BASIC PRINCIPLES AND GUIDELINES FOR IMPACTFUL AND SUSTAINABLE INCLUSIVE BUSINESS INTERVENTIONS IN HIGH-VALUE AGRO-FOOD VALUE CHAINS

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The objective of this report is to inform IDB-MIF officers and management how global value chain interventions can be more effectively designed, monitored and evaluated to ensure sustainable inclusion of small- and medium-sized producers in high-value agricultural chains. Lessons learned from the IDB-MIF's experience in inclusive business and value chain development interventions in these markets are complemented by a review of the academic literature on the inclusion of small producers in agro-food chains, and the analysis of successful practices from other development agencies. This report thus presents both an academically grounded model for sustainable inclusion and a practical guide for the incorporation of the model in interventions.

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"Basic Principles and Guidelines for Impactful and Sustainable Inclusive Business Interventions in High-Value Agro-Food Value Chains"

This research was prepared on behalf of the Inter-American Development Bank-Multilateral Investment Fund (IDB-MIF). The goal of this project was to capture the lessons learned from the IDB-MIF's experience in inclusive business and value chain development interventions in high-value agricultural markets, to improve these interventions based on good practices and to facilitate the systematic institutionalization of this knowledge. The project included four reports, available at www.cggc.duke.edu.

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None of the opinions or comments expressed in this study are endorsed by the companies mentioned or individuals interviewed. Errors of fact or interpretation remain exclusively with the authors. We welcome comments and suggestions.

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Other reports in these series:

- Inclusion of Small- and Medium-Sized Producers in High-Value Agro-Food Value Chains
- Assessment of Five High-Value Agriculture Inclusive Business Projects Sponsored by the Inter-American Development Bank in Latin America

Duke University, Center on Globalization, Governance and Competitiveness (Duke CGGC)

The Duke University Center on Globalization, Governance & Competitiveness (Duke CGGC) is affiliated with the Social Science Research Institute at Duke University. Duke CGGC is a center of excellence in the United States that uses a global value chains methodology to study the effects of globalization in terms of economic, social and environmental upgrading, international competitiveness, and innovation in the knowledge economy. Duke CGGC works with a network of researchers and scholars around the world in order to link the global with the local and to understand the effects of globalization on countries, companies and the full range of development stakeholders.

Acronyms

CABEXE	Cámara Boliviana de Exportadores de Sésamo (Bolivian Chamber of Sesame Exporters)
CAPASTE	Cámara Paraguaya de la Steve (Paraguay Chamber of Stevia)
COOPAIN	Cooperativa Naranjilla Industrial
DFID	Department for International Development (United Kingdom)
DUKE CGGC	Duke University Center on Globalization, Governance and Competitiveness
GAP	Good Agricultural Practices
FECOPROD	Federación de Cooperativas de Producción de Paraguay (Paraguay Federation of Industrial Cooperatives)
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
IDB-MIF	Inter-American Development Bank- Multilateral Investment Fund
IDMA	Instituto de Desarrollo y Medioambiente (Institute of Development and Environment)
KBDS	Kenya Business Development Services
NGO	Non Governmental Agency
PGS	Participatory Guarantee System
Reb-A	Rebaudioside-A
UNAM León	Universidad Nacional Autónoma de Nicaragua- León
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development

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I. How to Use This Guide

This report is a summary of the findings from the Inter-American Development Bank (IDB) – Duke Center on Globalization, Governance and Competitiveness (Duke CGGC) collaboration examining the Multilateral Investment Fund (MIF) inclusive business interventions in the high-value agricultural sector. These findings are based on extensive primary and secondary research of IDB-MIF projects, interventions carried out by other development agencies and a review of the academic literature on small- and medium-sized producer[1] inclusion in value chains. Over 50 interviews were conducted in three different Latin and Central American countries with IDB-MIF country specialists, representatives from implementing agencies, industry experts, producer associations and cooperatives, individual producers and other relevant stakeholders.

The report includes the following sections:

- A brief introduction to the value chain framework used to analyze the high-value agriculture industry.
- An overview of the changes in national and international high-value agriculture chains that have increased small- and medium-sized producer vulnerability.
- A model, referred to as the Four-Pillar Model, to overcome the major constraints that these producers face to participate in these chains. We propose that this model should be the basis for future IDB-MIF interventions.
- A step-by-step guide to incorporating this model into IDB-MIF inclusive business projects in high-value agriculture markets.
- A summary of key lessons learned for successful interventions during the review of five IDB-MIF projects in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru and three cases from other development agencies.

Case Review: Each of the eight cases reviewed in detail over the course of this project are presented at different stages within the report. These cases are used to illustrate how to integrate the Four-Pillar Model in the design, monitoring, evaluation and feedback stages of an intervention.

