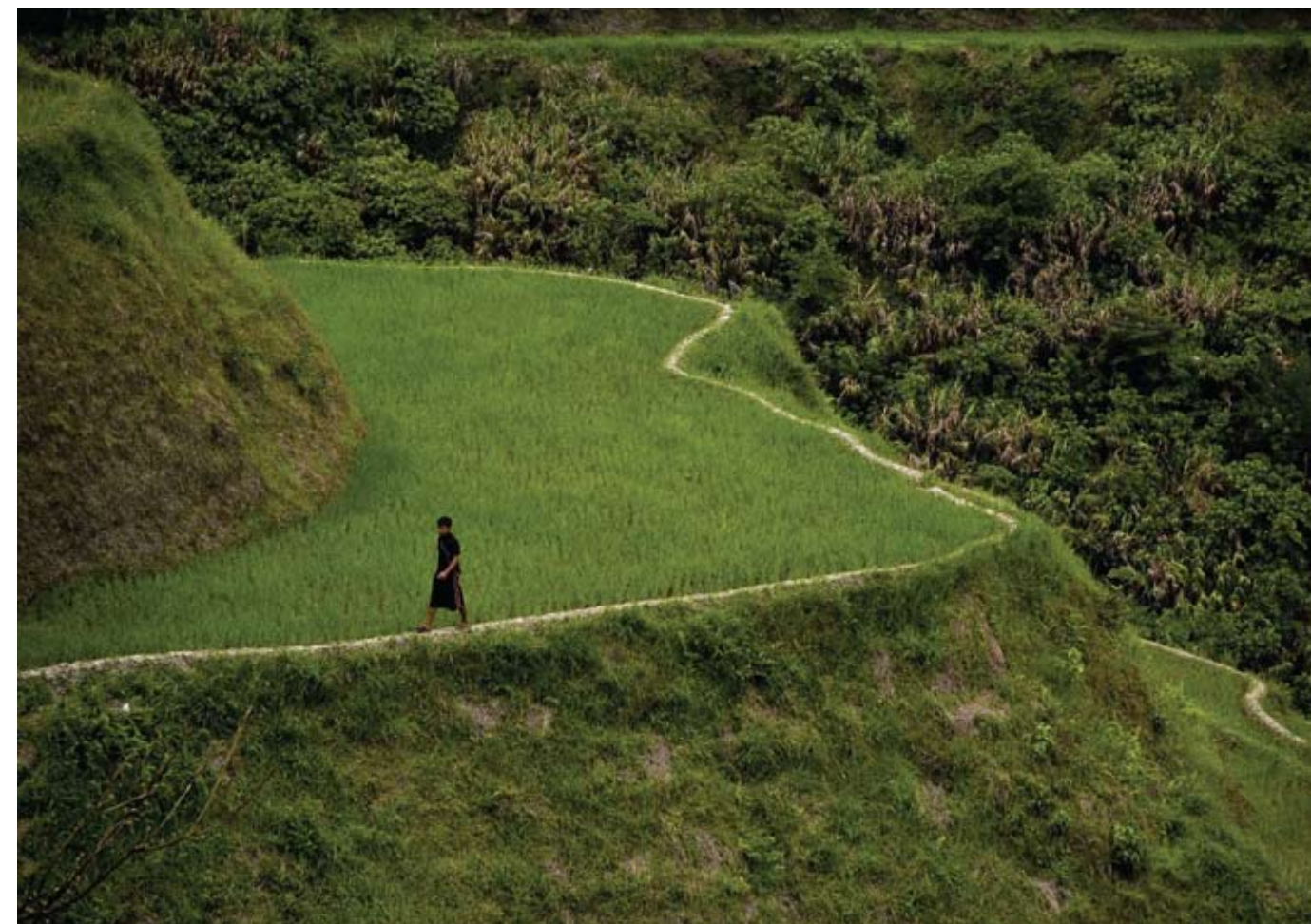
While the majority of agricultural production will continue to come from larger farms, there is a particular opportunity to increase smallholder productivity and production. The capacity of smallholder farms to grow more food is constrained because of lack of access to modern inputs, improved agricultural services and rural infrastructure. Making key inputs available - such as locally adapted quality seeds, fertilizer, animal feed, irrigation pumps, and veterinary drugs and vaccines - will significantly boost food production and incomes. This needs to be complemented by urgent measures to improve critical rural and agricultural infrastructure, in particular rural roads and bridges, electrification, public storage facilities and existing and small-scale irrigation facilities, to remove barriers to domestic trade and flows of food.

At the same time, there is an urgent need to link input and infrastructure support to expansion and improvement of the quality of agricultural services from agricultural research and technology dissemination to training and advisory assistance, as well as promotion of producer organizations and small agri-businesses, in order to improve smallholder productivity, reduce post-harvest losses and improve efficiency and safety in the food chain from the field to the end consumer.

However, increasing agricultural production in developing countries will only be achievable by both public and private investment. For the next ten years, at least high food prices should make agriculture attractive to private investors, while scaling up of innovative public-private partnerships has the potential to make a significant contribution to the enabling environment. The private sector has the “know-how” to reduce inefficiency and make agriculture more profitable for all. By working together, the UN and the private sector can help enable the world’s poor countries to feed themselves.

Suggested Actions for Business:

- Input manufacturers, sellers and related associations could contribute to the design, training and support for smallholder input supply schemes – for example by training and supply of stockists in rural areas with quality inputs and/or by providing in-kind and pro-bono agricultural assistance to governments and relevant UN agencies and NGOs, including training of governmental and non-governmental agents in appropriate standards and use of inputs.
- Large-scale food and cash crop buyers could promote producer organizations and provide inputs and training with costs recovered via group liability and contract buying of produce, which reduces transaction costs for the companies and the smallholders.
- Manufacturers and sellers of veterinary products could train community animal health workers and furnish them with start-up kits to be repaid from full cost recovery of services provided.
- Businesses could consider informing developed-country purchasers of company products that a small percentage of the purchase price will go to financing access to inputs by hungry poor and crisis-affected farmers in developing countries. For example, 5 cents from the sale of any product would provide a destitute farmer with enough seeds to produce a kilo of food.
- Commercial seed companies could assist governments and relevant UN agencies and partners with the design, training and support for multiplication and retailing of quality planting material, and support capacity building in national plant breeding and applied research for tuning production know-how.
- Companies could support other key public-good research that would have major positive impacts on smallholder production capability and make technological innovations available to national programmes in developing countries.
- Pesticide companies should join the UN in banning sales of category I pesticides in developing countries.
- Civil engineering companies could provide training in design, maintenance and repair of small- to large-scale rural infrastructure.
- Companies could also enable rural infrastructure development and build public storage and processing facilities in rural areas.



High-Quality Compost for Organic Farming

SEKEM Holding produces consumer products in the fields of natural pharmaceuticals, organic food and textiles, with an emphasis on sourcing its ingredients from biodynamic farms. Additionally, the company works for sustainable development locally and in the region through founding non-governmental organizations in the fields of organic agriculture, research and development, education and health care. For example, SEKEM has partnered with the Dutch Company Soil and More, to create a joint venture known as EcoProfit, which develops standards and techniques to produce high-quality compost suitable for organic and conventional farming.

In 2007, EcoProfit served as a project developer for Libra - an organic cultivation company which has invested in land to produce compost that will improve low-grade

desert soil contaminated through years of prior chemical fertilizer use. Since the beginning of the project, 30,000 tons of high-grade compost have been produced on this new farm land. At Libra’s plant, green waste from the SEKEM farm and other farms is processed into superior quality compost using a controlled aerobic process. The process for composting green waste avoids around two tons of CO₂-equivalent emissions per ton of compost, and the CO₂-equivalents have been certified under the Kyoto protocol and thus contribute to alleviating the global effects of greenhouse gases. Additionally, the project has proved to be a substantial benefit for the core business of SEKEM, which is now able to offer its customers products that are not only organic or biodynamic, but also carbon-free.

Company:
SEKEM Holding S.A.E.

Sector:
Food Producers

Headquarters:
Egypt

Global Compact
signatory since 2004

Company:
Novozymes

Sector:
Pharmaceuticals
& Biotechnology

Headquarters:
Denmark

Global Compact
signatory since 2001

Bio Solutions Aid Sustainable Agriculture and Food Production

Novozymes is a bio-tech based world leader in enzymes and micro-organisms. The company's enzymatic and microbial biosolutions are applied in 130 countries, across a broad array of industries including animal feed, agriculture and food.

A precondition for food sustainability is a stable climate offering suitable conditions for agriculture and animal farming. At present, climate change is one of the biggest challenges to securing acreage and plant growth since severe conditions such as flooding and draughts are escalating, especially in areas already toiling with poverty and low yields from agriculture.

Use of enzymes and microbes in production can increase the yield of a wide range of processes, including agriculture and animal farming. This enables farmers to increase yields while reducing the human impact on climate change and increasing secure farmland acreage.

