



# Attracting Private Sector Investment to Rural and Agricultural Markets

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## Lessons from the 2012 Conference

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September 2012

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## Acronyms

ACA	African Cashew Alliance
ACORDAR	Alliance to Create Opportunities for Rural Development through Agro-Enterprise Relationships
ATM	Automatic Teller Machine
B2P	Business to Person
CAP	Community Agriculture Promoter
CGAP	Consultative Group to Assist the Poor
CORAH	Control y Reduccion de Cultivos de Coca en el Alto Huallaga
CRS	Catholic Relief Services
CSR	Corporate Social Responsibility
DCA	Development Credit Authority
EDC	Education Development Center
FAF	Fairtrade Access Fund
FAO	Food and Agriculture Organization
FI	Financial Institution
FSMA	Food Safety Modernization Act
GIZ	Gesellschaft fur Internationale Zusammenarbeit
ICT	Information and Communications Technology
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IRRI	International Rice Research Institute
MARKETS	Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites
MEDA	Mennonite Economic Development Associates
MFI	Micro-Finance Institution
MIF	Multilateral Investment Fund
MIS	Management Information Systems
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-Governmental Organization
OPM	Oxford Policy Management
P2B	Person to Business
PDP	Productive Development Project
PLAS	Proactive Land Acquisition Strategy
POS	Point-of-Service
PPP	Public-Private Partnership
PROFIT	Productivity, Finance and Technology
RRB	Regional Rural Bank
SHG	Self-Help Group
SSP	Strategic Social Partnership

STS	Source Trade System
USAID	United States Agency of International Development
VRAE	Valley of the Rivers Apurimac and Ene
WOCCU	World Council of Credit Unions
WTO	World Trade Organization

## Foreword

Dear Fellow Nutcrackers,

Last year, the *Cracking the Nut* conference emphasized the increasing risks and challenges associated with the rapidly growing world population, food insecurity and global warming. Together participants worked on “Overcoming Obstacles to Rural and Agricultural Finance.” The remaining tough nuts pointed to the need for longer-term finance and investment capital to support rural and agricultural development. *Cracking the Nut 2012* focused on the opportunity created by our shifting global reality and what it takes to “Attract Private Sector Investment to Rural and Agricultural Markets.”


The conference emphasized the need for partnerships between farmers, local and international private businesses, donors, development practitioners and public officials to find creative solutions to the increasingly complex and interconnected global food markets. This publication is a synthesis of the contributions made by more than 270 participants from 41 countries around the world.

At the writing of this publication, the negative headlines continue:

- July 17, 2012 – Ice island twice as big as Manhattan breaks off Greenland glacier<sup>1</sup>
- July 20, 2012 – Corn, soybean prices shoot up as drought worsens [in the U.S.]<sup>2</sup>
- July 2012 – Food security worsens in East Africa – with about 16 million people facing food insecurity in Djibouti, Ethiopia, Sudan, South Sudan, Kenya and Uganda.<sup>3</sup>

Where there is change and risk, however, there is opportunity. And clearly, we are all in this predicament together. There has never been a more compelling time for the private sector to work in partnership with the development community to ensure that we turn risk into opportunity in a way that serves the global masses for this generation and the ones to follow. I thank all of you for continuing with us on this journey, to crack some tough “nuts” in hopes that many will benefit from the “fruits” of our labor.

Warmly,



Anita Campion  
President, AZMJ



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<sup>1</sup> Washington Post: [http://www.washingtonpost.com/blogs/capital-weather-gang/post/ice-island-twice-as-big-as-manhattan-breaks-off-greenland-glacier/2012/07/17/gJQAJApbrW\\_blog.html](http://www.washingtonpost.com/blogs/capital-weather-gang/post/ice-island-twice-as-big-as-manhattan-breaks-off-greenland-glacier/2012/07/17/gJQAJApbrW_blog.html)

<sup>2</sup> CNN Money: <http://money.cnn.com/2012/07/19/investing/corn-soybean-prices/index.htm>

<sup>3</sup> USAID FEWS NET: [http://www.fews.net/docs/Publications/East%20Africa\\_FSOU\\_07\\_2012.pdf](http://www.fews.net/docs/Publications/East%20Africa_FSOU_07_2012.pdf)

## Executive Summary

As populations and food consumption are on the rise, and the world has less accessible water supplies as well as lower arable land per person, the need for increasing investment in rural and agricultural markets has become one of the most important issues of our day. These are some of the issues that spurred the interest in the learning event, held on June 25-26, 2012 in Washington, D.C. Named after its core objective, the conference, *Cracking the Nut: Attracting Private Sector Investment to Rural and Agricultural Markets*, focused discussions around five themes for which the main lessons are summarized below. The conference benefited from private sector input from executives of Walmart, Unilever, Ecom Agroindustrials, Chevron, General Mills and Partners in Food Solutions, among others.

### Expanding to New Markets

- Use strategic partnerships to navigate the complex emerging markets landscape. Multi-national companies can build on the local knowledge and networks of NGOs, governments and development agencies to reach new consumer markets.
- Unlock market potential by building and financing collaborative supply chains. Lenders can mitigate the risks inherent to investing in agribusiness by looking at the entire supply chain and developing financing models customized to the business cycles of agricultural value chain actors.
- Leverage private sector investments to bring new technology to smallholder farmers. Technology companies can reach new markets by developing viable business plans that enable smallholders to afford these production-enhancing technologies.
- Conduct innovative market research to facilitate entry into new markets. Advanced market research provides more complete customer profiles and insight into the nuances of complex developing economies, allowing for better product design.

### Tapping New Sources of Supply

- Provide traceable, sustainable supply for global food companies. Multi-national companies can achieve product differentiation and meet regulatory standards by sourcing from sustainable and traceable supply chains.
- Facilitate small farmer certification with group financing, allowing smallholders to enter into high value markets and meet market demand.
- Use a local network of agents to help rural farmers tap new sources of inputs, enabling farmers to increase the quality and quantity of their production.
- Broker investments for the “missing middle” – including processors, transporters, distributors and retailers – to alleviate bottlenecks in agricultural supply chains.

### Creating Effective Partnerships

- Focus on long-term relationship building, based on mutual understanding of motivators, incentives, roles and expectations of the public and private sector teams and institutions involved.
- Create win-win situations for all partners and craft shared objectives. We need to move beyond fears that the private sector will exploit a situation for profit and the public sector will be inefficient. We can improve trust between public and private sectors by designing transparent partnerships that allow for long-term economic and social value creation.
- Share market information to streamline value chains and strengthen partnerships. By increasing flows of market information along the value chain, farmers can organize their production to meet the quality, quantity and schedule requirements of buyers.



- Strengthen the weakest link in the partnership. Food companies can invest in technical assistance and agricultural extension services for smallholder suppliers to ensure smooth supply and high quality produce.

### **Making Finance Work**

- Use behavioral economics research to design financial instruments and facilitate adoption through improved understanding of human behavior and economic decision making.
- Reduce credit and production risks by offering agricultural and market access assistance.
- Consider the business case for small savings, including minimal marginal costs, opportunity for cross-sales and reduced costs per transaction through technology.
- Member-based institutions can facilitate access to finance for smallholders
- Long-term capital can improve farmer productivity through investments in infrastructure to increase yields, improve quality, and create added value.

### **Forging Positive Government Support**

- Offer tax benefits to encourage investment in rural and agricultural market development, which can foster formality of the sector as well as long-term potential gains in tax revenues
- Make policy changes based on hard evidence combined with a clear understanding of perspectives, roles and leadership. Also, use a “best fit” approach towards applying best practices with regard to country specific constraints.
- Consider how government policy can play an important role in developing outgrower networks and agricultural supply chains. For example, government programs can build farmer capacity to engage more effectively in the private sector.
- Ensure the right business model and incentives are in place to stimulate private sector development.
- Encourage municipal governments to play an active role in developing rural markets.

### **Adapting for Special Considerations**

There are also findings that cut across all five themes, including:

- Map gender roles and impacts – by integrating it into value chain analysis – to raise awareness and encourage gradual change of social norms and behaviors.
- Provide rural youth with incentives and technical assistance to prepare them for markets, including as entrepreneurs and job seekers.
- Segment markets to identify appropriate approaches to serve marginalized groups.

### **Moving Forward**

Next year’s event will delve deep into sustainable sourcing for agricultural supply chains by looking closely at food safety and sustainability, facilitating transparency, traceability and certification, as well as innovative ways to facilitate access to finance and investment. As the burdens on our planet increase, consumers are becoming increasingly savvy about products and companies that create long-term social, economic and environmental value through their business. By sifting through the information and knowledge generated at the Conference, we identified the following big-picture lessons that all players must apply to attract meaningful investment to rural and agricultural markets:

- Champions that think long term and systemically and can mobilize different actors toward a shared vision.
- Large, multi-stakeholder initiatives can facilitate patient capital to strengthen rural and agricultural markets
- Creative uses of technology can serve rural areas more efficiently
- We need more engagement between private and public sector agents of change, diving deeper into sectoral issues

Through creative partnerships and win-win approaches, *Cracking the Nut 2012* has shown that we can leverage sustainable rural and agricultural investments in ways that reduce risk and create additional development impact for emerging markets.

# I. Introduction: Conference Objectives & Background

According to the FAO, to meet the needs of 9 billion people in the year 2050, the world needs to invest an additional \$83 billion on average annually in developing country agriculture. Based on soaring population rates and rising living standards, food production will need to almost double by 2050 in order to satisfy demand. From a market perspective, agribusiness is poised for unparalleled global growth and merits private sector investment. Box 1.1 highlights five indicators that suggest that now is a good time to invest in agriculture.<sup>4</sup>

From a development perspective, if this demand goes unmet, there is a risk that hunger will become even more widespread, with millions more lives at stake.<sup>5</sup> Given the limits to donor and state-level funding, however, only through creative collaboration and public-private partnerships will we be able to attract adequate and appropriate investments that lead to reduced poverty and hunger. Fortunately, there are an increasing number of private sector firms that see strategic business reasons to partner with development practitioners to sustainably support their supply chains and develop new markets by working in emerging economies. Walmart is one of the multinational businesses that are looking for partners in development to demonstrate its commitment to a triple bottom line (including profits, as well as positive social and environmental impacts). Box 1.2 describes how Walmart is demonstrating its commitment to sustainable agriculture in a way that highlights the five themes of the conference, *Cracking the Nut 2012: Attracting Private Sector Investment to Rural and Agricultural Markets*.

## Box 1.1 Five Reasons to Invest in Agriculture

1. Grain inventories are falling to their lowest levels in more than 40 years.
2. Grain consumption is on the rise (The world now consumes more than twice what we did in 1974).
3. Biofuels are driving agricultural demand to new levels.
4. As we lose quality top soil, arable land per person is falling (from 2.8 acres/person in 1960 to only 0.8 acres/person projected for 2030).
5. Decreasing water supplies limit farm productivity.

Source: Chris Mayer, *The Daily Reckoning*, 2012

Cracking the Nut 2012 brought together more than 270 stakeholders from 41 countries with the intention of identifying ways to attract private sector investment to rural and agricultural markets and ensure effective public-private partnerships. The two-day conference convened some of the world's leading private sector players, including multinational food companies, value chain financiers, investment fund managers, as well as rural and agricultural development practitioners, donors and policymakers. This publication summarizes some of the key lessons and experiences shared at the Conference, which indicate progress toward mobilizing public and private sector resources to develop rural and agricultural markets in a positive and sustainable fashion. The publication concludes with some thoughts on how we could move forward to crack the tough nuts of attracting private investment to ensure rural and agricultural market development.

<sup>4</sup> Mayer, C., "Invest in Agriculture," *The Daily Reckoning*, 2012: <http://dailyreckoning.com/invest-in-agriculture>

<sup>5</sup> Lamy, P., "The Key Ingredients to Tackle Food Crisis," *The Guardian: Poverty Matters Blog*, November 21, 2011: <http://www.guardian.co.uk/global-development/poverty-matters/2011/nov/21/food-security-crisis-productivity-restrictions>

### Box 1.2: Walmart's Approach to Sustainable Agricultural Market Development

Celebrating 50 years of operations, Walmart's mission is to provide "more affordable goods to underserved populations" through its 10,231 discount stores around the world as of April 2012. According to Beth Keck, Senior Director of Sustainability, Walmart is now committed to being a good steward and empowers its employees to identify ways to reduce waste and improve sustainability. Walmart demonstrates its commitment to sustainable agriculture by:

- supporting farmers and their communities;
- producing more food with fewer resources, less waste; and
- sustainably sourcing key agricultural products.