Helpful Tools: Furthermore, throughout the report, we highlight tips, best practices, pitfalls to be avoided and questions to keep in mind when applying this model. These can be identified by the following icons:


Tips


Questions to keep in mind


Best practices/ Useful approaches


Avoid these pitfalls

Note: This report should not be considered a comprehensive design manual for interventions, but rather a basic guide to improve upon existing practices.

[1] In this report, the terms "small producer" or "smallholder" are used synonymously to refer to small- and/or medium-sized producers.

II. Inclusion of Small- and Medium-sized Producers in High-Value Agricultural Chains

Over the past three decades, high-value agricultural markets have become more sophisticated, consolidated and regulated, making it increasingly difficult for small producers to participate in these value chains. Determining how to effectively insert small- and medium-sized producers in high-value agricultural markets requires a thorough understanding of how these markets work. The value chain methodology is a useful tool to trace the shifting patterns of production, link geographically dispersed activities and actors of a single industry, and determine the roles they play in developed and developing countries alike.

1. What is Value Chain Analysis?

The value chain framework allows one to understand how industries are organized by examining the structure and dynamics of different actors involved. The value chain describes the full range of activities that firms and workers perform to bring a product from conception to consumption and beyond. It examines the labor inputs, technologies, standards, regulations, products, processes, and markets in specific industries and locations, thus providing a holistic view of industries both from the top down and the bottom up (Gereffi & Fernandez-Stark, 2011). The relationship between the different actors in these value chains is referred to as the governance structure of the chain.[2]

Value chains are generally dynamic and firms can enter into, or move between, different stages of the chain in order to gain higher returns to their participation. In the value chain literature, this movement is referred to as "upgrading". Humphrey & Schmitz (2002) identified four types of upgrading: Process upgrading, that is, the adoption of new technologies to improve the efficiency of the production; Product upgrading, the production of higher value products; Functional upgrading, which entails acquiring new functions that require a new set of skills; and Chain upgrading, where actors move into new but often related industries. In addition to these upgrading trajectories, it is important to consider the first and often most challenging trajectory - entry into the value chain (Fernandez-Stark et al., 2011). In this report, we focus principally on this last trajectory.

2. What is the Role of Value Chain Analysis in Development?

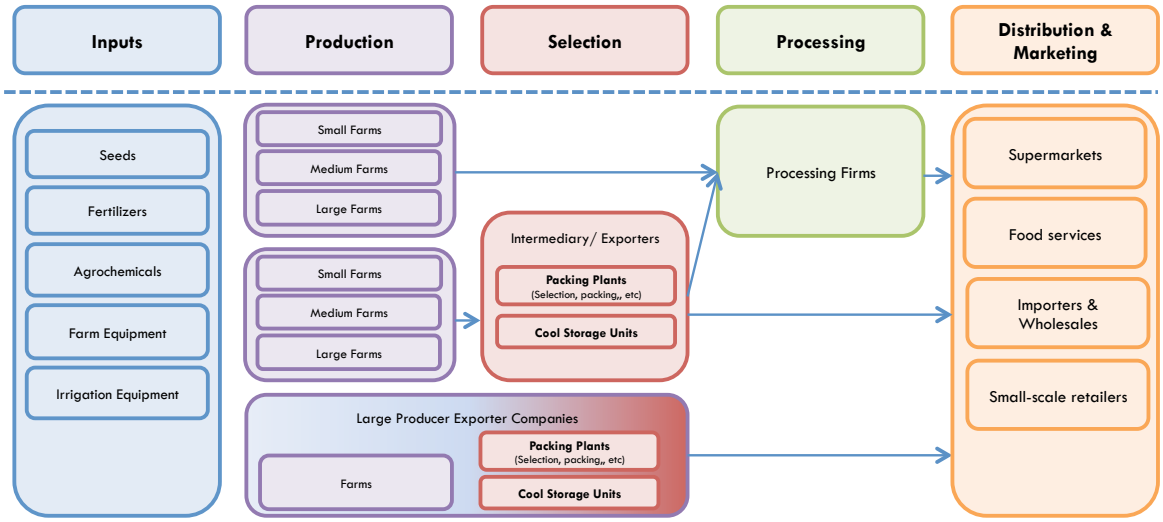
In development, value chains can be used to analyze industries, advise policy makers and identify skills gaps as well as understand how to include micro-, small- and medium-sized producers and firms into the value chain. Due to the fundamental role these smaller firms play in job creation in developing countries, major development agencies around the world, including the Department for International Development (DFID-United Kingdom), the German Agency for International Cooperation (GIZ), the United States Agency for International Development (USAID), and the United Nations Industrial Development Organization (UNIDO) among others, have adopted this methodology to better target interventions to improve the role of micro, small- and medium-sized actors in the value chain and to allow them to fully capture the gains of their participation (Barrientos et al., 2011; GIZ, 2012; Humphrey & Navas-Alemán, 2010; Meyer-Stamer & Waltring, 2006; UNIDO, 2009; USAID, 2012). The value chain approach has become particularly popular with a wide range of donors and development agencies to structure poverty reduction interventions through improving participation in high-value agricultural chains.[3]

[2] See Gereffi, et al. (2005) for a detailed typology of governance structures in global value chains.
[3] See Jaffee, et al. (2011, p. 42) for an overview of donor initiatives.