One such bio-solution allows farmers to raise the level of phosphates in soil - a

critical component of agricultural production. Phosphates are commonly added as industrial fertilizer in intensified agriculture. However, though fertilizers aid agricultural yield, they hold significant challenges to food sustainability: Substantial quantities of greenhouse gases are emitted from fertilizers, while increased demand and the increased cost of oil and gas mean that fertilizers are economically unavailable to many farmers. A phosphate inoculant containing a naturally occurring fungus that colonizes plant roots and makes the soil-bound and mineral forms of phosphate available for crop use can improve yield and promotes better phosphate use in a wide range of crops. The benefits to the farmer include better crop quality, better fertilizer efficiency, greater stress tolerance, higher yield (trials show average of seven percent higher yield) and cost savings. The resulting lower emission of greenhouse gases can become significant through a wider application of this and other modifications of fertilizer use.

Bio-control of Locust Management

The desert locust is a pest of unusually destructive powers. An average swarm can eat the same amount of food every day as 2,500 people. In 2003, desert locusts invaded several African countries where agriculture is mainly at a subsistence level and resources for locust surveillance and control are inadequate. The invasions have affected millions of farmers and continue to pose a serious threat to food sustainability and economic development.

The normal method of protecting crops from these pests is with chemical pesticides. However, many of these chemicals cause environmental damage and may be hazardous to humans and animals. As a result, the international community has initiated the development of alternative bio-control methods. One such method contains *Metarhizium* - a fungus that grows naturally in soils throughout the world and causes disease in various insects by acting as a parasite.

The Food and Agriculture Organization (FAO) is partnering with SenBiotech in Senegal and Biological Control Products in South Africa to develop, test and disseminate the product and facilitates the coordination between the different stakeholders involved. While FAO provided technical expertise, the companies covered production and distribution costs.

The project has had positive effects both for the companies and for rural communities. The companies involved benefit from the technical expertise, sensitization and dissemination of information provided by FAO, as well as improved access to markets as a result of the project. The project will enable locust affected countries to reduce the use of chemical pesticides and improve their natural resource management capacities – essentially. The project therefore benefits both the environment and the economy of the countries.

Company:
SenBiotech and Biological
Control Products

Sector:
Pest management

Partner:
Food and Agriculture
Organization (FAO)

Headquarters:
Senegal and South Africa



Company:
Unilever

Sector:
Food Production/Home
& Personal Care

Headquarters:
United Kingdom

Global Compact
signatory since 2000

Improving Gherkin Growth for Small Farmers

Unilever uses gherkins (small pickled cucumbers) for its French Amora brand. The gherkins sold by Amora are being grown by small farmers Southern India. In 1998, Unilever started a new initiative to enhance yield by supplying farmers with agricultural advice. In addition, agricultural input in the form of seeds, fertilizers and pesticides are also provided, the costs of which are deducted by Unilever only after the farmers have received the money for their harvest. Unilever offers the farmers a guaranteed price at the start of the season, giving them a more predictable income.

The results of this initiative are very positive for the growers and the environment. Unilever works with them to find ways of reducing the use of pesticides, by introducing natural predators and pest traps, such as banana bait traps. Since the start of the program, the overall use of pesticides has gone down by 40 percent, while yields increased by 60 percent. In a good season, a farmer can make a profit up to 40,000 rupees (£500) per acre. The initiative benefits Unilever by helping to establish a secure and high quality supply chain.

Promoting Agricultural Productivity in India

Company:
Tata Chemicals

Sector:
Chemicals

Headquarters:
India

Global Compact
signatory since 2002

The 1970's Green Revolution in India lifted agricultural productivity in some regions and enabled the country to attain food self-sufficiency, by and large. However, in the last two decades, the growth rate in farm output has been barely able to keep pace with the rate of population growth. The Tata Group has a wide and deep engagement with the farm sector and an increasing commitment to promoting sustainable rural livelihoods through the adoption of modern agricultural inputs and practices.

Tata Chemicals, a subsidiary of the Tata Group, has established the Tata Kisan Sansar (TKS), a network of franchised rural retail outlets which offer a comprehensive range of agricultural inputs and services to farmers. The TKS has the objective of becoming a "one-stop farmer's solution shop" and follows a "hub and spoke" model with 32 hubs staffed by agronomists and community organizers offering farm-specific services like soil testing. Each hub, in turn, supports around 20 franchisee outlets in a radius of 50-60 km, with each outlet promoted by a local entrepreneur serving some 30 to 40 villages. TKS offers extensive agri-products and services including:

- Expert advice: Advice from agronomists on plant protection, optimum use of agri-in-

puts, crop selection and rotation, and high-yield seed varieties.

- Agricultural Inputs: Fertilizers, specialty fertilizers, seeds and pesticides.
- Specialized agricultural products best suited to the crops of a region, e.g. calcium nitrate on potato and banana crops.
- Farmers' training, to encourage better farming practices; e.g. nutrient and pesticide management.
- Services, including: Soil and Water Testing and Contract Farming (on a limited scale).
- Farmers' club, through the Tata Kisan Sansar Parivar (Family). A by-invitation and paid-for club, the Farmers' club includes five to six key farmers/opinion leaders from each village who receive various benefits and services, including soil-testing and free accident insurance, and serve as role models. The annual membership fee is Rs 115 (approx. three US dollars) and the Parivar currently has ~26,000 members.

Currently, the TKS network has 32 hubs supporting 613 Tata Kisan Sansar outlets covering 16,397 villages across India. The services and products provided by the TKS network have allowed some 2.5 million Indian farmers to adopt more efficient agricultural practices and boost crop yields.



COLLECTIVE ACTION: The Sustainable Agriculture Initiative (SAI)

Long before the recent surge in food prices, three of the largest food producers in the world, DANONE, NESTLE and UNILEVER, recognized that sustainability is critical to secure a constant, growing, and safe supply of agricultural raw materials. The companies came together in 2002 to found the Sustainable Agriculture Initiative (SAI) – a non-profit organization dedicated to actively supporting the development of sustainable global agriculture practices involving all stakeholders of the food supply chain.

The SAI Platform today includes corporate 23 members, with estimated sales of USD 340 billion, which actively work to promote sustainable agriculture as a productive, competitive and efficient way of producing agricultural products, while at the same time protecting and improving the natural environment and social/economic conditions of local communities.

SAI Platform members are organized in crop/issue specific working groups including: Coffee, Dairy, Fruit, Potatoes-Vegetables-Cereals, and Water and Agriculture. Working group members meet on a regular basis to share information and knowledge on sustainable agriculture practices. Every member company carries out "in-house" pilot projects on certain crops or crop-related issues in their supply chain. After completion of the pilot project, a cost-benefit analysis is carried out in order to assess the sustainability performance, and the results are widely disseminated. Today more than 150 projects are being carried out in over 30 countries. Additionally, the SAI Platform works to share expertise with many universities and organizations and holds a variety of seminars and conference on issues pertaining to Sustainable Agriculture.

Business Alliance Against Chronic Hunger

The World Economic Forum (WEF) Business Alliance Against Chronic Hunger (BAACH), formed in 2006 by a group of CEOs and public leaders, is a cross-industry, multi-stakeholder initiative working with a broad array of companies to promote business models that contribute to sustainable food production and raise incomes in poor regions.

Through BAACH, businesses leverage their expertise and capabilities to improve value chains – from production, processing and packaging to retailing and marketing – to increase food supplies, nutrition and incomes in hungry regions. BAACH works to reduce hunger in Africa by strengthening specific food value chains through business development and market linkages. Companies implement these solutions in partnership with governments, NGOs, international agencies and communities.

Globally, BAACH strengthens commitment to action on hunger by promoting effective business models to reduce hunger, facilitating dialogue and engaging in global partnerships.

3 Financial Mechanisms and Risk Management Instruments

The food price crisis has raised awareness of the need to help low-income countries mitigate risks. Risk is pervasive in agriculture and affects countries at many levels. At the macro level, natural disasters and commodity price shocks can derail a government's budget and planning processes. At the meso level, commodity price risk and weather risks are problematic, but currency risk, logistics risks, and operational risks also create serious challenges for agribusiness companies trying to build sustainable operations. At the micro level, farmers' exposure to production and market risk makes it difficult for them to plan household expenditures, improve production practices, or engage in higher value-added activities. All of these issues increase the credit risk profiles of those involved in agriculture, leading to low levels of investment in the sector and limited access to financial services.

As illustrated by the current set of national responses to the food crisis, ex-post policy choices for managing risk can be costly, inefficient, and destructive to markets and trade. The alternative — ex-ante risk management — can help avoid such problems, yet lower income countries typically do not engage in risk management. The provision of international financial assistance to smooth shocks has reduced incentives for investment in ex-ante measures. Low perceived payoff due to short-term political objectives and concerns about ex-post perception of “unnecessary hedging” have also played a role in unwillingness of governments to pursue risk management. Constraints such as lack of knowledge, access, and capital create a serious market gap between the banks, insurance companies, and trading companies that can offer innovative financial products and developing countries that need them.