As Walmart is the world's biggest grocer, it is working with many agribusinesses and farmers around the world. However it is still unable to reach the most vulnerable rural producers, who need intensive training, finance and other resources before they can become a Walmart supplier. Below is a description of some of the ways in which Walmart is working to expand rural and agricultural markets works according to the five themes of the Cracking the Nut 2012 Conference:

1. **Expand to New Markets.** By saving people money so they can live better, Walmart is the world's largest grocer, selling more than \$400 billion annually (\$100 billion in the U.S. alone) in 27 countries around the world. Traditionally, Walmart has worked primarily with large growers and wholesalers to source its agricultural products. Given global population growth and the expanding market opportunities, however, it now actively seeks to work more directly with smallholders in developing countries around the world. By 2015, Walmart aims to work with and train more than 1 million farmers (including women), with a goal of increasing partner farmer income by 10-15%.
2. **Tap New Sources of Supply.** Rather than offering contracts, Walmart works with its suppliers to plan and respond to changing market demands. Walmart encourages its farmers to keep a record of everything they do to continue to identify opportunities to improve production, save costs, reduce waste and protect the environment. Through its Farmer Support Program, *Tierra Fertil* (Fertile Soil), Walmart has developed a cost-effective system of sourcing from small holders through Hortifruti, a subsidiary of Walmart, in Costa Rica. Working with Hortifruti, which functions as packager, processor and wholesaler, Walmart reduces its costs and increases income for farmers to invest in the expansion of their businesses in line with market opportunities. This program has benefited 13,692 families in Central America to date.
3. **Create Effective Partnerships.** Walmart relies on effective partnerships to connect smallholders to markets in the following areas: infrastructure, transportation, pricing & market information, agricultural technical skills, business skills and financing. Walmart focuses on creating long lasting, value based partnerships with local farmers and businesses, through government agencies and development practitioners. For example, Walmart has worked closely with CARE International to develop its global supply chain for cashews.
4. **Make Finance Work.** Walmart recognizes that the lack of access to rural and agricultural finance can constrain market development. Since Walmart's focus is not to be a financier to its suppliers, it is constantly looking for creative ways to facilitate access to finance, such as through partnerships, purchase agreements and risk reduction (through effective planning, quality control and crop diversification).
5. **Forge Positive Government Support.** In Costa Rica, Walmart worked with the Government to set standards for good agricultural practices and develop a certification process. Walmart worked through agricultural processors and extension services to ensure proper food handling and waste reduction. The Costa Rican Government likes working with Walmart because it helped to move farmers from the informal to the formal economy (increasing tax revenues), to improve safety standards and to increase employment.

As a result of its efforts, Walmart is on target to achieve its goal of investing \$1 billion in developing its fresh food supply chain by 2015, with \$167 million invested to date.

## II. Expanding to New Markets

Over the last several decades we have seen the rise of multi-national companies expanding their operations across political, cultural, and geographical boundaries. As production becomes more specialized in developed markets, developing markets continue to integrate into supply chains, feeding the growth of a global economy. With the rise of the middle class in the BRICS countries (Brazil, Russia, India, China and South Africa), consumer market opportunities have expanded along with the challenge of navigating the complexities of developing economies. We are now entering a new phase in globalization with many developing countries in Latin America, Asia and Africa emerging as high potential consumer markets for a global class of companies. While expanding to new markets, global companies have an increasing need to comply with both environmental and social standards as a cost of doing business. Many companies, including Walmart and Unilever (see Box 2.1), have set forth ambitious goals for sustainable operations that they must maintain and adapt as they enter new political, cultural and geographical territories. By definition, sustainable business operations are economically, socially, and environmentally viable over the long-term, which are objectives that intersect with those of many donors and development initiatives. The key is providing synergistic operations to expand the pie while sharing value. Many development organizations are now using market-based principles for development, meeting private sector companies half way. Simultaneously, as global companies expand their markets, they are looking to help develop the economies that are home to their future customers.

### Box 2.1: Unilever's Ambitious Sustainability Goals

Sustainability is at the core of Unilever's mission focusing on three very ambitious goals for 2020:

- improve the lives of one billion people,
- decrease their environmental footprint by 50%,
- achieve 100% sustainable sourcing.

For 13 years, Unilever has been the food producer sector leader in the Dow Jones Sustainability Index, and yet they acknowledge that they cannot achieve their goals without the use of partnerships. As Christof Walter explained, Unilever uses partnerships because "we have to; it's beyond our means to do it alone."

Given the immense opportunities, multi-national companies are seeking innovative ways of overcoming the challenges involved in expanding to new markets. They are utilizing state of the art technologies, comprehensive due diligence and market research programs, public-private partnerships, socially and environmentally friendly business practices, and innovative finance to create long-term value and staying power for their operations across the globe. Though multi-national companies are increasingly powerful, with budgets that rival those of many countries, they readily admit they cannot continue expanding without help from local businesses and public and social institutions.

### Lesson 1: Use Strategic Partnerships to Navigate the Complex Emerging Markets Landscape

Partnerships can help multi-national companies navigate the complexities of expanding their business into emerging market economies while helping ensure long-term social and economic value for all stakeholders. Local companies, NGOs, governments, and development agencies have had many years of experience operating in local economies, giving them a unique perspective from which expanding multi-nationals can benefit. Through joint ventures and partnerships, multi-nationals can build on local knowledge and networks to reach new consumer markets for their production.

World economic growth projections place emerging market economies as the critical source of future supply and demand for global food value chain companies. As global population continues to rise at a rapid rate, emerging market economies are simultaneously demanding differentiated food products. This combination of market forces is encouraging an increase in supply from underutilized agricultural lands of emerging markets as well as demand from their rising consumer classes.

Major trends pushing unprecedented emerging market expansion include:

- **Global food prices** are predicted to increase 20-30% by 2020.<sup>6</sup>
- **Emerging market demand** for processed foods is growing with the rise of middle class populations.
- **Yield increases** in emerging markets will be aided by better agricultural practices and technology.
- **Increases in land under cultivation** will come mainly from hard to access emerging market economies that hold over two thirds of the world's uncultivated arable land.

Recognizing these trends, Deloitte Consulting conducted research based on interviews with 20 major food companies, government agencies, and non-profits working to align their market needs with the emerging market expertise of development organizations to forge dynamic partnerships. Deloitte's research shows that leaders of top multi-national food companies see value in partnerships to help them in the following ways: to enter and expand to new markets; to manage risks associated with expansion; and to share human and financial resources. To navigate the market complexities, these synergistic partnerships move beyond traditional public-private partnership (PPP) or corporate social responsibility (CSR) initiatives toward sustainable development alliances with long-term market outlooks (See Box 2.2 for Deloitte's approach to Strategic Social Partnerships).

### Box 2.2: Deloitte's Approach to Strategic Social Partnerships

Deloitte has identified six leading practices that enable multinational firms to successfully enter emerging markets using partnerships:

1. **Strategy:** Focus partnerships on a limited number of areas that align with both the business and the Corporate Social Responsibility strategies
2. **Organization:** Institutionalize the partnership culture
3. **Business Cycle:** Think through models for how partnerships can be used to enter new markets; gain market share; expand the pie; and manage risk in difficult situations
4. **Structure:** Develop structures for major partnerships that address pre-competitive issues, align with supply chain and/or improve transparency
5. **Marketing & Branding:** Decide what and how to communicate about partnerships and how to make partnerships part of the brand
6. **Measurement:** Measure and quantify investment, impact and business value of partnerships for reporting to stakeholders and shareholders.

<sup>6</sup> OECD/Food and Agriculture Organization of the United Nations (2011), OECD-FAO Agricultural Outlook 2011, OECD Publishing: [http://dx.doi.org/10.1787/agr\\_outlook-2011-en](http://dx.doi.org/10.1787/agr_outlook-2011-en)

The evolution of CSR to sustainable business development has transformed the role of partnerships from being part of public relations campaigns to being an integral part of business strategy. Unilever, PepsiCo, Dole, Starbucks, Walmart and hundreds of other multi-national companies are planning to operate sustainably into the next century, and strategic social partnerships are going to be a key to their success.

## **Lesson 2: Unlock Market Potential by Building and Financing Collaborative Supply Chains**

Supply chains in emerging market economies are often fragmented. As a lender, this is a cause for elevated risk in lending to the involved actors on individual terms. Lenders can mitigate this risk and unlock untapped market potential by looking at the entire supply chain, combining technical assistance and adding targeted lending that matches the business cycles of the involved actors.

Given the size and scope of global agricultural operations and an increasing need to focus on entire value chains, innovations in finance have become a key factor in taking advantage of market expansion opportunities. In response, international and local banking institutions and investor groups are looking to integrate their services into the core of agribusiness plans (See Box 2.3 to learn how YES Bank is unlocking market potential in India). This opportunity matched with increasing political mandates for agricultural and rural investment has created a push for value chain finance expertise matching customized financing models to agricultural market opportunities across the globe.

“Removal of inefficiencies in agri supply chain results in substantial reduction in price escalation at the last mile, thereby ensuring better prices for the farmers.”

Girish Aivalli, Yes Bank

## **Lesson 3: Leverage Private Sector Investments to Bring New Technology to Smallholder Farmers**

Technology can bring transformative change, enhancing the productivity and livelihoods of smallholder farmers. The problem lies in the upfront cost and lack of financing options available for technological upgrades for smallholders as well as training needed to support these upgrades. Connecting new technology to smallholder farmers for enhanced production is a market-led development opportunity that needs to begin with a well-developed business plan, involving all stakeholders from day one. Once a viable business plan is developed, private sector investment can be leveraged to help smallholder farmers integrate their individual operations into the payback period of adopting agricultural enhancing technology. Finance – as a tool – needs to be flexible in addressing the diverse needs of a global market, but all the finance in the world cannot save a bad business plan. Yet if the success of the private sector business plan depends on the success of the farmer’s business plan, a true win-win business operation can transpire as highlighted by Netafim in Box 2.4.



### Box 2.3: Expanding Indian Agricultural Markets through Collaborative Linkages

With a population of 1.2 billion people, India has a real concern with developing sustainable supply chains in agriculture. YES Bank of India sees this challenge as an opportunity to expand its operations into new markets and develop financing models to fit the business cycles of local agricultural value chain actors. By identifying key constraints and collaborating with stakeholders, YES Bank can use finance as a tool to strengthen the weakest links in the value chain. YES Bank aims to improve the throughput of entire value chain systems, enabling expansion to new markets and increasing the value of their investments.

To unlock Indian market potential, YES Bank analyzes demand gaps caused by key supply chain constraints and collaborates with stakeholders to help ensure their clients' success in fulfilling known demand. In only seven years, the YES Bank business model has launched them into the spotlight as the fastest growing bank in India with the lowest non-performing loans ratio and the only private bank to have reached its Indian Reserve Bank's priority sector lending targets, including 18% of their portfolio in agriculture and 22% to small enterprises.

YES Bank's success hinges on a strategy that includes unsubsidized top quality agricultural advisory services complementing its customized agricultural lending. Targeting high impact solutions that increase land under cultivation and agricultural productivity while decreasing post-harvest losses, YES Bank simultaneously works with the Indian Government to enhance local enabling environments while applying its lending and advisory services through supply chain financing models, including:

- **Contract Farming Schemes:** Using production as collateral to extend loans, YES Bank helps farmers reach known demand.
- **Investment in Mega Food Parks:** Promoting food processing on a large scale through value added activities.
- **Expanded State of the Art Warehousing:** Extending loans through warehouse receipts to expand production while mitigating post-harvest losses.
- **Cold Storage Supply Chain Development:** Expanding cold storage supply chains for high value perishable goods.
- **Investment in Terminal Market Complexes:** Aggregating production and improving supply chain efficiencies.

By working closely with their clients and utilizing a holistic value-chain approach to improve Indian agribusiness, YES Bank helps to ensure the success of their own investments. Working with all relevant stakeholders including government and value chain actors associated with a given opportunity, YES Bank helps build collaborative supply chains to create and expand markets in India.



#### **Box 2.4: Netafim Utilizes Private Sector Investments to Expand Their Drip Irrigation Products to New Markets**

Netafim provides water-saving drip irrigation and greenhouse systems in 100 countries across the globe, including for smallholders in remote areas of developing economies. Netafim's technology can help farmers to substantially increase productivity, in some cases more than doubling production and revenues. Nonetheless, most smallholders can't afford the upfront costs involved in bringing this new technology to their farms.

As part of their growth strategy, Netafim is making long-term investments to expand their market and include a large number of smallholders. Netafim recognizes that the 400 million smallholders across the globe are essential to achieving global food security and works closely with local governments, donor agencies, not-for-profit organizations and private companies to help smallholders afford their production-enhancing technologies via partial subsidies. Eventually subsidies will need to cease if smallholders are to become stable and viable producers in a globalized food market. For this reason, Netafim is working on innovative ways to sell their products using an affordable, demand-driven business model for serving smallholder farmers.

AZMJ is partnering with Netafim to bundle the necessary technical assistance for irrigation system maintenance and agricultural production expertise, as well as financing with drip irrigation technology and solar pumps to provide a clean energy solution for enhancing smallholder agricultural production while conserving water. This innovative business model will channel patient capital to provide long-term loans to purchase drip irrigation bundles with payback periods structured to match increases in farmer production and revenue.

### **Lesson 4: Conduct Innovative Market Research to Facilitate Entry into New Markets**

Innovations in market research are shedding new light on the complexities of entering developing markets. By providing more complete customer profiles, rich market data is being used to customize product design to the specific needs of diverse demographics. MEDA is on the cutting edge of market research innovation, facilitating access to finance that is more useful and productive for rural clients. In their work, MEDA uses tablet technology to apply a range of market data gathering and analytic techniques utilizing Design Research methodologies (See Box 2.5).

Design Research is the use of an empathetic and ethnographic approach to market research that aims at better understanding the human experience, so that the findings of the research can be applied to increase end-user value. This technique requires:

- **Multi-disciplinary team:** By engaging with interaction designers and organizational /operations specialists, the technique enables the mapping of the larger 'ecosystem' of the client's use of services and/or technologies and brings different viewpoints to the problem
- **Analysis of daily transactions and interactions:** All types of relationships must be analyzed, not only financial institution relationships, to better understand how the financial service could fit into the life of the customer
- **Use of more interactive research techniques:** Experience shadowing, observing transactions in-situ, a more journalistic and empathetic interview style, opportunistic conversations, and iterative research techniques better capture realities of clients, as opposed to answers to set research questions

- **Ethnographic approach:** The approach must also be highly logical, employing brainstorming, forcing connections (clustering similar ideas), forming categories, reality checking and documenting.