3. What are High-Value Agriculture Value Chains?

High-value agricultural or agro-food products are non-bulk agricultural commodities that either require special handling, such as fresh fruits and vegetables, or are processed in one or more post-harvest stages, such as specialty coffee and honey, prior to reaching the end market.[4] These products tend to be significantly more labor intensive than cereal crops and other traditional agriculture, largely because mechanization is complicated by the need to prevent damage to fragile produce (Joshi et al., 2004). Quality is a key factor in determining price and potential markets. These products are also subject to a range of sanitary and phytosanitary regulations to ensure food safety and to prevent the spread of disease affecting food security. High-value agricultural products thus typically net higher prices and provide significant income generation for the producer (Weinberger & Lumpkin, 2007). Figure 1 illustrates a typical high-value agriculture value chain.

Figure 1. Example of a High-value Agriculture Value Chain



Source: Duke CGGC.

Traditionally, high-value agro-food sectors included producers of all sizes that participated in spot markets, where the forces of demand and supply prevailed and the highest bidder purchased the available product. Individual farmers determined the crop varieties grown, their desired quality levels and the production processes used. Today, however, this simple arrangement has been replaced by a highly complex agro-foods system. In response to rising global incomes, urbanization, and the liberalization and growth of international trade, traditional markets have been replaced with vertically coordinated, market linkage systems, where local sourcing in both developed and developing countries has largely been replaced by centralized national, regional or international supply chains and strict sets of standards must be met to gain access to these chains (Reardon et al., 2009; van der Meer, 2006). National and global lead firms now dictate how products are cultivated, harvested, transported, processed and stored through a series of public and private standards that producers, both large and small, around the world must comply with in order to maintain their access to markets. These changes have required producers to upgrade in various ways. Table 1 offers select examples of upgrading in high-value agricultural chains. These requirements can serve as important barriers to market access as compliance and upgrading often demand considerable "financial, informational and network resources (Lee et al., 2010)."

[4] The terms high-value agriculture and high-value agro-foods are used synonymously in the literature to refer to this broad range of non-traditional agricultural crops. The agricultural production is destined to the agro-food industry for human or animal consumption.

Table 1. Examples of Upgrading Trajectories in High-value Agriculture Value Chains

Upgrading Trajectory	Example
Entry into the value chain	Switching from subsistence agriculture to production of fruits, vegetables or honey for sale in national and/or international markets
Process upgrading	Introduction of traceability and administrative measures; installation of irrigation systems and/or greenhouses, or new planting or harvesting techniques
Product upgrading	Production of higher value products, such as organic fruits and vegetables; often requires costly certification
Functional upgrading	Processing produce in addition to cultivation
Chain upgrading	Expansion from production into agro-tourism industry

Source: Fernandez-Stark, et al. (2011).

Furthermore, in developing countries, these specific firm level constraints to participation often are further compounded by country-level challenges to competitiveness. These challenges include weak regulatory institutions, such as poorly designed and implemented sanitary and phytosanitary regulations, inadequate transportation, power and water infrastructure and the absence of important upstream value chain actors, such as equipment, seed and fertilizer suppliers and firms providing supporting services (Hazell et al., 2010; Markelova et al., 2009).

4. Vulnerability of Small Producers in Modern High-Value Agro-Chains

The need to undergo both product and process upgrading to participate in the value chain creates important challenges for small producers in particular. For a variety of reasons, including limited financial wherewithal to invest in costly certification of standards compliance, these producers are generally not well positioned to respond to these challenges and those unable to do so are often marginalized (Dolan & Humphrey, 2004; Lee et al., 2010; Maertens & Swinnen, 2009). The dramatic decline in the number of small producers contributing to national and export vegetable markets in Kenya at the turn of the century is one frequently cited example of the impact of the changes to the governance structure of the global agro-food market (Dolan & Humphrey, 2004). This decline raised alarm regarding future smallholder participation in the sector (Neven et al., 2009), and led to numerous studies of the impact of changing conditions (Jaffee et al., 2011; Reardon et al., 2009).