Reducing risk and improving the financial resilience of the agricultural sector are critical to achieving food sustainability and the Millennium Development Goals. Public-private sector partnerships are needed to ensure that:

- Agribusinesses and farmers have access to risk management solutions and financial services which allow for increased investment.
- Access to agricultural lending expands and the cost to borrowers decreases.
- Governments and donors improve responses to weather, disaster, and price shocks by supporting in-

vestment in risk management ahead of time instead of reacting to catastrophes after they occur.

Suggested Actions for Business:

- Governments are faced with hard choices when it comes to developing policies for food markets and trade. Food security is always a serious political issue and private-sector solutions are not always trusted. Companies should work to build supportive relationships with governments that aim to develop solutions that work for all.
- Lack of knowledge about financial markets is a serious constraint to developing new products. Education and awareness-raising efforts are critical to strengthening financial markets in developing countries.
- Businesses should explore the systematic development of financial instruments for agriculture that deepen markets and allow for efficient intermediation of financing and risk management (e.g. warehouse receipts, parametric insurance, weather-index insurance).
- In the absence of well-developed credit markets, agribusiness companies can play a useful role when they extend short- and medium-term financing to small farmers who supply their operations based on their ability to assess farmers' credit risk. By providing a partial guarantee over loans provided by local banks, they can also develop arrangements that meet the needs of farmers, overcome the banks' bias against agriculture lending and over time help increase the availability of rural credit.
- Developing financial products for low-income countries requires careful customization. Companies that have been able to successfully adapt products for developing country environments should share the outcomes of those experiences so that they can be supported by other organizations.

Multi-Peril Crop Insurance: Protecting the Agricultural Sector Against Natural Hazards

Munich Re, a global reinsurer, is working to develop new risk management systems that guarantee safer and more sustainable agricultural production with regard to natural catastrophes. New solutions have been necessitated by climate change, with the situation most pressing in developing countries, where creditors hesitate to invest because of the higher exposure to natural catastrophes and the lower security this implies. In the worst case, the risk factors mentioned lead to food shortages at the macroeconomic level.

Munich Re has developed multi-peril crop insurance (MPCI) to help maintain and foster more efficient farming. MPCI functions as a

risk partnership between a government, the insurance industry (insurer and reinsurer) and farmers. Instead of directly compensating farmers for a loss, the state subsidizes the insurance premiums payable by farmers. There are clear advantages for both sides: the scheme allows farmers to protect themselves against risks, while public expenses become more manageable.

Multi-peril crop insurance has been successfully introduced as a method for sustainable plant production in many countries, including Turkey and Lithuania.

Company:
Munich Re Group

Sector:
Financial Services, Reinsurance

Headquarters:
Germany

Global Compact
signatory since 2007

Weather Risk Solutions for Smallholder Farmers

Swiss Re, a global reinsurer based in Switzerland, is committed to developing and implementing financial solutions that adapt and respond to climate challenges.

Swiss Re pioneered weather risk transfer instruments in low-income markets, starting in India in 2004. Since then, more than 350,000 smallholder farmers have been covered. Innovative index-based insurance solutions, such as weather risk transfer, can help prevent increases in food insecurity and malnutrition which are projected to occur in developing countries as a result of climate change.

In 2007, Swiss Re launched the Climate Adaptation Development Programme to create a financial risk transfer market for the effects of adverse weather in emerging countries. Under this program, Swiss Re: (1) offers its expertise and a dedicated team of specialists to develop, structure, price and implement financial risk transfer solutions, such as weather index insurance; (2) participates in the risk transfer of such solutions; (3) financially supports related research and risk assessments; and (4) hosts training sessions and high-profile events to promote the development of a commercial market for these instruments.

Under the program, Swiss Re is engaged in partnerships with non-profit organiza-

tions, leading universities, humanitarian relief organizations and institutions active in micro-finance and micro-insurance to develop weather risk transfer solutions in many parts of Africa, including Ethiopia, Ghana, Malawi, Rwanda and South Africa.

Through the program, Swiss Re hopes to contribute to the development of a risk transfer market that will help smallholder farmers buy agricultural inputs, overcome a lack of collateral for micro-credit solutions, draw upon agricultural extension services, accumulate income, and ultimately improve food sustainability.

Company:
Swiss Reinsurance
Company

Sector:
Financial Services, Reinsurance

Headquarters:
Switzerland

Global Compact
signatory since 2008



Improving Access to Financial Services in Rural Areas

Company:
MAP International

Sector:
Business Association

Headquarters:
United States

Global Compact
signatory since 2008

Inaccessibility of financial services in rural areas, particularly throughout Africa, has long left the bulk of these populations “unbanked” – without access to savings, credit and efficient money transfer instruments, and vulnerable to fraud, theft, and physical abuse. A US-based business association, MAP International is working to transform the financial services infrastructure in developing nations by integrating and offering mobile banking, web-based tools, electronic funds transfer, debit/credit cards and national ID/election cards.

MAP aims to dramatically increase the availability of and reduction in the costs of financial transactions for rural populations, which will enable farmers to leverage savings and credit tools, significantly unleashing their production and earning potential.

Beyond fortifying the financial infrastructure and reliability of rural banking institutions, the lost expenses, time, and earning opportunities that rural farmers endure to travel to urban financial centers will be greatly reduced.

Late in 2007, MAP teamed with Post Bank Uganda (PBU) to offer its customers the first access to banking solutions, including secure debit/ATM cards. Beyond the urban-based branch network, MAP has partnered with PBU to deploy proprietary mobile data capture units to bring rural citizens into the MAP/PBU service offering. Development is underway to expand the rural initiative to savings and credit cooperatives and rural banks. In addition to Uganda, MAP is active in Peru with plans to expand into more African countries.



Financing for Farmer-Suppliers

In 2006, the International Finance Corporation (IFC), the private-sector lending arm of the World Bank, provided a corporate loan of USD 25 million to ECOM Agroindustrial Corporation Limited (“ECOM”), a leading supply chain manager and integrated supplier of both raw and semi-processed agricultural commodities, such as coffee, cocoa and cotton. The fund was to be used by ECOM to establish a capital lending program for smallholder coffee producers in Central and Latin America. The objective of the program was to improve production standards, farm practices and performance indicators of coffee suppliers identified by ECOM in Central and Latin America by funding capital improvements at the farm level. The program allowed farmers to become eligible for certification by sustainable coffee programs; gain access to premium coffee markets; and become stable and competitive suppliers of specialty coffee for export markets. The IFC’s investment was likewise complemented by a technical assistance (TA) program administered by the IFC’s LAC Facility. The program assisted farmers in improving their practices and standards; and helped ECOM efficiently manage its capital lending program relating to its coffee suppliers.

The IFC’s investment enabled ECOM to extend term financing to its coffee suppli-

ers – traditionally a sector with difficult access to financing – so that they could fund capital improvements that would ensure the long-term economic and environmental sustainability of their operations. The investment likewise allowed ECOM to provide the farmer-suppliers technical assistance to improve their farming productivity, sustainability practices, and farm management practices. Such programs were and still are not currently available under existing working capital lines extended to ECOM by commercial banks which limits use of funds to inventory and accounts receivables financing. Beyond direct benefits to ECOM, ECOM’s coffee suppliers and their immediate communities, there was the demonstration impact from ECOM and its supply chain that embedding sustainability in operations and practices makes business and economic sense.

In June 2008, following the success of the Latin America project, the IFC made another investment into ECOM, this time to cover working capital requirements and a small amount of capital expenditures to support ECOM’s buying operations in Africa and Asia. The funding is earmarked for Indonesia, Vietnam and Papua New Guinea, as well as Kenya, Uganda and Tanzania.

Company:
ECOM Agroindustrial Corp. Ltd.

Sector:
Agriculture / Agricommodities

Headquarters:
Latin America

Financing Sustainable Rice Production

Nigeria’s Bank of Industry was developed to finance and catalyze industrial development in the country. The potential global shortage of rice, which is a local staple, poses a serious risk to the country and its development. Therefore, the Bank is coordinating a public-private initiative to mobilize capabilities and resources for developing scalable and commercially-sustainable rice milling business models in a national effort to attain self-sufficiency in rice production. Beyond averting a food crisis, the goal is to adopt better agricultural inputs and processing capacities that would allow Nigeria to fill in the supply gap and become a net exporter of the commodity.

To attain economies of scale, smallholders and rice farmers’ cooperatives will be clustered as convergence points for the adoption of new technologies and inputs, particularly New Rice for Africa (“NERICA”) seedlings and the introduction of appropriate milling machinery to raise productivity.

The Bank’s role is to provide financing and manage a multi-million dollar rice development fund on behalf of the Federal Government of Nigeria. The Bank is also in dialogue with key stakeholders to promote the development of a commodities exchange in order to manage price and yield risks.

Company:
Bank of Industry Limited

Sector:
Development
Finance Institution

Headquarters:
Nigeria

Global Compact
signatory since 2006

Company:
PARIS RE Holdings Limited

Partners:
World Food Programme,
The World Bank

Sector:
Reinsurance

Headquarters:
France

Partnering to Manage Drought Risks in Ethiopia

A significant number of Ethiopians are highly vulnerable to severe and catastrophic weather events due to their reliance on rain-fed agriculture. For examples, as a consequence of the 2002 drought, the second-most severe in recent history, a record 13 million Ethiopians required emergency assistance at a cost of USD 600 million.