### **Box 2.5: MEDA Applies Design Research Principles to Help Companies Enter New Markets**

**Design Research** focuses on end users and human experience to provide rich user profiles that give a qualitative balance to raw data. It brings design industry skills to the field of demand-side market research. By asking clients about their lives instead of focusing on a product, the nuances of complex emerging markets are better understood, allowing MEDA to make better recommendations for product design.

Another innovative market research tool that MEDA uses is User Journey Maps. This tool is used for mapping the user's experience with a product or a program. In Pakistan, MEDA employed User Journey Maps to understand the user's experience with the *Watan* card. The Watan Card is a Visa prepaid debit card funded by the Pakistan Government to distribute relief funds to families affected by the floods. Visa partnered with United Bank Limited (UBL) Pakistan and local Pakistani agencies for electronic distribution of aid.

In the *User Journey Map*, research sought to identify how the cash transfer program "Watan" was working in practice by comparing the ideal Watan experiences versus the actual Watan experience. In the ideal experience, once the card is distributed, the beneficiary can use the card and withdraw money at an ATM or another point of service and then spend the money on family needs. The research found that the actual process, as seen from the customer's point of view was quite different. Based on in-depth interviews, MEDA found that even though in theory the Watan card is supposed to work at other banks (through the partnerships that UBL had), this was often not the case. This led to frustration and repeated trips to the bank. For those outlets where money became available in the village, there were long queues and some farmers reported standing in line for up to 36 hours. Even then the ATM might have run out of cash by the time they wanted to access their payment. The next option was to go to a local government office at the district level and use a POS system. Failing this, the beneficiary would need to travel to an urban area where there are more bank machines. At the urban centers, beneficiaries reported having to bribe an official to let them use the machine faster.

By understanding and communicating the User Journey, focus is taken off the product – and back onto the user experience. Design Research allows for a much richer understanding of *how* and *why* customers use one service instead of an alternative one. Knowledge of customers' both informal and formal personal, retail, and financial relationships is used to better design and deliver products.

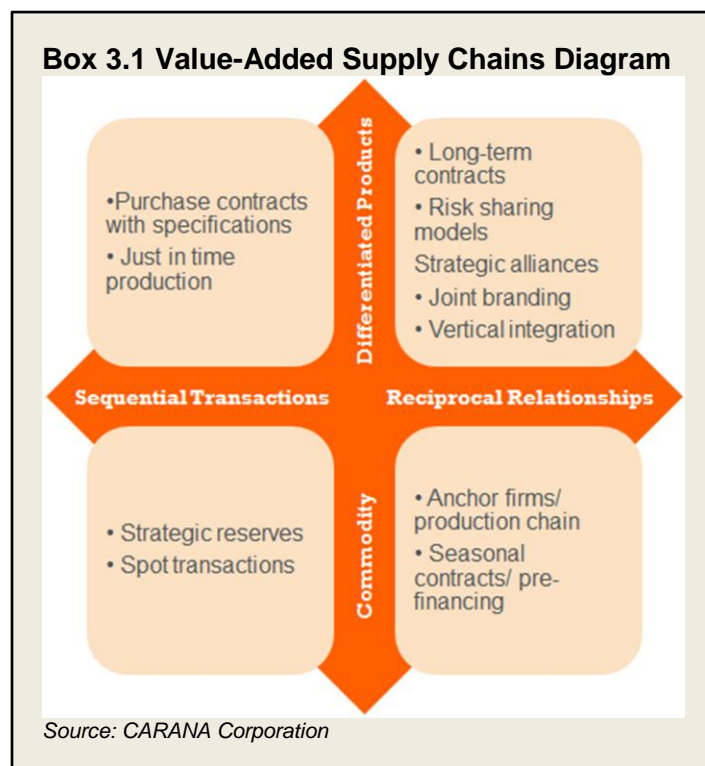
### III. Tapping New Sources of Supply

As emerging market economies continue to grow, catching up with developed economies, global companies are expanding to these new markets and need to tap new sources of supply to meet rising demand. In this way, supply chains have stretched across the globe, creating logistical challenges in providing safe, sustainably sourced production that can be traced from farm to fork. To manage the complexities of a global supply chain, companies are looking for innovative solutions that development organizations have a unique opportunity to address. Traceability, certification, logistics technology, supply chain investments, and utilizing local networks can help provide safe, sustainable sourcing while also providing the opportunity to create a more efficient, cost effective supply chain.

Development programs can help global companies tap new sources of supply by bringing safe, sustainably sourced and traceable production online. This can be done by providing innovations in technology to facilitate deal flow and logistics, accelerating access to finance that empowers the entire value chain, and implementing technical assistance programs that complement the business opportunities involved in tapping new sources of supply. For international development and global private businesses to collaborate, the development community will need to learn to speak the language of business, inviting global companies to share their challenges, and making opportunities for synergies in development. AZMJ recognizes the need for such a forum and is now working with Sustainable Food Lab to create a platform where private companies can share business and supply constraints that the development community might help to address.

#### Lesson 5: Provide Traceable, Sustainable Supply for Global Food Companies

An ever changing global food industry is increasingly demanding sustainable sourcing from a traceable supply chain. This trend is in response to consumer demand and increasingly complex government regulations, promoting transparency in operations, environmentally and socially-aware products, and greater food safety. A traceable supply chain utilizes technology, real-time information, and efficiencies to help global companies comply with sustainability and safety standards. Box 3.1 demonstrates how companies can add value to their products through product differentiation and reciprocal relationships while modernizing their supply chains to meet sustainability and traceability standards. As products move toward the upper right hand corner of the diagram, companies begin to yield private benefits while providing a public service in providing safer products through more efficient supply chains. It is in a



company's long-term interest to achieve sustainable and traceable supply chains even if they must forego the potential benefits of short-term cost cutting measures. Consumers and regulators can expedite this

process by incentivizing food companies through purchases and productive regulation. Box 3.2 highlights how CARANA adds value to supply chains using food traceability and product differentiation.

### **Box 3.2 CARANA Corporation Uses MIS Technology to Provide Traceability to Supply Chains and Differentiate Food Products for Multi-National Companies**

CARANA uses management information systems (MIS), including electronic bar coding systems, to help companies trace production from farm to fork, identifying outliers, inefficiencies, and potential pitfalls in the process. By increasing efficiencies while improving the safety and traceability of the supply chain, CARANA helps companies improve profitability while creating social value and exceeding regulatory standards. This is a win-win for both public and private stakeholders and a window of opportunity for their clients to tap new sources of supply.

Red River Foods, an international food company, works closely with CARANA and the African Cashew Alliance (ACA), a not-for-profit organization dedicated to supporting the African cashew industry. Africa produces 45% of the world's cashews but only processes 3% of it. With CARANA and ACA's assistance, Red River Foods supplies sustainably-sourced, traceable cashews to large buyers, such as Costco in the United States. In the fast growing market for cashews, there is a lot of money to be made for all stakeholders, including African smallholder producers. ACA helps ensure shared value while providing certification of sustainable, traceable production. CARANA has worked with ACA to develop the ACA Seal and position it as an industry-accepted mark of compliance with internationally recognized quality, food safety, and social/labor standards. Utilizing ACA programs, combined with CARANA's technical assistance and MIS capabilities, Red River Foods is exceeding their customers' expectations by providing reliable supplies of high quality African cashews that comply with international standards, including those of the new Food Safety Modernization Act (FSMA).

CARANA has also facilitated up to 10% price premiums for traceable sesame seed production in Paraguay, more than doubling producer incomes while streamlining the supply chain and opening Paraguayan production to more regulated Japanese markets. Utilizing cutting edge technology, CARANA is creating value in traceable, sustainable supply chains while helping multi-national food companies tap new sources of supply and stay ahead of the game.

## **Lesson 6: Facilitate Small Farmer Certification with Group Financing**

Farmer cooperatives have long been utilized as aggregators of smallholder production to help developing economies reach an increasingly global food market. Traditionally, the biggest challenge with this system has been the cooperatives' inability to satisfy quality and quantity standards. Certification is one way companies can be assured that smallholders comply with standards, but, certification comes at a high price to smallholders. For smallholders, however, higher value markets and certifications can guarantee better prices and steady buyers. Cooperatives can be utilized as a platform for facilitating the finance needed for certification as described in Box. 3.3.

### **Box 3.3 MIF Uses High Value Market Demand to Help Cooperatives Facilitate Certification for Smallholders**

Farmers face several barriers to high value markets, including lack of financing to capitalize on consumer demand for better agricultural practices, certified products, organic and ecological products, as well as weak institutional capacity of associations of small farmers. The Inter-American Development Bank's Multi-Lateral Investment Fund (MIF) sees value in certification and has partnered with various organizations and for profit companies to provide the needed finance for smallholders in Latin America to connect with global high value markets. Through these partnerships, the MIF finances both technical assistance packages (through grants) as well as loan products (through investment vehicles) that enable small holders to access new markets, by improving farm management, enhancing quality and productivity and providing much needed working capital. While the MIF does not operate as a commercial bank, it uses known demand for certified production from large food companies, including Kraft, Wholefoods, Illy and Starbucks, as a means to engage other investors who would otherwise not lend to this sector, therefore leveraging its development financing to attract other lenders.

The MIF is able to channel investment capital through local banks and credit unions to provide farmers with loans, often managed by cooperatives. One such project is a case in Guatemala, where a loan from the MIF has been channeled through a credit union to small horticulture farmers, so that they can pay for the certification process. Once they sell their certified production to large buyers/processors, such as Unispice (a horticulture exporter), who in turn sells to the food companies, farmers repay their loans to the credit union. The process works because the MIF is using a systems approach to strengthen the entire value chain while investing in its weakest link, the smallholder farmers. This approach allows an increase in throughput that meets quality, quantity, and certification standards, creating value for all stakeholders.

## **Lesson 7: Use a Local Network of Agents to Help Rural Farmers Tap New Sources of Inputs**

Expanding a sustainable supply chain in the context of developing economies can be challenging; making it important to rely on existing social and business networks to make sure necessary inputs and production flows between buyers and producers. Many remote regions of Sub-Saharan Africa are plagued by low production yields due to limited access to quality inputs. The relationship between smallholder farmers and seed providers, for example, is constrained by not only the physical distance and poor infrastructure separating them, but also a lack of trust. Smallholders in remote areas are often overlooked by input companies who don't have cost effective systems to provide services in rural areas. Creating a network of agents, such as described in Box 3.4, can be an effective way to bring inputs to these forgotten rural communities.

### Box 3.4: Cardno Implements an Agent Model to Reach Smallholder Producers

In partnership with Cardno Emerging Markets and International Development Enterprises, USAID sought to increase smallholder production and productivity in Zambia with its PROFIT project. It was immediately evident that the already low and unstable yields of smallholder production were being further crippled by limited access to key agricultural inputs and a lack of knowledge on how to use them properly. Smallholders in rural Zambia were caught in a poverty trap – without agricultural inputs, they were not able to increase their yields and improve their economic stability. At the same time, they were too poor to travel long distances to acquire the much needed inputs. To address this need, the PROFIT Project, together with their implementing partner CropServe, developed an “Agent Network Model” to increase smallholders’ access to agricultural inputs, as follows.

1. **Agents selected:** Select communities were visited by CropServe in order to demonstrate the use and value of their products and ask farmers to nominate a trusted member of the community with enough motivation and business acumen to successfully serve as an agent.
2. **Agents trained:** CropServe trained the agents on the use of its products and how to increase yields, while PROFIT trained them on relevant business skills.
3. **Model implemented:** The agents were given exclusive rights to represent CropServe within their designated area and were paid 10% commission on the sale of the inputs (no cost passed on to client farmers)

Though the first year of operation brought some challenges, such as unqualified and unmotivated agents, the agent network is now considered a success. By the end of 2011, 15 firms, representing nearly all of Zambia’s agricultural inputs industry, worked through rural agents. There are now more than 2,500 agents serving 180,000 smallholder farmers; and the initiative continue to grow organically, as some Zambians are creating their own sub-networks of agents. Overall, the PROFIT project has brought increased productivity, income, and resiliency to smallholder farmers, as their crops become more resistant to drought and disease. A key lesson learned from PROFIT is that even projects focusing primarily on increasing productivity – rather than focusing exclusively on poverty reduction – can result in lasting improvements in the lives of the poor.

## Lesson 8: Broker Investments for the “Missing Middle” to Tap New Sources of Supply

Finance is often needed to allow stakeholders to take advantage of market opportunities and access new sources of supply. Access to finance has long been a focus of development organizations providing micro-entrepreneurs with capital to create their own opportunities. This works to an extent, but does not address the needs of an entire value chain. In the food industry, processors, transporters, distributors, and retailers in the “missing middle” all need access to finance, and it is often the case that they are considered too small for banks and too large for MFIs. This creates a substantial bottleneck in the productivity of a supply chain. As seen in Box 3.5, targeted financing can relieve bottlenecks in production, improving the throughput of the entire system.



### **Box 3.5 ACDI/VOCA Facilitates Financing for Sugar Processing in Paraguay**

Manduvira is a fair-trade certified organic sugar co-operative comprised of smallholder farmers and medium-sized farms in rural Paraguay. The product is well-placed with high export demand. Manduvira has fulfilled orders from 17 different countries, but was doing so with an inefficient sugar mill located 90 kilometers away from its co-operative. As a result, only 320 tons of organic sugar was exported from Manduvira to international buyers in 2005. At this volume, Manduvira could not meet market demand, and the \$80/ton price premium on organic sugar was hardly being exploited. It was estimated that the price of not having a conveniently located mill with more capacity, was \$1.5-\$2 million per year across the co-operative. Smallholder farmers were the hardest hit due to the high transport costs and factory inefficiencies.