To address these risks, the World Food Programme (WFP) implemented a programme to provide cash payouts to Ethiopian farmers in the event of a severe drought. Although response mechanisms are in place to deal with small-scale or localized droughts (e.g. grain and cash reserves, as well as a small contingency fund built into major country programmes), these mechanisms are insufficient in the face of a severe, country-wide drought.

In November 2005 WFP entered into a contract with French reinsurer, PARIS RE (then called AXA RE), and facilitated the transfer of risk from a developing country government to the international risk market. In the event of a drought during the 2006 agricultural

season, PARIS RE would pay US\$7.1 million to WFP, to be transferred to the Ethiopian government and disbursed as cash assistance to the approximately 62,000 “at-risk” households, or 310,000 “at-risk” beneficiaries. Fortunately, there was enough rainfall during the 2006 pilot so no payout was made. But the project was a success in showing an innovative approach to risk management which is a reliable, timely and cost-effective way of funding emergency operations.

Now, WFP is working with the Ethiopian government to expand the programme for three years from 2009. This second phase presents a more thorough approach to risk management by including clearer contingency planning, capacity building and more robust early warning systems. The WFP and the World Bank, building on a crop model developed by FAO and the local knowledge of the Government of Ethiopia, have developed software that allows users to quantify and index the drought and excessive rainfall risk in a particular administrative unit in Ethiopia.

Certification to Improve Food Supply-Chain Practices

Company:
Det Norske Veritas (DNV)

Sector:
Professional service provider

Headquarters:
Norway

Global Compact
signatory since 2003

Through the provision of risk management services, Det Norske Veritas (DNV) seeks to encourage sustainable practices in all industries with a particular focus on the food and beverage industry. This includes building trust and transparency in food supply chains worldwide. DNV’s third-party certification related to management systems, products and supply chains is one way in which it contributes to food sustainability. For example, the GLOBALGAP certification works to ensure quality, safety and sustainable production practices while also contributing to supply chain efficiency and inclusion of smallholder farmers. Early certification by an independent third party increases trust along the supply chain by providing proof that the primary producer meets a certain standard which opens access to markets for smallholder farmers. Certification at the cooperative level is another solution that contributes to easier access to global supply chains for smallholder farmers as it reduces the cost of certification. In such a scheme, the cooperative itself sets appropriate require-

ments for individual farmers and compliance is demonstrated through documentation.

At the other end of the value chain, DNV contributes to transparency in global food supply chains and encourages the adoption of sustainable practices through Sustainability Report Verifications. By assisting global food and beverage companies with communication on their sustainability performance and supply chain processes, the company increases stakeholder confidence in the food industry and promotes efficiency and food sustainability at every stage of the value chain.

DNV is actively involved in defining, sharing and developing sustainable schemes, standards, practices and technologies across the entire value chain from farm to fork. To this end, DNV works in close partnership with those operating along the entire food supply chain - from farmers, fishermen and growers to food processors, retailers, distributors, and storage and transport companies – and other stakeholders, such as trade organizations and legislative and standardization bodies.



4 Nutrition

The food crisis that has gripped the world over the past year has exposed a chasm of need — a need to improve food and nutrition security worldwide. Before the crisis, 854 million people went to bed hungry each night. Today, the World Bank, the International Monetary Fund (IMF) and the World Food Programme estimate that another 100 million to 130 million people have been pushed into the ranks of the poor and hungry.

The urban poor struggle to afford food and the rural poor have increasingly limited access. These people are living on the edge and employing coping strategies that will have a devastating effect on the world's ability to achieve the Millennium Development Goals. From reducing the number of meals eaten to swapping fish, meat and even cereal with less nutritious food, these dietary changes mean fewer micronutrients and poorer health and nutritional status for hundreds of millions of people. Under-nutrition lowers the resilience to disease and shocks leaving the most vulnerable people — particularly women and children — susceptible to infection. It also hinders both physical and mental development, increases the risk of maternal and child deaths, and ultimately impedes the development of entire societies.

The food crisis is thus a dual threat first to young children who can be mentally and physically hampered for life, and second to adults who face increased risk of heart disease, diabetes, and some cancers that are strongly linked to improper childhood diet.

However challenging, this crisis presents an opportunity for the global community to demonstrate concerted leadership as never before. Governments, citizens, the UN, NGOs and the private sector can come together in a common call to action: feed the hungry today — and produce the food to end hunger tomorrow.

This is where corporations, foundations and even individuals can make an impact. By leveraging talent, knowledge, cutting-edge technology and material assets, the private sector can bolster the ability of humanitarian organizations to effectively respond to this crisis. It can also offer an incentive for developing societies and the world at large, to successfully tackle the rising burden of malnutrition.

Suggested Actions for Business:

- Improve the nutritional benefits of commercially available foods, particularly in countries with large scale humanitarian needs, and ensure access for all;
- Develop new, nutritious food products that are acceptable, appropriate and affordable for the different needs of vulnerable populations;
- Lend scientific expertise in food processing, including fortification;
- Build local milling, production and distribution capacity to increase the supply of safe and more nutritious foods;
- Measure the nutritional impact of new or improved food products on populations;
- Analyze supply chains to determine ways of mitigating the effects of the high price of food on local economies;
- Conduct country-specific market research on hunger and nutrition to measure awareness on the issues and better target campaigns;
- Leverage customers to raise funds through cause-related marketing campaigns.

Long-term sustainable solutions are rooted in the market. This is why — now more than ever — it is critical that the private sector is fully engaged and committed to meeting these challenges. If we do not act quickly, the bottom billion will become the bottom two billion virtually overnight as their purchasing power is cut in half.

REACH: Ending Child Hunger and Nutrition Partnership

REACH is a multi-stakeholder partnership among the UN, civil society and private sectors aiming to escalate the fight against child hunger. Jointly established by WFP, UNICEF, WHO and FAO, REACH promotes interventions of proven effectiveness, while considering the local context, in five priority areas relating to food security, health and care: improving breastfeeding and complimentary feeding, increasing micronutrient intake, improving diarrhea and parasite control, increasing treatment of severely acute malnutrition and improving household food security.

As part of its private sector strategy, WFP entered into a long term partnership with The Boston Consulting Group (BCG) in 2003. BCG is one of the world's leading management consulting firms. BCG's Social Impact Practice aims to employ the company's core consulting skills, lessons from the private sector and understanding of the social sector to help address some of the world's most pressing global challenges. BCG has been supporting the REACH Partnership since 2006.

Together with the global REACH team and local country teams BCG has helped to design and test a "prototype" of a new, collaborative country action-planning process. This

process is currently being applied in pilots in Mauritania and Lao PDR and is intended to be rolled out to further countries. During the course of this work it has become clear that while very detailed knowledge exists about the science and effectiveness of the "right" interventions, there is an important gap in the know-how on implementing these interventions at scale at the country level. To address this, BCG has used its broad expertise on knowledge management to design a system which captures and shares practical knowledge on how to implement the various REACH interventions at scale in diverse settings.

BCG is also supporting REACH through its Social Impact Secondment Program, whereby selected consultants spend a year working for a BCG social impact client. Through this program, BCG has deployed two full-time consultants to facilitate the REACH pilots in Lao PDR and Mauritania. These professionals deploy their project- and change-management experience and skills to support the REACH multi-stakeholder country teams in order to rapidly catalyze and advance coordinated, joint action against child hunger.

Company:
Boston Consulting Group

Partners:
WFP, UNICEF, FAO, WHO and civil society partners

Sector:
Management Consulting

Headquarters:
USA



Biofortified Sorghum Holds Promise of Improved Health and Nutrition

Company:
DuPont

Sector:
Chemicals

Headquarters:
United States

Global Compact
signatory since 2001

Sorghum is an important dietary staple for more than half a billion people. However, it lacks essential nutrients and is not easily digested, posing a significant problem for the millions of people, and especially children, in sub-Saharan Africa who suffer from health problems associated with vitamin and mineral deficiency. Pioneer Hi-Bred, a DuPont business, has partnered with Africa Harvest to form the Africa Biofortified Sorghum (ABS) Project, an initiative that works to improve the nutritional value of sorghum to help address widespread malnutrition. Pioneer donated initial technologies valued at \$4.8 million to help with the project and additional funding has been provided by a grant to Africa Harvest from the Grand Challenges in Global Health initiative, with a budget of \$18.6 million over five years.

The project aims to provide a long-term

solution - using biofortification - to fight hunger, malnutrition and poverty in Africa, particularly among the poorest of the poor, who reside in remote areas and do not have access to fortified, processed food. Planting maize or other crops in many regions in Africa simply isn't an option due to the arid climates and poor soil properties, and biofortified sorghum is a viable alternative. Dupont's technology allows for the cultivation of sorghum with higher levels of vitamins A and E, micronutrients such as iron and zinc, and essential amino acids such as lysine, while also improving digestibility. The project aims to give farmers and consumers a nutritional package in popular sorghum varieties for the different regions in Africa. If successful, in the long term, the project could help improve the health of 300 million people in Africa.

Salt Industry Works to Eradicate Iodine Deficiency

Company:
China National Salt Industry Corporation, EuSalt and Salt Institute

Partner:
UNICEF

Sector:
Salt

Headquarters:
China, Europe and USA

Iodine deficiency is the world's leading cause of preventable mental retardation and brain damage. It is especially damaging during the early stage of pregnancy and in early childhood. Iodine deficiency also increases the chance of infant mortality, miscarriage and stillbirth.

China National Salt Industry Corporation, EuSalt and the Salt Institute, collectively accounting for more than half the world's salt production, have joined the global public-private partnership "Network for Sustained Elimination of Iodine Deficiency". The Network is an alliance of major organizations committed to reach the goal of sustained elimination of iodine deficiency.

To prevent iodine deficiency, minute amounts of iodine must be added to the diet every day. This is most efficiently done, at low cost, by iodizing all salt provided to humans and animals. The salt industry has been playing a key role in helping countries promote and market iodized salt to consumers. UNICEF estimates that less than 20% households in developing world were using iodized salt in early 1990s. Through partnership with salt industry, there has been remarkable success, with about 70% of households currently having access to iodized salt. The production of iodized salt must be accelerated until consumption in all households is assured.



Company:
Grameen Danone
Foods Ltd.

Sector:
Food industry and Finance

Headquarters:
Bangladesh

Global Compact
signatory since 2003
(Groupe Danone)

Meeting the Nutritional Needs of Bangladeshi Children

In March 2006, the Grameen Group and Groupe Danone joined forces to create a new Bangladeshi-based company, Grameen Danone Foods Ltd. The initiative combines Groupe Danone's expertise in healthy foods with Grameen Group's specialization in micro-credit and economic development.

Grameen Danone Foods Ltd. developed a yoghurt to meet the specific nutritional needs of Bangladeshi children, providing the benefits of milk and the micronutrients lacking in their normal diet. The first production plant in Bogra began operating in November 2006, producing the yoghurt "Shoktidoi" at a highly affordable price. When used to its full capacity, as forecasted for the end of 2009, the plant will be able to reach 300,000 children.

The price for an 80 gram portion of "Shoktidoi" had been set at 5 BDT (around 6 Euro cents), making it affordable for the poorest families in Bangladesh. As milk is the main ingredient in "Shoktidoi", the price is crucial in determining the sustainability of the business model. Hyperinflation of milk (up 65 percent) has forced Grameen Danone to find creative solutions to avoid increasing the price without compromising the fortification levels, as the local population in Bogra

is not able to pay more than 5 BDT. The food crisis is a major threat for the success of the Grameen Danone venture in terms of reaching the very poor.

GAIN, the Global Alliance for Improved Nutrition, further supports the initiative by providing technical expertise in fortification and social marketing, and has funded an efficacy study conducted by John Hopkins University to evaluate the health impact of "Shoktidoi".

Alongside improving the nutrition of the Bangladeshi population, Grameen Danone Foods aims to fight poverty through a unique, "proximity-based" business model. The company promotes local business activity and creates jobs at the plant, in the agricultural industry, and in sales and distribution. A distribution system whereby "Grameen Ladies" make door-to-door sales, will create an income for more than 1,600 women once the plant is used to full capacity. Further, the "Grameen Ladies" are trained to convey a nutrition-based message developed in partnership with Danone and GAIN. Such professional training, as well as offering micro-financing solutions, helps to ensure the initiative's long-term success.

Delivering Nutrition to Children through Fortification

Company:
Britannia

Partners:
Naandi Foundation
and GAIN

Sector:
Food and Drink

Headquarters:
India

Seeking to address vitamin and mineral deficiencies in Indian children, the Global Alliance for Improved Nutrition (GAIN) in 2007 commenced a partnership with Britannia, a leading Indian food company. Britannia's Tiger biscuit is one of the most widely recognized biscuits in India, and was determined to be an excellent product for delivering nutrition to the poor – children in particular – if it was fortified. GAIN supported Britannia in developing the fortified biscuit, selecting iron as a key solution to fight against anemia, a deficiency from which 70 percent of Indian children are suffering.

The Hyderabad-based Naandi Foundation joined the partnership after it was determined that the fortified Britannia biscuit

would be a solution to the foundation's struggles to improve the nutritional value of the school meals it was providing daily to thousands of children.

To date, the partnership has succeeded in achieving the goals of the three partners, and has managed to improve the health of 150,000 children. The Indian government finances the hot school meal, whilst a GAIN grant makes it possible to procure the biscuits from Britannia at cost. The project has progressed well and is set to continue successfully once GAIN funding ends, despite the fact that tight margins on manufacturing make Britannia extremely sensitive to rising commodity prices.



COLLECTIVE ACTION: GAIN Business Alliance for Improved Nutrition

Two billion people worldwide lack the vitamins and minerals necessary to lead healthy and productive lives. The Global Alliance for Improved Nutrition (GAIN) was founded in 2002 at a special session for children at the United Nations as a public-private network to reduce malnutrition through the use of food fortification and other strategies aimed at improving the health and nutrition of populations at risk. GAIN builds partnerships between the public and private sector and enables innovative solutions to improve nutrition at a large scale by providing financial and technical support. It has set itself the target of reaching 1 billion people of whom 500 million are in target groups most vulnerable to malnutrition.

A distinctive and essential feature of GAIN's approach is its work with the private sector, to use their know-how in product development, marketing and distribution. To support its commitment to finding market-based solutions, it has established the GAIN Business Alliance for Improved Nutrition, which is spearheading active business-led initiatives in a number of regions around the world. Food fortification is an innovative and cost-effective solution to the global challenge of hunger, and GAIN believes is not just about philanthropy, but also a compelling, profit-driven business strategy. Meeting the demand for fortified food helps businesses expand while at the same time improving the health of potentially billions of people. Healthy populations are also more likely to become future customers.

The GAIN Business Alliance Africa promotes national food fortification programs in Côte d'Ivoire, Mali, Morocco, South Africa and Zambia. It also promotes fortification investments and new market development in Africa by supporting new financial mechanisms and business models; engaging international companies and local millers, food producers and retailers; and expanding scientific knowledge by bringing together technical expertise in fortification. In Bangladesh, the Business Alliance has helped to create a national oil fortification program that will fortify 70 percent of all cooking oil with vitamin A. The program aims to produce 700,000 metric tons of fortified oil by 2010, which will improve the health of 90 million people, including 30 million people whose diets are Vitamin A-deficient. Through these and other fortification programs, the GAIN Business Alliance is helping to address the challenge of global malnutrition and contributing to the achievement of long-term food sustainability.

5 Energy and Biofuels

Energy access is crucial to achieving the MDGs, as energy services underpin economic activity, and enable basic human needs of nutrition, warmth, and lighting, in addition to education and health.

Sources of energy run from fossil fuels to a whole range of renewable options, including solar, wind and biofuels. Biofuels offer an opportunity to many nations to produce their own efficient and sustainable energy from agriculture, forestry and urban wastes as part of a wider energy mix, applied alongside energy efficiency and changed patterns of production and consumption. Particularly in developing countries where 75 percent of the world's poor depend on agriculture for their livelihoods, and where many of the 2.5 billion that rely on traditional use of biomass live, biofuel production can harness agricultural growth for broader rural development, reducing poverty and the drain on government budgets to pay for fossil energy imports.

However, whether these benefits materialize depends on how this development takes place, what business models are promoted, and whether the energy produced will be available for local use. Rules of the game are needed to ensure sustainability both on the macro and on the project level, including guidance on management of risk to climate change mitigation, biodiversity, water, soil, air, land tenure, labour conditions and food security.

The past few months have witnessed a sharp increase in food prices. Different factors have contributed to this, with biofuel development being seen as a potentially major contributor. While the extent of the impact of biofuels needs further research, it is clear that the sudden interest in biofuels, spurred by high oil prices and incentives introduced by a number of governments around the world, has put additional pressure on food markets that — due to the nature of lead times in the agricultural sector of one to two years, depending on the crops — have had little time to react. Even without biofuels, the pressure on food prices due to high oil and fertilizer prices would have increased. Finally, food prices had been on a long-term downward trend. Higher prices may help raise farm incomes in developing countries and encourage farmers to produce more food, which may in turn increase the availability of food over the medium to long-term.

Poor investment in agriculture in developing countries in the last decades has led to inadequate food production, hunger and poverty, which the current food crisis has accelerated. A concerted effort to

increase investment in agriculture is necessary and bioenergy development could be one component of the required investment if introduced in a balanced manner. In the short-term, however, access to food may decrease for poorer urban dwellers that must spend either more of their limited incomes on food, or go without sufficient quantities of food.

Over time, this might level out — or not. Population increase, changing diets to more energy intensive food such as meat, ever increasing demand for energy and impacts of climate change on agriculture, might further increase the competition between food and fuel use of biomass - unless we can identify and actively promote new and innovative ways to provide both food and fuel.