In partnership with ACDI/VOCA, USAID sought to facilitate the financing required to construct a new, more efficient organic sugar processing center for a rural farmers' cooperative that had many farmers without registered land and little access to commercial finance. Local banks were not interested in a long-term investment based on cash-flow financing, especially if the co-operative would still need to expand production to meet market demand. The loan amount was considered too small for commercial bank financing but far too large for co-operative financing. Stuck in the "missing middle", ACDI/VOCA had to attract multiple sources of investment. ACDI/VOCA's solution was to create a trust fund, which was managed by a local co-operative bank for the Manduvira co-operative. Forty co-operative members registered their land titles in order to guarantee the loan, in exchange for a price premium. Manduvira members were also trained by ACDI/VOCA agronomists to increase their crop yield to meet the production quota and establish credit-worthiness to local investors.

As a result, Manduvira was able to pledge \$5 million of their own resources to the project, leaving roughly \$10 million to be financed by other sources, \$8.5 million of which came from international development banks and international social investment firms. The investment paid off; Manduvira's connections to international markets strengthened and membership grew substantially.

## IV. Creating Effective Partnerships

Agribusiness companies are creating partnerships with smallholders, local governments, NGOs, donors and other actors, to expand access to resources needed to grow their businesses. Partnerships only add value if each partner holds knowledge, resources or expertise that the other does not and together they are able to create more value by working together. Box 4.1 highlights some ingredients AZMJ has found to build successful partnerships between processors and producers in agricultural value chains, beginning with clear lines of responsibility.

### Partnerships Facilitate Access to:

- Smooth Sourcing
- Creative Finance
- Technical Assistance
- Local government, donors and NGO resources
- Competitive and geographical advantages

### Box 4.1: Ingredients for a Successful Processor-Farmer Partnership

#### Responsibilities of the processor:

- Create aggregation points for production, utilizing regional warehouses and cooperatives
- Provide steady demand to normalize smallholder cash flow
- Provide technical assistance to help farmers meet quality standards and production quotas
- Engage smallholders with an appropriate farm size to meet production demands (e.g., working with a 1 acre farmer might not work for the processor or the farmer)
- Create a balanced power structure to share value with farmers, moving toward stable prices for production

#### Responsibilities of the farmer:

- Understand quantity and quality requirements
- Comply with international food standards
- Apply Good Agriculture Practices (i.e., correct use of inputs and farming methods)
- Produce on time
- Honor long-term relationships, avoiding the temptation to side sell
- Practice farming as a business and avoid becoming fully dependent on one buyer to maintain bargaining power
- Diversify, inter-crop, and maintain bio-diversity to protect long-term production viability

In the context of attracting private sector investment to rural and agricultural markets, multi-national companies are expanding their supply chains across the globe and looking to emerging market economies for major growth in consumer markets. This trend, along with pressures to mitigate environmental risk factors and include social capital as a price of doing business, has given rise to an increasing opportunity to create value through partnerships. Local governments, multi-national companies, donor organizations, development implementers and finance institutions all bring unique perspectives and expertise to the table. Together these organizations can bring a more holistic approach to both market development and poverty reduction. Value can and should be had by all, by creating long-term, sustainable efficiencies in supply chains, bringing online new investment opportunities and growing rural and agricultural markets. The key to creating value for rural and agricultural markets is to focus on market demand. As Alex Pavlovic of ACIDI/VOCA said, “Produce what you can sell.” Facilitating a successful partnership relies



on building long-term relationships and aligning incentives. This facilitation role is an opportunity for development implementers, bridging the gap between public and private institutions.

## Lesson 9: Focus on Long-term Relationship Building, Based on Mutual Understanding

According to Jeff Dykstra of Partners in Food Solutions, which facilitates public-private partnerships for General Mills, Royal DSM and Cargill, “There is growing interest in the private sector to engage in this space [development sector], but there are misconceptions on both sides.” It is important to understand the motivators and incentives of the public and private sector teams and institutions involved (See Box 4.2). Private sector firms have diverse objectives, strategies and ways of operating.

### Box 4.2: Understanding Private and Public Sector Perspectives

#### Understanding Private Sector Perspective:

Private sector partners look at partnerships through the lens of risk involved in generating a return on investment. Through partnerships, the private sector aims to mitigate the following risks:

- Operational risk – partner capacity/reliability, workforce capacity
- Financial risk - exchange rate stability, interest rate/cost of capital, predictability of cash flow
- Political/regulatory risk – expropriation, cost of compliance, market access

For the private sector, along with risk mitigation, partnerships also generate social returns through increased transparency and good corporate citizenship.

#### Understanding Public Sector Perspective:

Public sector players and donors look at partnerships through the lens of impact on target groups. When donors work with highly vulnerable populations and aim for a high level of impact, private sector involvement is usually low. However, when donors work with target groups which have a high level of productive capacity, private sector involvement can be higher with costs being shared by both public and private sector partners. In these projects, the public-private partnership reinforces the sustainability of the projects, even long after the project is completed. The partnerships can also facilitate access to advanced technologies and technical knowledge such as high-yield seeds and emerging buyer standards.

*Source: CARANA Corporation*

Dennis Flemming of Chevron explained that its interest in providing assistance to rural and agricultural markets in the Niger Delta of Nigeria is not just to reinforce the region’s security, but also to stabilize businesses that work there. There has been an evolution away from seeing development projects as part of Corporate Social Responsibility (CSR), toward a more integrated part of a corporate investment strategy, to reinforce core values and ensure long-term business viability.

In assessing potential partnerships, private firms look at the long-term costs and benefits, looking for synergies and additionality that it would not have without the partnership. However, it is important to not underestimate the costs of working on complex partnerships. While traditional private sector joint ventures can be clear agreements between two parties, public private partnerships generally involve multiple stakeholders with varying agendas. Based on his experience, Hank Dunlop of ECOM Agroindustrials argues that “the devil is in the details” and for that reason it is important to be as transparent and articulate as possible regarding each partners’ roles and expectations. For example,

private sector firms rarely have resources to organize farmers and make them ready for markets, so the development community is much better prepared to play that role. As farmer groups are organized, however, private sector firms can help to ensure that they are trained and producing for a ready market, as Walmart does with its partners through its *Tierra Fertil* program in Central America.

From the private sector's perspective, challenges in working with public sector include:

- Short term nature of donor contracts hinders long-term planning and relationship building;
- Lack of clear lines of authority and responsibility (e.g., is someone's job on the line?);
- Lack of involvement of the private sector in the planning process from the beginning by development agencies;
- Need for more people with effective skills in developing and managing complex partnerships and who are problem-solvers; and
- Lack of a strategy established upfront for transitioning off donor support and ensuring the project's role is catalytic rather than damaging to markets.

Finally, the public sector needs to recognize that the private sector cannot carry all the risk and that some risks are just too large to overcome. Country risk and the risk involved in property rights, for example, are often the first deterrents to investment in rural and agricultural markets in many developing countries. Box 4.3 highlights how Cargill's international business has been impacted by such risks. Corruption is also a big deterrent to long-term investment in rural and agricultural markets. For example, Venezuelan regulations are subject to interpretation, so many companies offer "incentives" to officials to ensure they get the proper certificates. According to one news thread, "One of Cargill's biggest challenges is their corporate policy, in compliance with U.S. law, against bribes."

#### **Box 4.3: Cargill Faces Risks around the World**

Below are a few examples of Cargill's costs of doing business in developing countries:

- After its rice mill was nationalized in Venezuela, Cargill accepted a government offer for less than its value, but still hasn't been paid the \$8 million due.
- The Syrian Ministry of Economy seized up to 6,000 tons of sugar in a midnight raid of a mill in which Cargill had a minority interest. The refinery later shut down in a siege.
- A year after Cargill had purchased Finexcor, one of Argentina's biggest beef exporters, then President Nestor Kirchner suspended beef exports to stem inflation, forcing Cargill to sell the business for a nominal sum.
- Cargill was banned from trading grain after a dispute over a shipment of wheat that went missing after arrival to Iraq.

*Source: Minneapolis Star and Tribune, April 21, 2012, p. D1.*

## **Lesson 10: Create Win-Win Situations for All Partners and Craft Shared Objectives**

Agribusiness companies are looking for security in their operations through long-term, stable sourcing of raw materials while farmers are looking for increased incomes through increased access to markets and technical assistance. It is difficult to align the interests of agribusiness companies and farmers; however, with a partnership approach, the two parties can create a win-win situation and achieve their goals. In order to create effective partnerships, development projects should identify the weaknesses of each partner, understand their motivations and drivers, and then align their incentives, creating a shared

objective. Germany's Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH worked with the palm oil industry in Thailand to create such win-win situations for several partners (see Box 4.4).

#### **Box 4.4: Interdependent Agreement Used to Create Win-Win Situation for Sustainable Palm Oil**

Palm oil is a globally traded agricultural commodity that is used in many consumer goods, from lipstick and packaged foods to body lotion and biofuels. The demand for palm oil imports has steadily increased and industrial plantations have destroyed rainforests and contributed to climate change. In Thailand, GIZ works with farmers in sustainable palm oil production, following international standards for environmental, social and economic impacts in the community.

In Thailand's palm oil industry, low yields, combined with poor fruit quality, leads to low palm oil output. Furthermore, the value chain is plagued with short-term relationships, spot markets and side selling, limited information sharing, low levels of coordination, and weak control over fresh fruit quality by the mills (see Table for the various palm oil players and the inefficiencies they bring to the value chain). GIZ estimates that these market inefficiencies account for a loss of \$1 billion per year.

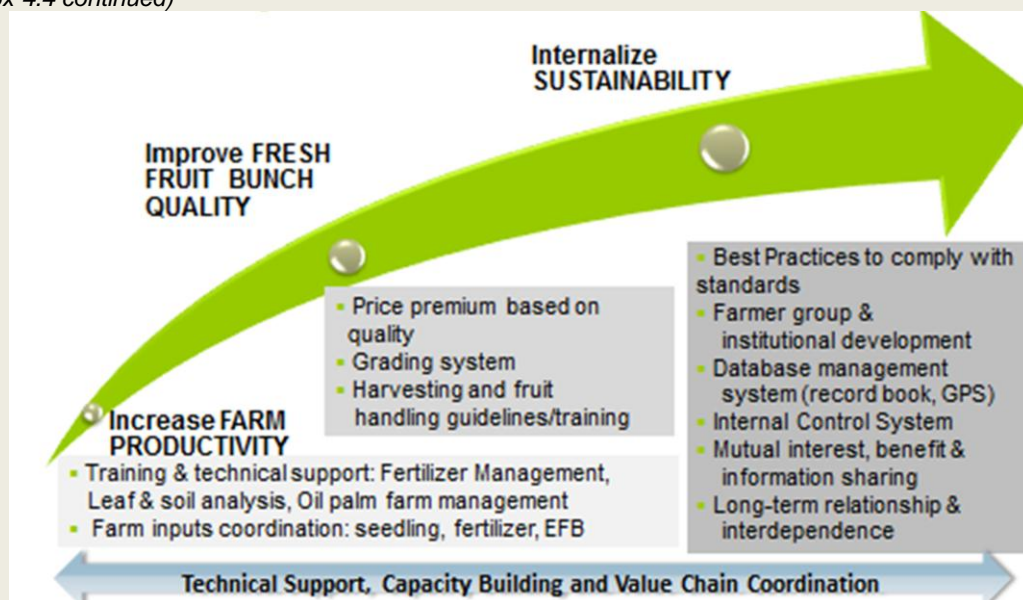
**Table: Palm Oil Players and their Weaknesses**

<b>Player and their Roles</b>	<b>Weaknesses</b>
<b>Smallholders:</b> Produce palm oil fruit	<ul style="list-style-type: none"> <li>• Poor plantation management skills</li> <li>• Low levels of agricultural knowledge</li> <li>• Lack of knowledge of inputs – fertilizers, credit, etc.</li> <li>• Low quality seedlings, which yield low harvests for 25 years</li> <li>• Harvesting of unripe fruit bunches</li> </ul>
<b>Ramps:</b> Middlemen who function as collection centers. They often provide agricultural inputs including fertilizer, credit, transportation and farm laborers	<ul style="list-style-type: none"> <li>• The Ramp often lowers the quality of fresh fruit bunches by adding water and sand to the fruit, in order to increase margins</li> </ul>
<b>Palm Oil Crushing Mills:</b> Buy fresh fruit bunches from Ramps to feed the mill's capacity	<ul style="list-style-type: none"> <li>• Low quality control of fresh fruit bunch purchasing</li> <li>• Low oil extraction rate</li> </ul>

At the beginning of the project, GIZ identified that the palm oil farmers were looking for training and knowledge from the mills, certification, and skills to better manage farmer groups and increase family incomes. On the other hand, the mills were looking for steady delivery from farmers, higher quality product, efficiency in extracting oil, and long term partners in export markets. During the project, GIZ worked with four private mills to connect them to other private sector players (i.e., refineries, traders, and input suppliers), civil institutions (i.e., universities, collection centers, and cooperatives), and various related government institutions. The project worked to (i) design mechanisms necessary for sustainable palm oil production and certification at the national level, and (ii) facilitate certification processes for smallholders and the mills. The project hired farm advisors to work closely with the farmers and provide technical assistance to increase farm productivity, improve fresh fruit bunch quality, and internalize sustainable practices using the following interventions (see image below).