Suggested Actions for Business:

- Actively engage in processes supporting the development of an international standard for sustainable biofuel production.
- Commit to test, help refine, and apply this sustainability standard.
- Explore flexible markets, such as the Brazilian option to switch from sugar to ethanol production depending on prices and demand.
- Support R&D for and develop new technologies enabling:
 - increased productivity, including ecological intensification;
 - intercropping, multi-purpose crops, cascading use of biomass; and
 - use of degraded land (i.e. land not suitable for food production and without conservation value in terms of carbon storage and/or biodiversity), including developing incentives to use such land.
- Enter into partnerships with United Nations agencies and relevant international organizations that focus on the nexus of energy, biofuels, environment and natural resource management, poverty alleviation and food security, and that encourage the development and use of practices that allow sustainable access to both energy and food.
- Explore the potential benefits, and related infrastructure, such as markets of biofuels production in rural areas of developing countries, for example meeting farm-level energy needs for cooking and lighting, traction, transport providing income through sales of biofuels or feedstocks.

The Petrobras Biodiesel Program: Fostering Family Farming in Brazil

The role of biofuels is of fundamental importance in the drive to reduce global warming. That is why, among other reasons, Petrobras has created a new subsidiary of the company: Petrobras Biocombustível.

Due to its geographical characteristics, Brazil has excellent conditions to produce biofuels. The cultivation of oleaginous crops such as peanuts, sunflower and castor seeds alongside food crops facilitates the generation of income and creates opportunities for rural employment.

Petrobras' Biodiesel Program aims to develop the biofuels market whilst promoting family farms as suppliers. Three industrial biodiesel units have been built: Candeias in Bahia, Quixadá in Ceará and Montes Claros in Minas Gerais. These plants, all located in low-income rural areas in the Brazilian semi-arid region, use currently available technology to process oil seeds, with a capacity of 171,000 m³ per year.

The creation of Petrobras Biocombustível reinforces the company's commitment to the environment and its performance in the

biofuels sector, in which it plans to invest \$1.5 billion by 2012. The company intends to be the leading domestic biodiesel producer and also to enhance its participation in the ethanol business, focusing mainly on the international market.

In addition to its environmental benefits, biofuel production encourages social and economic development of rural areas, by associating incentive programs with family agriculture. Petrobras has developed support programs for 55,000 low-income families living close to its facilities, for oilseed planting, focusing on biofuel production. This initiative supports and promotes the creation or consolidation of local cooperatives, training for qualifications, technical management of the production chain and market development.

One of the main values of the program is planting of oleaginous crops along with staple foods. For example, castor and sunflower planted in conjunction with beans and manioc. This supports a multi-crop model, preserving local culture and ensuring food production.

Company:
Petrobras

Sector:
Oil & Gas

Headquarters:
Brazil

Global Compact
signatory since 2003



Biodiesel Production in Tanzania

Company:
Diligent Tanzania Ltd.

Sector:
Energy

Headquarters:
Tanzania

Diligent Tanzania Ltd is a renewable energy services provider processing Jatropha seeds into biodiesel to promote food sustainability, provide clean climate and reduce Tanzania's dependence on imported fuel.

Diligent Tanzania is working together with local farmers in growing Jatropha. By paying local farmers a fair price, Diligent ensures that the profit is double: vegetable oil is not only a renewable, nearly CO2 neutral fuel, also a contribution is made to a fair distribution of prosperity.

Jatropha is a toxic plant that grows in areas that are unsuitable for other plants, because they are too dry or too arid, or because they have been left by humans because of soil depletion after excessive agriculture. The plant also requires little water, fertilizer or pesticides. Since the plant is toxic, it is also not eaten by goats or other animals. As a result, a hedge of Jatropha plants keeps cattle outside the fields where other food crops are grown. This intercropping method has shown

good results, and Jatropha cultivation has become a natural safeguard against crop destruction by the cattle and evolved as a means to increase productivity

Besides promoting the cultivation of Jatropha, Diligent provides farmers with a guaranteed market for their seeds, thus dissuading farmers from growing non-sustainable biofuel crops. The company has devised a strategy under which local shops or farmers serve as direct sellers of Jatropha seeds and earn substantial income without going through any complicated market arrangements. The company also provides and shares knowledge on Jatropha cultivation with farmers by means of conducting training workshops and seminars.

Diligent's sustainable business model creates value for society as a whole, for the environment and for customers, and for the company's employees.



Bringing Sustainable Sugar and Ethanol Production Back to its "Roots"

Syngenta is one of the world's leading crop protection companies, selling products in all major areas of crop protection and seeds. The company is involved in researching and developing crops for biofuels. To reduce competition between food and fuel and improve the lives of current and future generations, Syngenta aims to make the production of biofuels more efficient and sustainable. The tropical sugar beet project is an example of this – providing new opportunities for food and biofuel production in developing countries.

Syngenta has developed tropical sugar beet (TSB) varieties that can yield the same quantity of sugar (or alcohol or ethanol) per land unit as sugar cane in half the time. This allows farmers to grow a second crop on the same land within the season, thereby increasing agricultural output and raising incomes. The new varieties also use about a third of the water typically required by sugar cane, saving almost 10 million liters per hectare.

The beets can further be grown in relatively dry areas and on saline soils, much of which were rendered useless by decades of sugar cane production.

In India, almost 2,000 farmers successfully planted TSB on over 1,700 acres. The farmers increased their incomes by selling their product to local sugar mills or ethanol processing plants. In addition, the farmers were able to plant a second, or sometimes even a third crop, which was sold in local food markets. TSB farming has provided new economic opportunities, especially for women, who are employed for sowing, weeding and harvesting. Last year alone, around 18,000 women found employment through TSB production.

The project represents a "win-win" strategy for business, farmers and the environment. The goal is to bring 100,000 hectares under TSB production in the medium term in Asia, Africa and Latin America, while also improving the methodology to extend the project to other parts of the world.

Company:
Syngenta

Sector:
Agri-business

Headquarters:
Switzerland

Developing New Crop Drought Protection Technologies

Lafarge, the world's largest cement manufacturer and the biotechnology company Performance Plants Inc. (PPI) joined forces in June 2008 to develop clean energy biomass grasses and woods for use as fuel at a Lafarge Cement Plant in Canada. The project is designed to reduce Lafarge's carbon footprint and the company's dependence on fossil fuels.

For PPI, the partnership is an opportunity to create enhanced non-food crops that are able to be grown on less productive farmland – such as in the Canadian and US mid-west and parts of Africa. The challenges with biomass and biofuel energy are maximization of crop yields, crop consistency and crop efficiency. New technology is fundamental to develop next-generation seeds that are customized for specific industrial users looking for alternative clean energy sources. Biomass-derived biofuels provide a sustainable and economically viable solution for reducing

global carbon emissions.

By enhancing a crop's own traits, PPI has a suite of patented weatherproof technologies that deliver more abundant, consistent and cost-effective harvests for farmers and feedstock suppliers. PPI is developing non-food biomass feedstocks that will be grown on land and under conditions less suitable for food or feed production.

Non-food grass crops were planted in late May and early June of this year on 25 acres of land adjacent to the Lafarge cement plant. The land is supervised by a local farmer. Lafarge expects to conduct the first trial use with these crops in the fall of 2009.

The project also involves a partnership with the Sustainable Bioeconomy Centre at Queen's University and the University of Guelph to assess the full potential of non-food plant species as fuel.

Company:
Lafarge North America Inc.
& Performance Plants Inc.

Sector:
Construction/Biotechnology

Headquarters:
France/Canada

**Global Compact
signatory since 2003
(Lafarge)**

6 The Role of Information and Communication Technology

Finding solutions to the food crisis requires a multi-dimensional approach and should leverage the power of technology and innovation. Governments, the private sector, and civil society should work together in synergy to find immediate as well as medium- to long-range solutions to the critical issue of making food availability and food security a long-term priority in the developing world. New technologies play a critical role in promoting food security and sustainability by increasing agricultural and food productivity, lowering production and distributions costs, and improving the functioning of markets. Biotechnology, genetic engineering, and farm-level technologies for improving crops, fisheries and livestock can help significantly in boosting production. Information and communication technologies (ICT), in particular, can help mitigate the food crisis in the short run and accelerate agricultural development in the long run by increasing food production, improving marketing and distribution, and facilitating communication and access to information. For example:

- ICT can be used as an alarm system to help linking different stakeholders in sharing information and preventing food shortage crises.
- ICT can create strategic decentralized networks that would link producers, distribution centers and consumers, critical to commercial and non-commercial environments for development.
- ICT applications can enable the exchange of information about innovations in farming technologies, crop varieties, pest control, manuring, weather forecasting, irrigation and efficient and monitoring methods. Mobile phones, the Internet, satellite-based systems facilitate communications and create opportunities among producers and consumers.
- ICT can aid in marketing and distribution of agricultural products by linking farmers into regional, national and international trade systems.

ICT offer tremendous opportunities for improving rural livelihood and augmenting agricultural production through better information and communication. The Food and Agricultural Organization (FAO) recommended addressing six areas of action in order to achieve and effective use of ICTs for development in rural areas: establishing appropriate ICT policies; ensuring sustainability; system design; capacity-building; applications development; and research.

Suggested Actions for Business:

- Work with UN agencies, research centers, and universities to develop technology solutions and deploy pilot projects that identify local needs, address food sustainability issues, and monitor performance and effectiveness in the field.
- Advocate for policy frameworks that reduce investment risks and ensure financial sustainability of ICT investments for rural development and underserved areas.
- Explore other areas of potential ICT uses, such as access to information databases and repositories; process applications for information collection and processing that help protect the environment or biodiversity; monitor local conditions; help increase productivity or facilitate market access; and weather process monitoring, etc.
- Establish strategic partnerships with UN agencies and governments to develop appropriate policies and legal framework to facilitate diffusion and use of ICTs in poverty alleviation, food production and rural development.
- Collaborate with local rural government agencies, research institutions, universities and NGOs in developing content and making information accessible to encourage localized solutions and applications.
- Invest in the design of ICTs appropriate for use in rural areas and suited to the needs of local communities, taking into consideration local needs, culture, language, socio-economic context, etc.
- Partner with local government and regional agencies to invest in training and local capacity-building by educating local workers and users to incorporate ICTs and applications in their activities. Emphasis should be placed on training women and youth in using ICTs and ensuring the inclusion of disadvantaged groups.
- Work with UN agencies, local rural government agencies, research institutions, universities and NGOs to have access to their information resources to facilitate the process of localized customized applications and cooperate in giving feedback to these stakeholders in order to better serve the communities with appropriate content development and applications.

Transferring Money Using Mobile Phones

Economic and social return from mobiles is highest of all in rural areas where there is no fixed line alternative, and research shows a link between mobile penetration and economic growth in emerging markets. The facilitation of information flow enables the rural poor to make decisions which can directly impact their income by ensuring they achieve the best prices for their crops. It can also enable farmers to reduce the need for unproductive travel and therefore spend more time engaged in agricultural management. This is particularly significant in developing markets where, until recently, people have not had access to convenient and low cost communications systems due to a lack of fixed line infrastructure.

Vodafone, an international mobile communications group, through their subsidiary Safaricom, recently launched a money transfer service in Kenya enabling people without bank accounts to transfer money via basic SMS technology. Launched in March 2007,

“M-PESA” operates on low cost handsets and has over 3 million customers. It benefits individuals and economies by enabling the safe and convenient transfer of funds irrespective of the availability of banking services. In rural areas this is particularly important where people would otherwise have to travel for long distances, sometimes in dangerous circumstances, to buy and sell produce, or to transfer funds within family groups or to third parties.

Typically, educated young urban migrants with higher incomes are able to deposit money onto their cellphone account at a M-PESA agent, send a text message to poorer relatives and friends in rural areas, who in turn go to nearby M-PESA agents to redeem the cash, with which they would purchase food and other essentials.

The success of this initiative has prompted the adoption of the same initiative in other nations including Afghanistan.

Company:
Vodafone & Safaricom

Sector:
Telecommunications

Headquarters:
UK



Company:

Microsoft

Sector:

Software & Computer Services

Headquarters:

USA

Global Compact

signatory since 2006

Digital Green: A Framework for Agricultural Extension

Microsoft's Digital Green initiative is a research project that brings audio-visual information on new farming trends and techniques to small and marginal farming communities in India. The system improves the efficiency of extension programs by delivering targeted content to a wider audience and enabling farmers to better manage their farming operations with reduced field support.

In a four-month trial involving 16 villages (1070 households), Digital Green increased adoption of certain agriculture practices by a factor of six to seven times over classical person-only agriculture extension. Each village was given a TV and a DVD-player, and one digital camera and PC shared among all 16 villages.

Compared to previous efforts, the introduction of the Digital Green system has led to a five-fold increase in the number of farmers seeking to apply better agricultural practices. Digital Green aims to scale its system to offer

relevant agricultural extension services to a much wider population of farmers.

The initiative has created a repository of videos that includes testimonials of progressive farmers, field demonstrations led by agriscientists, interactions between farmers, and market-based opportunities. The library currently contains over 150 locally-produced videos in the Kannada language. These recordings are shown to individuals on laptops, small groups using shared TV and DVD players, and communities through the village cable network. One of the main benefits of the Digital Green approach is that the content is local and speaks to the problems specific to the villages. Because the content features both knowledge experts and local farmers, those watching are motivated to adopt a new practice when they see a fellow villager, living in similar circumstances, experience its benefits.



Strengthening Market Linkages through ICT Access

Company:

Intel

Sector:

Semiconductors

Headquarters:

USA

In May 2008, Intel formed a joint venture with Grameen Trust to foster sustainable solutions based on information and communications technology (ICT) to help rural, impoverished people improve their livelihood.

The Grameen Intel Joint Venture builds on the "social business" concept originated by Nobel Peace Prize winner Dr. Muhammad Yunus. Coupling Intel's technical expertise with Grameen's extensive grass-roots experience, the initiative focuses on improving access to ICT to create an efficient marketplace, promote entrepreneurship, narrow the digital divide and help alleviate social and economic problems such as poverty and hunger.

The venture will work in tandem with microfinance institutions to facilitate solutions that capitalize on modern computing technology and Internet connectivity. For example, a poor villager can take out a small loan to purchase a cow and sell milk, or buy

a flock of chickens and sell eggs. Technology then offers the means to supply the "market intelligence" element currently missing in this scenario. For example, a local entrepreneur with a mobile device connected to a Web portal could inform food producers in his village about the going market rate for milk and eggs, even before they begin the long walk to the nearest bazaar. Such knowledge will help establish a more consistent and equitable pricing structure for basic foodstuffs and encourage a better grasp of market demand.

Taking it a step further, the approach can be applied to small farmers who sell grains and other food crops. Over the course of time, fair market pricing and an understanding of supply and demand will help the poor become better business people and enhance their sustainability in terms of food production and livelihood.

Mobile Communications to Combat Poverty and Hunger

In rural communities, mobile communication is revolutionizing access to new markets and crop prices, weather reports, small business applications and sending or receiving micro-payments, which can significantly impact the Millennium Development Goals and contribute to economic growth. Ericsson, a leading communications technology provider, is working globally on several initiatives that support MDG 1:

- **Millennium Villages and animal health** - Ericsson is providing ICT connectivity together with mobile operators through an innovative public-private partnership designed to bring voice and Internet communication to the 12 Millennium Villages in Rwanda, Uganda, Kenya, Ghana, Tanzania, Senegal, Mali, Nigeria, Malawi, and Ethiopia. In the village of Dertu, Kenya, a remote, pastoral and nomadic society, mobile applications for livestock management have great practical benefit to the pastoral nomads, who critically depend on healthy livestock.
- **Innovation center to stimulate mobile applications for the rural poor** - In sub-Saharan Africa, Ericsson is creating an Innovation Center comprised of three regionally placed development hubs which will focus

on developing applications and tools for the rural poor in Africa. This will include improving access to information and delivering services in the areas of agriculture, weather and climate, health, education, business and finance, and government services, and the improvement of communication capabilities. For example, mobile agricultural portals can provide farmers with price updates from various markets within a specific geographic community, enabling efficient sales and distribution of their crops.

- **Improved safety and security on Lake Victoria support fishermen** - More than 3.5 million people either directly or indirectly rely on Lake Victoria, Africa's largest lake, for their livelihood. At the same time, Lake Victoria is one of the world's most dangerous waterways, due to piracy, drowning and weather-related accidents. Ericsson, Zain and the GSMA Association's Development Fund are partnering to extend mobile network coverage over the lake, enabling fishermen to be in contact with each other and with the shore. The upgraded telecoms infrastructure supports the uptake of value-added services, including weather alerts, safety bulletins, market prices and commodity updates.

Company:

Ericsson

Sector:

Telecommunications

Headquarters:

Sweden

Global Compact

signatory since 2000

7 Job Opportunities for Rural Low Income Populations

Work is central to human lives and productive and decent employment is the principle way out of poverty. Employment should provide predictable income to help meet basic needs, including food, education, health, housing, energy and other basic necessities and is essential for achievement of Millennium Development Goals (and it is a new target itself, in MDG 1). Employment and income also contribute to a broader sense of empowerment, human dignity and hope for the future.

The current global food crisis, characterized, for instance, by an increase of more than 130 percent in wheat prices over the last year, has led to a greater number of people hungry and without access to food. Solutions to strengthening the ability of the poor and low-income populations to buy enough food include production increases and, more importantly, job creation for those with inadequate incomes.

A majority of the global poor continue to live in rural areas where employment growth has been dormant and investments have declined. Ongoing transformations of national economies have led to people moving out of agriculture into other sectors, necessitating significant investments to increase agricultural production and productivity that would also create decent jobs in other sectors including construction, engineering, irrigation, services, etc.