*(continued on next page...)*

(...Box 4.4 continued)



Through this partnership, the mills provided farmers with fertilizers (at the mill's price and quality), high quality seedlings, free empty fruit bunches, premium prices based on quality, express delivery channels, and technical support. Meanwhile, the farmers committed to regular delivery, plantation management best practices, and sustainability on socio-economic and environmental aspects. This collaboration created a win-win situation: not only were farmers now being certified – increasing their productivity and incomes – but the mills were now able to ensure a smooth and high quality supply and were able to link with export markets. Furthermore, a triple-win was attained, as these mills and farmers are now producing palm oil sustainably and reducing their environmental impact.

## Lesson 11: Share Market Information to Streamline Value Chains and Strengthen Partnerships

Value chains that have a low level of integration are characterized by information asymmetry. In many cases, producers and lead firms have never communicated with each other; hence, producers do not know the buyer's quality, quantity and schedule requirements. In El Salvador, a supermarket chain worked with a cooperative to ensure steady supply of high quality produce through effective knowledge sharing (see Box 4.5).

#### **Box 4.5: Lead Firm Works with a Producer Organization to Facilitate Knowledge Sharing**

In El Salvador, Chemonics implemented the Millennium Challenge Corporation-funded Productive Development Project (PDP) and forged a partnership with Super Selectos, the largest supermarket chain in El Salvador. The PDP's goal was to increase the income of small farmers in the northern zone, which is the poorest region in El Salvador. Super Selectos wanted better quality produce that is grown in-country, as it was sourcing up to 80% of its fresh fruits and vegetables from Guatemala, Honduras and Nicaragua. The procurement process to import from these countries involved up to seven transactions, making the supply chain highly inefficient and costly.

PDP and Super Selectos worked with 7,500 small producers to improve the productivity and quality of their produce. Super Selectos promoted production based on market demand by sharing quality, volume and seasonality information with the farmers. PDP worked with the small producers and guided them through the creation of their own company called “El Salvador Produce.” The company built and operated producer-managed collection centers that serve as the primary link to Super Selectos’ multiservice center. The multiservice center served several key functions, including gathering and sorting produce, value added processing, as well as providing technical assistance and market information services to its suppliers to ensure they met Super Selectos’ standards. By working with El Salvador Produce as a “Preferred Supplier,” Super Selectos was able to vertically integrate its supply chain, and increase competitiveness by lowering prices and increasing quality of locally-sourced produce.

The design of this partnership helped improve the dialogue between producers and the supermarket by giving the producers the ability and leverage to effectively negotiate with the large supermarket chain. Furthermore, Super Selectos now only has to negotiate with one company, instead of several small producers, which is more convenient and cost-effective. These producers now supply better quality produce and plan their production around the supermarket’s actual demands throughout the calendar year.

### **Lesson 12: Strengthen the Weakest Link in the Partnership**

The most effective partnerships are those where partners complement each other’s strengths and help bridge any competency gaps. Through partnerships, gaps in farmer education and training, as well as problems of low productivity can be remedied. GIZ builds holistic partnerships through “Partnership Farming.” This approach works to create partnerships that are inclusive, comprehensive and institutionally-focused, through which smallholders (or groups) can start trustful, long-term, mutually beneficial business relationships with agribusinesses. In Partnership Farming, smallholders sell portions of their product to the agribusiness at fair market prices, and in return, the company provides basic agricultural education, as well as access to markets and finance. See Box 4.6 to learn about how a lead firm invested in farmer education to ensure smooth supply and high quality produce.



#### Box 4.6: Partnership Farming: Investing in Education to Ensure Smooth Supply and High Quality

In India, GIZ worked with Desai Fruits and Vegetables using their Partnership Farming approach with a banana value chain. India produces 25% of global banana production, but only exports 0.2% of global banana exports. India is also in a prime geographic position to supply the Middle East and European markets with bananas. Identifying this market demand, GIZ started working with Desai Fruits and Vegetables in 2009. GIZ first conducted a baseline study on farmers and farm workers with regard to their income and agricultural practices. Based on the results of the study, GIZ identified the need to invest in farmer education and helped launch the Desai Agricultural Academy, which offers the following courses:

- **Basic Agricultural Course:** conditions for cultivation, plant protection, soil and plant nutrition, farming as a business, how to manage finances, business calculations, irrigation methods, post-harvesting management
- **Good Agricultural Practice Course for Banana Production:** planting, plant/field care, fruit care, harvesting and post-harvesting procedures, and traceability
- **Practical on-site training** on banana generally accepted principles for farm workers



100% Traceable Bananas

The project ensured that all farm laborers were trained and that the banana supply chain was 100% traceable.

**Impact:** In 2009, the farmers in the program were producing two harvests in three years, yielding 17 tonnes/acre with 0% of the bananas at export-quality. By 2012, the farmers were producing five harvests in 3 years, yielding 35 tonnes/acre with 70% of the produce exportable.

## V. Making Finance Work

When it comes to the term “private investment”, one often thinks of outside equity investors focused on maximizing profits. In terms of investment in rural and agricultural markets, private investment must include all financial institutions (FIs) to ensure adequate access to financial instruments for all. Private investment in this sense must come from a combination of funding from the rural community itself, from poor and wealthier farmers through cooperatives for example; from local financial institutions and value chain actors; and finally external players, such as impact investment funds as well as private equity investors. To encourage more than just token investment, however, all of these financiers must see a clear path to reduce risk (both real and perceived) and to make a reasonable return. This chapter on “Making Finance Work” includes insights into how the industry can engage, encourage, and enable financiers and investors to increase their investment levels in rural and agricultural markets.

### **Lesson 13: Use Behavioral Economics Research to Design Financial Instruments and Facilitate Adoption**

One of the two greatest arguments against increased investment in rural and agricultural markets have historically been: 1) the target beneficiaries, e.g., smallholder farmers, are not capable of taking on the responsibilities associated with financial products, such as loan repayments, and 2) the clients simply do not want these products, preferring to continue with informal financial sources already available. Over the last twenty years, the industry has largely disproven the first argument that beneficiaries are not capable (they are, when the products are well designed), but there is often still a lingering issue of adoption (2) for clients, especially with savings and insurance products. Most FIs have learned the hard way that they must listen to rural clients regarding their needs through proper market research, instead of stripping down a conventional urban product (and then wonder why this new target market is not taking up the product). Listening to clients state their wants and needs is certainly an improvement; however, what clients say and what clients actually do (behavior) can be completely different. As such, the field of behavioral economics offers perspective in understanding the link between human behavior and economic decision, especially in enhancing market research by learning from clients through observation. In this way, behavioral economics can help FIs and investors to have a better understanding of how their potential clients behave and think, and thereby increase the probability of adoption and usage.

Behavioral economics looks at how individuals evaluate options and choose between them. In general, human decision-making is heavily influenced by psychological limitations and biases, which can often be counterintuitive, leading to undesirable outcomes. Faced with daily challenges that non-poor people take for granted (e.g., where their next meal is coming from), poor smallholders are in a state of greater psychological deprivation, which further impairs their decision-making abilities.

By using insights from behavioral science to re-design and improve existing rural and agricultural finance interventions, development practitioners can increase the adoption and use of financial products and productivity-enhancing agricultural inputs (such as modern seeds, fertilizers and irrigation equipment). Even the slightest changes can make a huge difference in uptake. For example, such changes can include marketing agricultural products in ways that tap into an understanding of farmers’ own mental models or re-designing payment schemes in contract farming to better align farmers’ desired spending patterns with their cash inflows. In Box 5.1, Ideas42 highlights results from a number of behavioral studies to illustrate the power of applying behavioral science to improve adoption of rural and agricultural finance and development solutions.

### **Box 5.1 Behaviorally-Designed Rural and Agricultural Interventions**

Ideas42 is a U.S.-based non-profit organization born out of Harvard University, Princeton University and MIT. It is an innovation lab that applies insights from behavioral economics and psychology to design development interventions from a behavioral lens. Below are three case studies Ideas42 often uses to illustrate behavioral innovations at the nexus between financial-product design and agricultural development.

#### **Farmers in Kenya do not use enough fertilizer**

African farmers typically use less than 10% of the amount of fertilizer farmers elsewhere use. Based on findings from a study<sup>7</sup> conducted by the National Bureau of Economic Research (NBER) in Kenya, behavioral scientists found that although 97.7% of Kenyan farmers reported that they planned to use fertilizer in the following season, only 36.8% actually ended up using fertilizer during the planting season. Conventional rationale for this behavior was that farmers did not have enough money to spend on fertilizer. However, after analyzing the situation from a behavioral perspective, researchers found that farmers indeed did have enough money immediately after harvest, but due to impatience and procrastination, they did not set aside enough money when it was time to invest in inputs, such as fertilizer, for the next season. Given the agricultural cycle and the farmers' behavioral tendencies, researchers proposed offering free delivery of fertilizer, saving on time and transportation costs, just after the previous harvest to incentivize the farmers to purchase the fertilizer when they had more funds available. As a result, there was a 47-60% increase in fertilizer use. The fertilizer adoption results of this treatment group were comparable to that of another treatment group that received a 50% subsidy instead (saving on program costs) and was far more effective than the treatment group that received free delivery just before harvest.

#### **Farmers in Malawi do not save enough to buy inputs**

In Malawi, behavioral economists also conducted a study<sup>8</sup> to determine why farmers do not save money to purchase agricultural inputs when they know it would benefit them.<sup>9</sup> The research found that this lack of savings was not because farmers were poorly educated or did not have adequate funds, but because they were often impatient and had low self-control (as many of us all do). As a solution, researchers designed savings products with built-in commitment savings features that automatically deposited a portion of their harvest income when it was paid out to them (i.e., direct deposit), and farmers voluntarily restricted their own ability to access these funds to overcome self-control problems until planting season. As a result, savings balances dramatically increased, leading to an increased investment in inputs by 27% and ultimately a 22% increase in the value of crop output.

#### **Farmers do not always optimize agricultural techniques**

In Indonesia, many seaweed farmers did not optimize pod sizes despite being informed that this could increase their incomes by 20-30%, as had been shown experimentally. An IFC-funded project team repeatedly trained farmers using demonstration pods, but these trained farmers continued to use their old seaweed pod cultivation techniques once they returned to their own activities. After a study to find out why adoption of the new techniques was low, researchers found that limited attention was to blame. Neither demonstration, nor participatory experimentation, nor abstract information had any effect on farming practices because farmers did not attend to the relevant dimensions of the experiments. Instead, their attention needed to be drawn directly to the benefit of changing pod size on their own plots. Doing so was the only aspect that made farmers change the way they approached seaweed farming, allowing them to reap large benefits in terms of yield.



## Lesson 14: Reduce Credit and Production Risks by Offering Agricultural and Market Access Assistance

Improving adoption of financial products can encourage FIs to enter rural and agricultural markets, but more importantly, risk reduction will ultimately be the key to encourage adequate private investment in these markets. Any financier looking to crack the nut of rural and agricultural markets must find a way to simultaneously manage the risks inherent to both finance and agriculture. Financial institutions can directly reduce some of their direct financial risks through portfolio diversification, good monitoring and underwriting systems, dealing with the farm as a business unit (and not on a crop by crop basis) and the use of credit insurance. They can also mitigate risks inherent to agricultural and rural markets, such as weather damage to crops through insurance, and market price drops through contracts and access to information. An effective way to reduce these inherent risks in serving rural and agricultural markets is by integrating non-financial support to clients, such as extension services and facilitating access to markets. The benefits of these interventions are clear:

### Agricultural technical assistance

- Transfer of knowledge about best practices, especially to producers, leads to improved planning of activities, more organized management, better risk management, and increased productivity.
- Technical assistance can teach farmers how to produce what the market demands, rather than simply selling what they have always produced.
- Farmers can add more value to their production process, resulting in higher quality, larger output volume, and ultimately higher incomes.

### Facilitating access to markets

- Enabling the evolution from a disconnected and isolated market segment toward one with more integrated systems can be an effective way to create linkages to buyers.
- The building or strengthening of a dynamic value chain can be a means to access valuable market information, so farmers can begin examining the markets well before the product is harvested.

When equipped with knowledge, technology and markets, smallholders are more likely to maximize returns on their investment and increase the probability of repayment. The example from SEMBRAR in Bolivia (see Box 5.2) shows how a locally-based NGO provides critical technical assistance services to smallholder borrowers (thus reducing market and production risks – and ultimately credit risk), allowing its sister MFI to safely expand its rural portfolio. This approach allows each entity, technical assistance provider and financial institution, to focus on their core business and expertise. After its initial success with its sister MFI, SEMBRAR began to offer its services to rural clients of other financial institutions, including more conventional banks and larger agribusinesses.

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<sup>7</sup> Duflo, E., Kremer, M. & Robinson, J., “Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya,” NBER Working Paper Series # 15131, National Bureau of Economic Research, Cambridge, MA, July 2009: <http://www.nber.org/papers/w15131>

<sup>8</sup> Brune, L., Gine, X., Goldberg, J. & Yang, D., “Commitments to Save: A Field Experiment in Rural Malawi.” World Bank Policy Research Working Paper no. 5748, August 2011: <https://openknowledge.worldbank.org/bitstream/handle/10986/3510/WPS5748.pdf?sequence=1>

<sup>9</sup> Martin Palomas, X. & Westley, G., “Is There a Business Case for Small Savers?” CGAP Occasional Paper #18, September 2010: [http://www.cgap.org/gm/document-1.9.47356/OP\\_18\\_Rev.pdf](http://www.cgap.org/gm/document-1.9.47356/OP_18_Rev.pdf)

### Box 5.2: SEMBRAR Mitigates Risks by Providing Smallholder Farmers with Technical Assistance and Increased Access to Market Information

The SEMBRAR Institute (SEMBRAR) is a Bolivian non-profit that provides both agricultural and market access assistance to client borrowers of its sister microfinance institution (MFI), Sembrar Sartawi Foundation (SSF), which provides agricultural financial services. SEMBRAR assigns technicians to the field who provide small farmers direct technical assistance, new technology and equipment. SEMBRAR also links the producers to value chain actors, such as large companies and other buyers, to purchase their products. SEMBRAR also disseminates market information to the farmers, such as current prices and trends, via radio, cell phone, and through its field technicians. The assistance from SEMBRAR mitigates production risk through interventions such as improved irrigation or access to inputs, making farmers less vulnerable to drought, pests, and diseases, and mitigates market (and income) risks, through better pricing information and price arrangements with buyers. Ultimately, Sembrar Sartawi, SEMBRAR's sister MFI, benefits through an indirect reduction in credit risk due to the reduced production and market risks.

SEMBRAR has trained 490 families in dairy farming best practices, and 380 other families are now producing better quality potatoes since being trained in pest and disease control techniques. SEMBRAR has also recorded a 2,000 square-meter increase in productive land use per family. The results for the MFI have been encouraging as well. Sembrar Sartawi has experienced significant growth in the past two years, as its loan portfolio increased from \$1 million in 2009 to \$14 million in 2011 (with 70% of its 10,000 borrowers in the agricultural sector). More importantly from a risk perspective, SEMBRAR's portfolio at risk over 90 days was at just 0.09% at the end of March 2012, despite this growth in credit.

SEMBRAR has found that although access to finance is important for smallholders, it is essential that the financial resources be supported with a comprehensive package of technical assistance and market access (including market information, access to savings, communication services, and climate adaptation techniques). It is these non-financial services that can help ensure loans lead to more efficient agricultural production and improved repayment capacity.

## Lesson 15: Consider the Business Case for Small Savings

Minimizing risk is certainly one of the main concerns of private investors and lenders; however, ultimately, they must also earn an adequate return, through maximizing revenues and minimizing costs. For example, there is still not a clear set of business practices on how to ensure non-financial services can be financially viable. Many MFIs have also attempted to mobilize rural savings but have often found that the average cost of an account is too high and that savings can rarely represent a significant portion of their funding sources.<sup>10</sup> Nonetheless, a study by Glenn Westley and Xavier Martin Palomas<sup>11</sup> found a number of reasons for financial institutions to consider mobilizing small saving accounts:

- **Minimal marginal costs.** If one factors in that many of the costs of mobilizing rural savings are already covered by a financial institution's fixed costs, then the additional marginal cost can be minimal.

<sup>10</sup> Portocarrero, F., Tarazona, A. & Westley, G., "How Should Microfinance Institutions Best Fund Themselves?" Sustainable Development Department Best Practices Series, Inter-American Development Bank, Washington, D.C., 2006.

<sup>11</sup> Ibid. 9, at 32

- **Opportunity for cross-sales.** As most clients have a broad range of business needs, rural savings clients can purchase other financial products, such as loans, money transfers, insurance, etc.
- **Reduced cost through technology.** Banking technologies that facilitate automated transactions, such as automatic teller machines (ATMs), point-of-sale (POS) devices, and mobile banking have the potential to reduce operating costs and increase client retention and accession rates.
- **Higher returns.** If the loans taken out by small savers are significantly smaller than average, the MFI may still be able to make this lending profitable by charging higher interest rates and/or fees for these loans.
- **Higher fees and/or lower interest rates on savings accounts.** If the cost of serving small savers is still excessive even when all the previous points are taken into account, the MFI always has the option to charge for the service provided.

Even if small-saver loans and savings accounts are too small to be profitable clients today, both may increase in size over time by enough to make them profitable in future years. Based on this long-term market potential, for example, EcoBank is mobilizing small savings via public high schools throughout Mali.

## **Lesson 16: Member-Based Institutions Can Facilitate Access to Finance for Smallholders**

As mentioned previously, private investment can actually come from within the rural community. Credit unions, for example, can serve such a purpose as they are member-owned, not-for-profit financial cooperatives that provide savings, credit and other financial services. Credit unions particularly focus on entire communities, including the rich & poor and small & large farmers, and serve entire families, instead of just the heads of the household. In this way the revenue opportunity is greater for the credit union, as it has more potential client members, and individual group risks are reduced as all stakeholders are involved. The credit union model also augments the funding source base as better off farmers can deposit their excess funds for the credit union to lend to capital hungry clients with smaller means. The example below in Box 5.3 from the World Council of Credit Unions (WOCCU) shows how credit unions can increase access to high quality financial services for all community members, especially smallholder farmers, while ensuring that the institution and its investor members/depositors earn an adequate return.

### Box 5.3 Credit Union Methodology for Reaching Smallholder Farmers

The three keys to the credit union model are affordability, availability and accessibility. In general, pricing (affordability) for agricultural loans is one of the most important components to lending. Per WOCCU, pricing could be structured on a case-by-case basis to better understand the absorptive capacity of each farmer. Furthermore, by having the discipline, efficiency and structure to keep costs low, agriculturally-focused credit unions can pass on savings to farmer clients by charging lower interest rates on loans and paying higher savings rates.

The loan products typically available to agricultural clients include production loans, improvement loans (i.e., for house, equipment, or land; typically longer term), and revolving lines of credit (acting as a cushion for a farmers' day to day cash needs). While repayment is important, the end goal is not that the farmer repays the loan, but that the farmer is able to generate wealth. This can be done by improving the main productive asset of the farmer (land), improving the annual net income of the farmer-member by introducing viable agricultural products, and creating a master farm plan (which includes soil improvement, improved seed quality, fertilizer, water, and insecticides and pesticides). Credit unions are member funded, typically driven by member savings as well, which can also provide members a source of income through dividend payments, a source of investment for a purchase planned for the future, such as a new tractor, and a place to safeguard emergency funds.

Accessibility can be achieved by offering services to the entire community of farmers, rich and poor, helping to diversify borrower risk and spread fixed costs across a larger client base. Farmers from different economic backgrounds bring with them varying levels of risk, and thus could be treated differently. For example, subsistence farmers, who often have no collateral, no equity, and no outside income are generally more risky than semi-commercial farmers, who often have outside income, some collateral, and some equity (often 20-30%). By targeting higher income members first, such as the semi-commercial farmers, the credit union can establish a stable and viable client base before expanding to subsistence farmers, who are more risky and less profitable. In addition, by serving commercial farmers, credit unions can better cover costs on savings, especially fixed costs, as these farmers can save larger amounts. Per WOCCU, the ideal client mix is 30% subsistence farmers, 60% semi-commercial farmers, and 10% commercial farmers.

Furthermore, when performance is measured and reported, it implies a sense of accountability, causing performance to accelerate. WOCCU developed 15 organizational indicators (e.g., membership breakdown, portfolio distribution by agricultural product, type of loan, loan size, delinquency) and 14 producer indicators (e.g., land ownership, plot size, number of employees, crop production and yield, gross income, production costs, and net income) to measure performance and advancement of both credit unions and client borrowers.

## Lesson 17: Long-Term Capital Can Improve Farmer Productivity

Private investors and lenders in rural and agricultural markets have historically focused on fulfilling short-term working capital needs to minimize their risks. However after two decades of price volatility, many farmers have liquidated their long-term assets, such as animals and equipment, and are trapped in a vicious cycle of zero profitability and lack of access to long-term capital. Fair trade farmers are also affected, as some of them have higher production costs and declining yields. Due to the lack of access to appropriate long-term capital, farmers have not been able to invest in infrastructure to increase yields, improve quality, and create added value in their produce. Incofin estimates that there is tremendous pent-up demand, approximately \$1.2 billion in additional capital needed globally, 65% of which is long-term

capital, to finance fair trade farming.<sup>12</sup> On the other hand, there is a growing demand for certified products not only within the US and Europe but also emerging countries, such as Indonesia, Vietnam, India, Brazil and Mexico.

Incofin, Fairtrade International and Grameen Foundation, for example, have partnered to start the Fairtrade Access Fund (FAF), which will invest in well-run producer organizations that are Fairtrade certified (or in the process of becoming certified). Incofin will manage the Fund and raise \$8-10 million in capital by the launch in Fall 2012, eventually growing the Fund's capital to \$50-\$100 million by the fourth year. FAF will initially focus on Latin America and the Caribbean and later expand to other regions.

FAF investees will benefit from debt financing (1-5 years terms) and various types of technical assistance. Incofin will provide organizational capacity building to the producer organizations, including risk management and corporate governance training. Fairtrade International will provide market expertise to the producer organizations and help in securing buyers in the market. Grameen Foundation will provide support through its mobile information services platform and its Progress out of Poverty Index (PPI) to help collect, analyze, and disseminate data on the end beneficiaries. The design of FAF and the structure of investments will provide farmers access to long-term capital, actionable information that will allow them to enhance their yields, a reduction in the impact of diseases, and greater access to the benefits of Fairtrade certification including markets, minimum prices and price premiums. In particular, the long-term financing will not focus on land acquisition, but rather on value adding investments, such as for land preparation, irrigation, equipment and processing facilities.

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<sup>12</sup> Based on producer survey conducted by Fairtrade International in March of 2012.

## VI. Forging Positive Government Support

Governments often have strong political reasons for supporting rural and agricultural market development, as well as economic reasons. As a result, the best policy decisions often come from engaging the private sector to ensure that new policies are market friendly and serve the necessary constituencies. According to Honduran Minister of Agriculture and Livestock, the Honorable Jacobo Regalado, “In the past, Hondurans viewed the agricultural sector more as charity than a business. Now we use a more sustainable approach, promoting a business model and access to markets...” Through partnerships with the private sector, the Honduran government has better aligned its agricultural policies with market demand, increasing its agriculture-related GDP (see Box 6.1). There are a number of ways that governments can support rural and agricultural market development, beginning with a policy environment that is conducive to:<sup>13</sup>

- Starting and closing a business
- Dealing with licenses, certifications and standards
- Employing workers
- Registering property, land and water use rights
- Accessing finance and protecting investors
- Assessing and collecting taxes
- Promoting fair competition
- Facilitating access to markets – transparent pricing, information systems, etc.
- Facilitating trade across borders
- Enforcing contracts and rule of law

### Box 6.1: Agricultural Policy in Honduras

In Honduras, agriculture contributes to 13% of gross domestic product (GDP), but only represents 4% of extended credit. Nonetheless, Honduras was able to increase agriculture-related GDP by 5.6% in 2011, while Honduras' overall GDP only increased 3.6%. The Government of Honduras has done this through multiple collaborative partnerships, including:

- working with the national bank, Banadesa, to improve analysis;
- reducing risk through complementary guarantees and building trust;
- improving agricultural risk management schemes;
- working through new development channels.

Below are additional lessons related to forging positive government support.

### Lesson 18: Offer Tax Benefits to Encourage Investment in Rural and Agricultural Market Development

In many developing countries, rural and agribusinesses operate under the radar of government taxation, which can limit growth and investment. Governments can offer tax benefits to incentivize rural and agribusinesses to operate more formally, which can expand its tax revenue base over time. The Government of India, for example, offers a tax holiday for up to 15 years to encourage investment in agri-industrial parks (100% first 5 years, 50% second five years and up to 50% for third five years). According to Saurabh Bhat of YES Bank, the Indian Farmers Fertilizer Cooperative was started this way, which is now the largest chemical fertilizer provider in Asia, with 38,155 cooperatives associated and 55 million farmers as shareholders.

<sup>13</sup> Adapted from [www.eatproject.org](http://www.eatproject.org)

## Lesson 19: Make Policy Changes Based on Hard Evidence Combined with a Clear Understanding of Perspectives, Roles and Leadership

Oxford Policy Management (OPM) has found a frequent need to re-examine the justification for existing and/or proposed policy interventions by a range of actors. An assessment of the impact of fertilizer subsidies and purchasing schemes for maize farmers in Zambia, for example, found that only 5% of the benefits went to the poorest smallholders, despite the fact that the schemes absorbed 90% of the Government's poverty reduction budget. In many cases, action is advocated on the basis of perceived best practice rather than a robust appraisal of country specific trends and priorities. Often times, aiming at best practice without taking full account of country specific constraints and drivers results in unintended consequences; so it is much more effective to go for "best fit" or "good fit." As a starting point, it is important to acknowledge the challenge policy makers face in managing the many trade-offs (see Box 6.2 below).

### Box 6.2: Political Trade-offs Related to Supporting Agricultural Markets

Ensuring benefits for the rural poor are disenfranchised	VS.	Managing expectations of those with power and influence
Waiting to collect information to make informed policy decisions		Making policy decisions based on timely but incomplete information
Establishing a single, coherent framework for understanding and formulating policy		Taking full account of the differences in understanding and opinion among varied stakeholders
Protecting national food security		Supporting growth of rural and agricultural markets
Promoting best practice policies		Promoting policies that can be effectively communicated and accepted
Addressing short-term concerns and demonstrating immediate improvements		Addressing long-term structural problems

OPM recommends a deep and thorough analysis of the political economy to understand the wider constraints and incentives facing policy makers. Political economy analysis includes an assessment of the stakeholders, rules and institutions (e.g., Ministry powers, "rules of the game") and structures (socio-economic, culture, history). For a given policy issue, one must understand who would be the winners and losers over time, and what would be required to build support for the policy change.

"We need to do rigorous analysis to really understand the market before selecting policy interventions at macro, meso and micro levels. If we don't learn from mistakes, we'll be doomed to repeat them!"

Dr. Robert Stone, OPM

Combining political economy analysis with value chain analysis can help identify the real issues that need to be addressed to spur agricultural investment and finance. In Rwanda, for example, a team was able to demonstrate the benefits of focusing heavily on improving the financing of post-harvest handling and storage (through warehouse receipts, etc.) to complement the existing emphasis on input financing.