A recent report by UNDP titled “Creating Value for All: Strategies for Doing Business with the Poor” (Growing Inclusive Markets, June 2008) demonstrates the effectiveness of business models that include the world’s poor as employees, producers and consumers. It provides excellent examples of firms that are generating profits, creating new growth potential and improving poor people’s lives. Similarly, the ILO produced a report on the promotion of rural employment for poverty reduction for the International Labour Conference (2008), which highlights the need for and provides examples of comprehensive strategies to address the significant decent work deficits in rural areas.

Multinationals enterprises with their influence, global reach and resources can effectively scale and replicate successful business models. Yet smaller, local or regional businesses create most of the jobs and wealth required to meet the MDGs and can provide important insights into strategies that work.

Suggested Actions for Business:

- Advocate for effective rural economic and social development policies that produce an enabling environment to enterprise and job creation
- Encourage representative organizations of employers and workers to extend their membership, advocacy and services to rural areas.
- Explore ways of expanding supplier networks and increasing sourcing of raw materials, parts, components and services from local suppliers, farmers and cooperatives.
- Consumer goods companies as well as companies delivering other basic services such as food, water, sanitation, energy, housing, healthcare and communications can explore ways of using local micro, small and medium-size enterprises to distribute or deliver products and services.
- Agribusiness and biotechnology companies can work with small farmers and their cooperatives along supply chains to provide credit, and improve rural productivity, product quality and food security.
- In the agriculture sector, larger companies can invest in agribusiness logistics and distribution infrastructure together with the public sector: this can facilitate trade, lower costs, and reduce post-harvest waste for smallholders.
- Support the creation and development of new markets for certified, fair trade, organically grown or environmentally friendly products that are produced by producers in low-income communities;
- Work through value chains to promote the application of workplace practices based on full respect for fundamental principles and rights at work and international labour standards, and foster good labour-management relations as important means of raising productivity and creating decent work.
- Help local SMEs and producer associations gain access to finance, either through direct or indirect financial investment (e.g. financial institutions acting as guarantors for loans, or even by risk-sharing with development organizations and NGOs).
- Further work to maintain liquidity in supply chains by providing working capital facilities to agribusiness clients so that they can pre-finance inventories, seeds, fertilizers, chemicals, and fuel.
- Explore partnerships with UN agencies and relevant international organizations that are focusing on the issues of training and capacity development for job creation and entrepreneurship development.

Business Linkages to the Revive Soybean Production in Ghana

Since 2004, 3K&A Industries, a small Ghanaian family-owned business, has built a profitable Soybean processing plant and developed new soy products capturing almost nine percent of the local cooking oil market and a large part of the poultry feed market in less than two years. The commercial success was reliant on a rapid growth in the production of raw materials (soybean), achieved by the company organizing the first small-growers outreach scheme that invested in improved access to and use of inputs, farming techniques, planning and commercial skills.

Despite working with farmers in Ghana’s poorest and most isolate rural areas (where 80 percent of the population live below the poverty line), and facing all the usual barriers (limited rural infrastructure, power cuts, smallholder farmers’ resistance to adopting new techniques), the company has found a sustainable business model for making good profits. Three years on, the company was already unable to meet the demand for its produce and planned an expansion.

The impact on local poverty levels has been profound. The company originally expected to boost the income of 1,200 farmers,

creating direct employment for 65 individuals. The processing plant now has more than 100 employees earning an above average income. More than 2,800 registered farmers have benefited from the outreach scheme. As a result, local soybean production has increased by approximately 14,000 tons in just three years reducing dependence on imports and meeting shortages that would have otherwise led to rapid price increases.

Local supply has also helped the regional poultry industry avoid a price shock from increased international soybean prices and increasing fuels and transport costs. 3K&A has further employed other local companies in the construction of its processing plant, sourcing of packaging materials, transport and distribution, and is using local packaging, distribution and transport services that have been boosted by 3K&A’s growth. Finally, the increases in farmer’s wealth has made the areas more attractive to service and business expansions.

3K&A’s achievements are particularly remarkable considering serious constraints such as lack of affordable agricultural commercial credit, frequent electricity cuts and floods.

Company:
3K&A Industries

Sector:
Agri-business

Headquarters:
Ghana

Beyond Fair-Trade – Enhancing the Capacity of Local Communities

Dean’s Beans is an Organic, fair trade coffee company. Fair trade is most widely recognized for guaranteeing farmers a stable, pre-determined price for a particular product in a global economy where the price of commodities can experience drastic fluctuations. Dean’s Beans takes a more active role beyond paying the fair trade floor price for their products. The company pursues a wide variety of programs to strengthen the communities from which it procures its supplies.

In East Timor, Dean’s Beans is working with a local NGO to fund and implement a crop diversification and food safety program for its coffee growing partners in the mountainous Ermera district, providing a nutrient-rich diet and an alternative source of income generation for local farmers. In 2006, Dean’s worked with their Pangoa cooperative in Peru to put USD 3,000 of their social equity premium towards the bolstering of a micro-lending program for

the cooperative’s female members. The flexible financing mechanism has enabled a number of women to invest in expanding their crops or base of livestock, paving the way for new income streams and more diversified diets for their families. In 2007, Dean’s Beans partnered with Cultural Survival to fund the broadcast of “Coffee Talk” a weekly radio show picked up by 26 local radio programs in rural, coffee growing regions of Guatemala. While presenting information on market trends and prices, it also provides technical advice on subjects such as organic crop production.

By partnering directly with cooperatives to help identify community needs, Dean’s Beans helps design, fund and implement local initiatives. Their pursuit of a comprehensive implementation of Fair Trade - one that develops long-term trading partnerships with communities — helps create conditions supportive of food security.

Company:
Dean’s Beans
Organic Coffee

Sector:
Beverages

Headquarters:
USA

Global Compact
signatory since 2006

Company:
Shirosawa Company SAIC

Sector:
Food & Beverages

Headquarters:
Paraguay

Global Compact
signatory since 2007

Introducing Sesame Cultivation in Rural Paraguay

Shirosawa Company SAIC began operating in Paraguay in 1971. The company initially sought to identify an agricultural product that could be cultivated in Paraguay to serve the Japanese market. After determining that sesame plants would work well in the Paraguayan soil and climate, Shirosawa worked with other major Japanese companies to provide the necessary expertise and financial investment to aid small scale farmers in the cultivation of this new crop.

Today the company works directly with over 20,000 small sesame farmers, with a staff of approximately 100 employees en-

gaged in agricultural extension, production, and export. The company has worked with producers in the poorest and most troubled areas of the country, allowing these communities to develop an alternative industry that promotes economic development. Additionally, Shirosawa supplies major international companies with its sesame, thus directly allowing rural communities in Paraguay to access demand in a global market place. As a result of the Shirosawa Company's introduction of sesame cultivation, thousands of farmers in the poorest regions of Paraguay now have an additional source of income.

Company:
Restaurantes Toks

Sector:
Food & Beverages

Headquarters:
Mexico

Global Compact
signatory since 2006

Integrating Rural Communities in the Supply-Chain

Restaurantes Toks operates 78 restaurants in 19 cities throughout Mexico, providing more than 6,000 jobs and serving over 19 million consumers per year. In an effort to integrate poor rural communities into its supply chain, the company has initiated a project working with a marmalade provider formed and managed by 13 women in Santa Rosa de Lima, a poor community located in the mountains of the State of Guanajuato. In 2005, the per capita income in Santa Rosa de Lima was less than \$60 USD, and the town's population was disproportionately female as a result of illegal immigration by men to the United States.

Restaurantes Toks has incorporated the

strawberry marmalade supplied by the Santa Rosa de Lima Enterprise into its menus, successfully integrating the community into the value chain of the company. In 2005, before the project commenced, the Santa Rosa de Lima Enterprise provided an income of USD 1,000 to all the families in the community. The Santa Rosa de Lima Enterprise now sells over USD 350,000 worth of strawberry marmalade to Restaurantes Toks each year, radically increasing the community's per capita income. Furthermore, Restaurantes Toks is working with the company to increase production capacities in order to enter additional markets.



PHOTO CREDITS

Cover photo © "Flying Pumpkins", Bangladesh; Michael Foley/World Bank
Page 5 © "Got No Milk", Tanzania; Manuela Lea Palmioli/World Bank
Page 7 © "The Day's Last Pulling", Sierra Leone; Lianqin Wang/World Bank
Page 9 © Amitai Gat/istockphoto
Page 10 © Manoocher Deghati/IRIN
Page 11 © Claudia Dewald/istockphoto
Page 13 © VJ Villafranca/IRIN
Page 15 © Manoocher Deghati/IRIN
Page 17 © Tomas Bercic/istockphoto
Page 19 © Eva Serrabassa/istockphoto
Page 20 © MAP International
Page 23 © "Market Day", Peru; Carmen Machicado/World Bank
Page 25 © The Boston Consulting Group
Page 27 © Shehzad Noorani /HQ07-1162/ UNICEF
Page 29 © Manoocher Deghati/IRIN
Page 31 © Petrobras
Page 32 © Petrobras
Page 35 © Vodafone
Page 37 © LM Ericsson (both images)
Page 40 © Paul Smith / Panos Pictures

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 are asked to 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.



Published by the United Nations Global Compact Office, September 2008.

In collaboration with:



THE WORLD BANK