One of the difficulties in crafting effective policies to promote agricultural finance, results from the lack of clarity about which ministry is responsible for it. As Boaz Blackie Keizire of the African Union Commission explains, "The Minister of Agriculture often assumes that agricultural finance is the Minister of Finance's responsibility, while the Minister of Finance assumes that it is the Minister of Agriculture's



responsibility.” This blurring of responsibilities can lead to policy vacuums or stalemates that keep policy initiatives from moving forward, thereby hindering investment.

Unless there is clarity from government leadership, the private sector will not invest. Public leaders need to speak up and make specific commitments to facilitate private sector investments in rural and agricultural markets. When looking to make long-term investments, private investors need to know that they will be supported and protected.

In general, policies are easier to pass than to implement, particularly when the potential winners are marginal economic players. To work around the traditionally male dominated policy stakeholders in Pakistan, for example, the President moved responsibility for financial inclusion to a Department in the Central Bank with several women among the senior staff. It is crucial to have a champion to make difficult policy shifts: in the Pakistan case, the champion was the (female) Governor of the Central Bank. If you cannot create a champion, you can usually facilitate the emergence of one.

## **Lesson 20: Consider How Government Policy Can Play an Important Role in Developing Outgrower Networks and Agricultural Supply Chains**

In Nigeria, the Federal Ministry of Agriculture and Rural Development launched an ambitious program to help farmers access seeds and inputs through the private sector, providing financing and support to supply chain development, while the Ministry of Water Resources increased public expenditure on irrigation facilities specifically in rice growing areas. Working closely with the USAID-funded MARKETS program, managed by Chemonics International, government agricultural extension agents acquired new skills and tools for increasing agricultural productivity, which increased farmer yields in sorghum, cassava, sesame, maize and rice. As a result of these capacity building efforts, the Federal Government of Nigeria plans to facilitate rice production and processing to effectively compete with imports over the next five years.

“Governments can help the private sector only when they have a shared perspective.”

Dr. Benugopal Mukhopadhyay, NABARD

## **Lesson 21: Ensure the Right Business Model and Incentives are in Place to Stimulate Private Sector Development**

Following the end of apartheid, the South African Government mandated land reform, with an end objective of redistributing 30% of the country’s agriculturally viable land to the previously disadvantaged or black population. The Government has seen the shortcomings of giving land to unskilled and undercapitalized people, which among other things has resulted in 90% of the estimated 6 million hectares of land purchased remaining unproductive and driving up local food costs. Government is now calling on the private sector to partner with them in creating a sustainable solution to the land reform process in South Africa. To this end, companies like EmVest, which is a private agricultural investment company, have positioned themselves as strategic partners with the Government and the beneficiaries of land reform, thereby ensuring that the land maintains its productive status. Under the new land reform strategy, known as the Pro Active Land Acquisition Strategy (PLAS), the Government retains land title for five years before turning it over to someone who has a claim on the land (even if distant). During this time, EmVest trains the farmers and links them to markets, creating jobs in a way that is commercially sustainable (depending on the strategic partner contribution, they share up to 45% of the profits with the beneficiary). By partnering in this way, EmVest has created a win-win-win solution for the Government, local farmers and its investors. As Stephen van Schoor of EmVest explains, “We are unashamedly commercial. We want to attract others by being a success, to encourage other private sector players to get their hands dirty.” It takes significant time, effort and coordination, however, to get public and private



sector partners on the same page. A financial inclusion pilot project to develop an ICT based solution for penetrating rural markets in India highlights the difficulties of getting public and private sector representatives to buy into a shared initiative (See Box 6.3).

### **Box 6.3: NABARD's Role in Supporting India's National Plan of Financial Inclusion**

Due to its past close relationship with the Central Bank in India, an apex development finance institution, the National Bank for Agriculture and Rural Development (NABARD), was selected to work on an important initiative related to the National Plan of Financial Inclusion with the intended outcome "to increase the access of finance of the excluded populations in a cost effective way," as 54.6% of farmer households were financially excluded, according to National Sample Survey Organization in 2003. The project was to educate and motivate rural people to use the banking services at their door steps through a business model in which banks would gain clients and revenues through repeated transactions and the ICT provider would benefit from the sale of hardware and software. The end objective was to provide unbanked clients with access to finance, not just credit, but also savings, insurance, remittances and payment services, including State welfare payments through smart cards.

NABARD's partners included The World Bank; Source Trace System (STS), a private technology service provider; and 15 Regional Rural Banks (RRB), which are state-sponsored rural financial institutions in India. NABARD's role was to coordinate with the other institutions, providing financial, logistical and technical support, and to guide the RRBs' participation in the project. The pilot aimed to reach unbanked populations through information communication technology (ICT). STS provided ICT pilot study kits to select RRBs, which contained hardware: laptops for enrolling clients, and software: client software and server software licenses for six months. It also provided smart cards to the clients to facilitate transactions. The pilot was implemented in fourteen states by working with Self-Help Groups (SHGs), farmers clubs and business correspondents, with varying degrees of success, ranging from no new clients in one RRB to more than 1700 new clients in another RRB. The estimated investment to date has been \$72,470. All together, the six month pilot resulted in 13,000 new clients as of May 15, 2011, and 11 of the 14 RRBs added at least 1,000 clients, which was the break-even point for the business model.

The project faced significant hurdles due to insufficient power, poor telecommunications, selection and adoption of appropriate technologies, non-availability of locally skilled persons and vendors, cost of technology upgrades, and enrollment of a large numbers of accounts over a wide geographical area. The RRBs faced additional hurdles, including high maintenance cost of accounts, small size transactions, and various linguistic and literacy challenges. Regulatory issues included transit security, distance criterion and transaction settlement.

The project yielded several important lessons that can be applied to future ICT initiatives for financial inclusion:

- Project design should integrate knowledge related to theories of change to anticipate and address client resistance;
- Special efforts must be made to strengthen stakeholder engagement and to achieve a shared vision;
- Rolling out technology requires technical assistance and buy-in at all levels of hierarchy, from senior management to rural branch managers;
- A project champion is needed to oversee and ensure overall project success.

Box 6.4 offers another example of how a Government's time and investment in identifying the right business model can pay off, even in the most difficult situations.

### Box 6.4 Peruvian Government's Effective Strategy to Eradicate Coca Production

Deemed the “San Martin Miracle,” the Peruvian Government, in partnership with the private sector and development partners, was able to reduce coca cultivation (the plant used for cocaine) from 23,000 hectares to 1,725 hectares in the San Martin area of Peru from 2000 to 2010. The average coca growing community in San Martin suffered from high incidents of poverty, insecurity and violence, government distrust and low levels of education. Through an effective communication strategy and ongoing support, San Martin's poverty dropped from 70% in 2000 to 31% in 2010 and became the top performing region of the country with 7% annual regional growth.

USAID/Peru contributed to these achievements through a series of Alternative Development Programs from 2002-2012. Chemonics' current model uses three phases:

1. **Hearts and Minds.** Chemonics' team begins to work with a coca growing community by socializing and consulting with them, and identifying potential architects of change. Approximately, 70-80% express interest in program and agree not to go back to coca cultivation in exchange for economic and community support. Communities become more interested after having their coca “eradicated” by the Peruvian government CORAH agents several times. According to Greg Jacobs, Chemonics Director, “Women are often the strongest voices as agents of change,” so the team would convince them of how they could improve society and make a better future for their children. While it is hard to compete with the returns on coca production, site visits to communities that had worked on other crops showed how alternative development could improve communities, investment and resources.
2. **Capacity Building.** Once committed to change, communities were encouraged to grow crops with high market potential, such as cocoa, coffee and palm. Nonetheless, Loren Stoddard of USAID explains that part of why this model works is because “We don't tell communities what to do next; we ask them.” Chemonics then provided capacity building assistance to farmers and cooperatives on how to prepare land, cultivate new crops, provide adequate shade and post-harvest handling, and ensure effective farm and nursery management. Chemonics has also worked to develop key SMEs in the agricultural value chains, including a cocoa processor that ferments cocoa and produces chocolate products, which won a prize for taste at the 2009 Chocolate Festival in Paris.
3. **Post-Eradication Support.** Support does not stop there. Chemonics also works with the productive sector to better understand and link to markets, facilitates cocoa exports to Germany and the US, and supports education through farmer field schools. In addition, Chemonics supports community development, including infrastructure development of roads, electricity, potable water, as well as strengthens social cohesion through leadership training and networking activities, especially for women and youth.

So, is the San Martin Miracle replicable? The Peruvian Government believes it is, despite the fact that it required about \$250 million of USAID funding over the past 10 years, and some coca growing has just moved to other areas (e.g., in VRAE, where there is limited local government commitment to coca eradication).

### Lesson 22: Encourage Municipal Governments to Play an Active Role in Developing Rural Markets

Traditionally, municipal governments see their role as providing public services mostly, with little vision of how they can play a role in attracting investors, especially to support rural and agricultural markets. In Nicaragua, however, Catholic Relief Services found that by actively engaging municipal government leaders and local farm and agribusiness leaders, its ACORDAR project was able to facilitate relationships

and stimulate dialogue among multiple value chain stakeholders (see Box 6.5). As a result, investments increased by \$19.5 million (\$14.63 million in roads and water infrastructure and \$4.78 million in storage facilities, sanitation and market access), which were needed to facilitate private investment in the following value chains: fresh fruits, vegetables, coffee, red and black beans, cocoa, roots and tubers.

#### **Box 6.5: CRS Leverages Municipal Investments to Strengthen Agricultural Value Chains in Nicaragua**

To create value chain friendly environments, CRS' Alliance to Create Opportunities for Rural Development through Agro-Enterprise Relationships (ACORDAR) project worked with 25 municipal governments to embed actions to secure investments in their planning structures and processes. They found that farmer enterprise investment support has greater potential to be included in the municipal budget when presented at town hall meetings in the presence of other local stakeholders. The ACORDAR project was implemented over 5 years (2007-2012) through the following four phases:

1. **Obtaining buy-in from municipal governments and producer organizations**, by meeting with municipalities to discuss importance of selected value chains, explaining initiative and benefits to producers and municipalities (win-win scenario) and obtaining political and financial commitments in writing.
2. **Developing farmer capacity**, helping farmers to understand municipal legal framework and develop lobbying action plans to articulate their needs.
3. **Encouraging farm cooperatives to participate in municipal decision making bodies**, learning how to lobby local governments in town meetings, through environmental and technical commissions for improved water use, waste management, etc.
4. **Ensuring sustainability: making farmer participation in municipal activities a permanent political process**, by improving government transparency and access to quarterly publication of municipal investments, engaging cooperatives and encouraging farmers to attend government departmental meetings.

By assisting 3,068 direct participants in 25 municipalities, ACORDAR strengthened value chain competitiveness, increasing production by 66%, sales by 98% and average annual farmer income from \$2,400 to \$4,600 over four years. As a result, CRS estimates that it helped to create 23,600 new jobs and benefited 20,000 farmers and families in 25 municipalities in Nicaragua. In addition, sixteen legal regulations to support value chain development were implemented as a result of farmer enterprise lobbying efforts, including forest and agriculture fire prevention, protection and adequate use of water sources, regulation of irrigation areas, agriculture-based water and solid waste management, and watershed and natural reserve protection. According to Jefferson Shriver of CRS, "perhaps the most important impact was on people's health, resulting from having more consistent access to potable water." One municipality with notable results is Pantasma (Jinotega department). Their farmer enterprise lobbying efforts led to the creation and/or repair of 15 kilometers of rural roads, 65 latrines, and electricity installation for 150 families. Nonetheless, CRS admits that its results varied by municipality, with five experiencing exemplary results, 10 good results and 5 municipalities with not so good results. They found there was more success in municipalities with a history of transparency and leadership, as well as with mature cooperatives, where farmers had strong ties and worked well together.

## VII. Adapting for Special Considerations

Special considerations are merited in light of a number of important changes in global demographics, including:

- Prevalence of females in agriculture (they represent up to 43% of the agricultural labor force in developing countries)<sup>14</sup>;
- Growing global population, with large concentrations of young adults in developing countries;
- Acknowledgement that the extreme poor, often live in rural areas, with no access to land, markets and education, making it extremely difficult to lift them out of poverty through market-driven solutions alone.

Three related lessons are highlighted below.

### **Lesson 23: Map Gender Roles and Impacts to Raise Awareness and Encourage Gradual Change of Social Norms and Behaviors**

Unfortunately, economic growth is not sufficient to address gender gaps. Instead, special efforts are needed to help both genders see the advantages of gender equality and in particular, of women's empowerment. Gender mapping can be integrated into value chain analysis and the findings used to gradually change social norms and behaviors. According to the FAO, women are traditionally responsible for collecting water and fuel, maintaining household plots and gardens, processing and preparing food, in addition to housekeeping and childcare. Women generally have less access to land, credit and education, which limit their capacity to invest in new technologies or equipment for rural and agricultural development. If women farmers were empowered to produce the same yields as male farmers, then agricultural output would increase by up to 4% in developing countries.<sup>15</sup> Through rural and agricultural development projects, communities can be incentivized to encourage and facilitate change, by identifying triggers that move people to action and allowing them to set their own pace of change. Most people change when they see others in the community accepting change, resulting in a domino effect, with changes happening slowly at first followed by more rapid change once the “tipping point” is reached. Empowering women through local leadership can play an important role in facilitating behavioral change and social acceptance as highlighted in Box 6.1.

<sup>14</sup> “The State of Food and Agriculture: 2010-2011,” Food and Agriculture Organization of the United Nations, Rome, 2011.

<sup>15</sup> Ibid.

### Box 7.1: CARE Empowers Women to Develop Cashew Enterprises through Education, Technical Assistance and Business Linkages

As part of CARE's Global Market Engagement Strategy, CARE empowered women to develop cashew processing businesses in two cashew-growing districts of Cuddalore and Nagapattinam in Tamil Nadu, India with funding from Walmart Foundation. These districts account for 45% of all cashew nuts processed in India, for which women are traditionally used for unskilled, low-wage work, such as gathering or de-shelling nuts. In this role, they have had little opportunity for advancement, control over productive assets or decision-making authority. CARE intervened in two key ways – promoting social empowerment and developing women-owned cashew enterprises.

When dealing with vulnerable and marginalized groups, such as women and Dalits, education and social empowerment play a prominent role. To implement this, CARE and its local partners worked with the women cashew processors to improve their functional numeracy and literacy, as well as raised their awareness about norms, power, rights, reproductive health and entitlements. The women also received training on savings and were introduced to micro-insurance and micro-pensions.

To help the women develop their cashew enterprises, CARE and its local partners offered a package of technical and managerial training, designed to teach them about cashew processing, management, negotiation, and marketing. CARE guided the enterprises through a four-stage process of growth (Start-up -> Formalization -> Maturity -> Growth & Scale) as depicted in the illustration. CARE also facilitated linkages to input and output markets for them. For example, CARE brought in Walmart India as a buyer for the women-owned Cashew processors, also demonstrating the groups' ability to meet very strict quality standards.

<b>Start-up</b>	• Sensitization, training, exposure, negotiation, business planning, and start-up
<b>Formalization</b>	• Registration, board formation and development, management development, business process, linkages
<b>Maturity</b>	• Financing, break-even, growth plan, transition plan
<b>Growth &amp; Scale</b>	• Full autonomy, explore other business models, diversify supply and market, scale

So far, through the project, the women are operating four women-owned processing units. Three of these have been formalized as producer companies with women-only boards. 1,250 women are now part of the Cashew Processing Federation and have processed 184 metric tonnes of raw cashew, leading to \$280,000 in sales of the finished product.

### Lesson 24: Provide Rural Youth with Incentives and Technical Assistance to Prepare Them for Markets

Many youth in developing countries leave the rural areas in search of opportunity and employment. Many saw their parents and grandparents struggle to make a living off of agriculture, which has not made it an appealing vocation for young adults. In some value chains the average age of the farmer is increasing, such as in cocoa in which the average farmer is 58 years old. In these cases, special efforts must be made to attract and retain youth in rural areas, possibly including asset building grants, training, financial

literacy, technical assistance, coaching and market linkages. Nonetheless, it is important to segment youth for targeted interventions, as they are not a homogenous group. Interventions must be carefully designed based on their diverse backgrounds, sequenced and structured so as to create a valid pathway forward. For example, AZMJ's work for the Education Development Center (EDC) in the Democratic Republic of Congo found that young entrepreneurs had different needs depending on gender, age cohort, level of education and household income.<sup>16</sup> While agribusiness ownership is one potential pathway, not all youth are meant to be entrepreneurs and many prefer to have jobs. Often youth's best asset is their labor and energy; through internships, apprenticeships and entry level jobs, young adults can develop skills to link them to productive markets.

## **Lesson 25: Segment Markets to Identify Appropriate Approaches to Serve Marginalized Groups**

Marginalized groups, including the extreme poor with no or very little access to land, finance and education, are the most difficult to link to commercial markets in rural and agricultural markets. Alexia Latortue of CGAP emphasized the importance of segmenting rural agricultural households in order to develop a more precise and nuanced understanding of their financial service needs. A client-centered approach benefits from taking a holistic look at households whose income is significantly tied to agriculture. Rural households are not only producers; they are consumers with needs and aspirations linked to schooling, healthcare, etc. Based on research conducted by Bob Christian and Jamie Anderson, CGAP is proposing an emerging segmentation that differentiates (i) non-commercial smallholders, (ii) commercial smallholders in loose value chains, and (iii) commercial smallholders in tight value chains. The non-commercial smallholders are among the most poor, and farm for sustenance and survival. They are characterized by a lack of access to most kinds of resources—land, technology, inputs, financial services, etc.—and are highly vulnerable to shocks. Different services, providers and delivery channels may be needed to reach these three segments effectively. From its work on the CGAP-Ford Graduation Program, CGAP has found that the extreme poor first need to be food secure and possibly given an asset-building grant, skills training, and intensive coaching before they can benefit from financial services, usually beginning with savings.

Some countries are using conditional cash transfers to serve marginalized groups, which can be effective in protecting them from the long-term negative effects associated with food insecurity. For example, Ethiopia's Productive Safety Net Program (PSNP) provides food and cash for work to chronically food insecure populations in Ethiopia. While these transfers help to meet immediate needs and ensure ongoing investments in human capital, there are opportunities to leverage government-backed safety nets to transition beneficiaries into more sustainable livelihoods. USAID's Productive Safety Net Graduation Program (PSNP GRAD), implemented by a consortium led by CARE, is spearheading such an approach in close coordination with the Government of Ethiopia. Target beneficiaries are offered a sequence of interventions, including appropriate financial services and income diversification opportunities, which can help to build assets, smooth consumption through difficult times, and manage risk from agricultural income. Successful beneficiaries can move beyond PSNP transfers and become eligible for other agricultural value chain development efforts supported by USAID.

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<sup>16</sup> "Youth Enterprise Development Project: Assessing Youth Entrepreneurship Skills: Final Findings," EDC's USAID-funded Cross Sectoral Youth Project, July 2009.



## VIII. Moving Forward

Given the demand for increased production and incomes in rural and agricultural markets, a lot of work remains to fully crack the nut of attracting private investment in a way that is globally sustainable. Cracking the Nut 2012 helped us to understand how the public and private sectors and civil society can all come together by pooling our knowledge and resources to develop rural and agricultural markets around the world. In particular, we need:

**Champions that think long-term and systemically.** Most successful efforts to mobilize rural and agricultural investment begin with at least one champion – someone who knows how to mobilize people toward a shared vision. Champions might have a technical expertise, but they are able to think outside of traditional silos and welcome other perspectives. By building long-term and broad-based relationships, champions can facilitate significant investment to systemically improve rural and agricultural markets. These efforts take time and trust to develop. For agricultural development to be sustainable, we also need to make sure the potential impacts (positive and negative) on locals and their environment are factored into the assessment of long-term costs and benefits.

### Box 8.1: Multiple Stakeholders Facilitate Patient Capital for Rural and Agricultural Development in Peru

In partnership with Carana's Peru Cocoa Alliance, AZMJ is facilitating \$60 million in investment and \$6 million in technical assistance to support 20,000 rural households from 2012-2016. AZMJ has letters of interest from:

- Calvert Foundation (with HIVOS)
- IDB's Multilateral Investment Fund
- MicroVest
- Root Capital

All stakeholders see this as a win-win opportunity, as they are able to leverage additional impact by working together. The fund investors are benefitting from reduced costs of vetting potential investment opportunities and lower risks thanks to USAID's DCA guarantees and matching technical assistance. Local financial institutions benefit from expanded markets and improved capacity to finance rural SMEs and agribusinesses. Private firms benefit from better quality supply and more consistent sourcing. Farmers benefit from increased technical assistance and access to finance, as well as improved market linkages. Donors benefit from leveraging market-driven investment from the private sector and impact investors, ensuring larger, more sustainable results.

**Large, multi-stakeholder initiatives to facilitate patient capital to strengthen rural and agricultural markets.** Given their large resources and interest in expanding markets and increasing returns, the private sector is most likely to lead the way forward. Donor and government agents should listen to private sector actors, to acquire their input and buy in, prior to structuring their programs and policies. Public sector participants will continue to play an important role in raising concerns for the public good, protecting the environment and ensuring benefits flow to disadvantaged populations. However, we will need more flexible and longer-term contracting mechanisms, allowing for slower results at first, as well as better monitoring and evaluation mechanisms to capture the full impacts of systemic changes to rural and agricultural markets. Public-sector subsidies, such as for agricultural extension services and technical assistance, will likely be needed to raise the bottom of the pyramid to an “investment ready” level. Fortunately, there are an increasing number of impact investors with patient capital interested in investing

in rural and agricultural business opportunities. AZMJ, for example, is facilitating patient capital into agricultural investments in Peru, which it hopes to scale and replicate in other countries (see Box 8.1).

**Creative uses of technology to serve rural areas more efficiently.** Each year new technologies are discovered and applications in developing countries become less expensive and more accessible. The conference highlighted several innovations, using GIS mapping, cell phones and tablets to facilitate the transfer of technical services, improve product traceability and make farming more efficient. Mobile technology has been extremely successful in this capacity with services providing market information, access to finance, deal flow and logistics. Mobile technology is a game-changer in its ability to deliver information and services directly to individuals, allowing for the potential to reach geographically-isolated populations, such as farmers, to increase productivity, facilitate market access, and reduce risk. Mobile phones can be used to provide several services, including facilitating access to finance, inputs, buyers, and markets, social/health services, as well as access to information and skills trainings. Box 8.2 describes Mercy Corps' mobile bundling of finance and technical advice for farmers in the Philippines.

### **Box 8.2: MercyCorps Partners with Mobile Bank and Research Institution to Serve Farmers**

MercyCorps is working on a MicroAgri project, with BPI Globe BankO, two MFIs and the International Rice Research Institute (IRRI) in the Philippines to offer Agrifin Mobile services (including savings, loans, B2P and P2B payments) in combination with technical advice (including recommendations on seeds, fertilizers & pesticides, weather data, market prices and costs and availability of inputs). BankO is the first mobile-based microfinance-focused savings bank in the Philippines, and it is providing the mobile platform for the project. IRRI is providing a Nutrient Manager mobile application (called NMRiceMobile) that allows farmers to call a toll-free number from their mobile phone, answer questions by pressing numbers on the keypad, and then receive a text message with a fertilizer recommendation for their field (See illustration).

MercyCorps has been working with BankO and IRRI since 2011 to develop the mobile interphase and the NMRiceMobile application. In 2012, they started piloting the MicroAgri project with loans being disbursed for the Filipino rice planting season.

#### **MicroAgri Project Process:**

<b>Pre-Loan</b>	<ul style="list-style-type: none"> <li>• Microfinance clients who are farmers open an account with BankO.</li> <li>• Farmers receive training on IRRI's NMRiceMobile</li> </ul>
<b>Loan Disbursement</b>	<ul style="list-style-type: none"> <li>• MFI processed loan application which includes crop insurance.</li> <li>• BankO processes loan application and credits disbursement directly to Farmer's Bank Account</li> </ul>
<b>Loan Collection</b>	<ul style="list-style-type: none"> <li>• MFI Loan Officers keeps relationships with the clients and also monitors the use of Nutrition Manager's Advice.</li> <li>• The Farmer makes repayments through the mobile phone.</li> <li>• Both the MFI and BankO track payments.</li> </ul>
<b>Impact Analysis</b>	<ul style="list-style-type: none"> <li>• Analyze challenges and possible process improvements</li> <li>• Track impact of NMRiceMobile on Farmer's yields and income</li> </ul>

**More engagement between private and public sector agents of change, diving deeper into sectoral issues.**

There is need for more facilitated communication between public and private sector actors, especially to discuss some of the tough issues, such as distinguishing large agricultural investments from land grabbing. We must not stop at dialogue and memorandums of understanding, but move toward action based on clear implementation plans. Several representatives of private companies expressed the need to more quickly turn these exchanges into results. One concept that AZMJ is pursuing with the Sustainable Food Lab is the *Sustainable Sourcing Platform*, which will be an online resource for the private sector to communicate the challenges they face in sustainable sourcing. For example, a recent article highlighted Kentucky Fried Chicken's difficulty in sourcing sufficient high quality chicken and lettuce to supply all its outlets in Nigeria.<sup>17</sup> By making their sustainable sourcing issues public, the platform will mobilize development resources to address these market constraints, making programming more efficient and impactful. AZMJ hopes to launch the *Sustainable Sourcing Platform* at Cracking the Nut 2013: Sustainable Sourcing from Agricultural Supply Chains, which will likely take place in Europe, as described in Box 8.3.

**Box 8.3: Cracking the Nut 2013 Learning Events**

AZMJ has already begun to plan for the next global Cracking the Nut, which will cover themes important to the private sector, such as: i) Facilitating Traceability and Certification; ii) Ensuring Food Safety; and iii) Financial Packaging for Supply Chains. One plenary session will have potential investors assess rural and agricultural investment opportunities. Designed similar to the television series *Dragon's Den* in the U.K. and *Shark Tank* in the U.S., investor panelists will grill project representative "investees" through a series of questions to vet potential debt and equity deals. Furthermore, we envision a series of regional Cracking the Nut learning events, which will allow us to dig deeper into specific regional and sectoral issues. For example, AZMJ is planning an African Cracking the Nut for 2013, which will dig deeper into issues related East Africa and food security.

**Conclusion.** Through creative partnerships and win-win approaches, the Cracking the Nut community has shown that we can leverage sustainable rural and agricultural investments in ways that reduce risk and create additional development impact in emerging markets. Additional creative solutions to global problems (i.e., tough nuts) are within our reach, as long as we are willing to step outside our comfort zones, work with new people and in new ways and then be willing to share the experiences and lessons with others. AZMJ thanks the Cracking the Nut Community for being willing to play that role.

<sup>17</sup> Maritz, J., "KFC's African Expansion an Opportunity for Farmers," *How We Made it in Africa: Insight into Business in Africa*, February 3, 2012: <http://www.howwemadeitinafrica.com/kfcs-african-expansion-an-opportunity-for-farmers/14799>

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