These studies, however, revealed that smallholders do indeed continue to play a critical role in modern, high-value agro-food chains for a variety of reasons, including policy changes, labor intensity, and land ownership structures (Weersink & Herath, 2009). There are a number of chain and country contexts in which it is more efficient to source from small- and medium-sized producers, such as tea processing in Sri Lanka and vegetable production in Madagascar (Reardon et al., 2009). However, the increased demands and consolidation of the value chains have imposed a new set of conditions under which these small producers, particularly poor, vulnerable ones, can access the chain and consolidate their positions. Generally, this participation requires the initial support of an external actor due to the constraints the producers face. In the following section, we propose a holistic model to help producers overcome these constraints.

III. Model for Sustainable Inclusion of Small- and Medium-sized Producers in the Value Chain: A Holistic Approach

In this section, we propose a holistic approach to value chain interventions for the inclusion of small- and medium-sized producers in high-value agriculture chains. This model is based on extensive primary and secondary research and incorporates key instruments in overcoming market failures that can prevent smaller actors from gainfully competing in these markets.

A. Competitiveness

In order to participate in national and international value chains, actors need to be competitive. This is the golden rule of markets. Small- and medium-sized producers, however, usually face competitiveness bottlenecks such as low productivity, poor product quality, non-compliance with standards, high transaction costs and lack of networks that limit their potential chain involvement. These competitiveness bottlenecks are difficult for smallholders to overcome due to numerous constraints. We identified four major constraints to participation:

1. Lack of access to markets
2. Lack of training (technical, interpersonal and entrepreneurial skills)
3. Lack of collaborative networks (Among small producers and with chain stakeholders)
4. Lack of finance

Relieved of these constraints, small- and medium-sized producers have the opportunity to become competitive and participate in value chains in a sustainable manner. Table 2 shows how different competitiveness challenges can be overcome when the constraints are removed. For example, productivity issues are usually related to a) lack of exposure to buyers and their requirements, b) lack of technical, entrepreneurial and interpersonal skills, c) lack of information flow with other producers and other chain actors and, d) lack of access to finance to buy necessary equipment, infrastructure or inputs.

Table 2. Selected Competitiveness Bottlenecks & Intervention Instruments

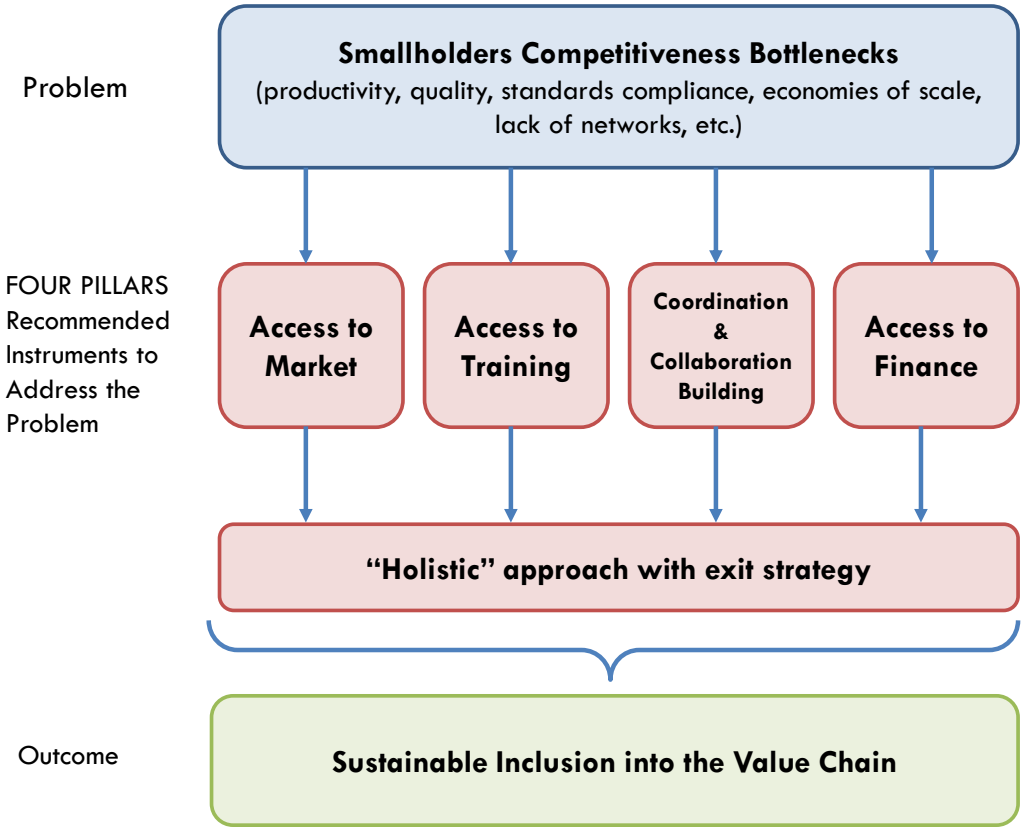
		Four Pillars (intervention instruments)			
		Link to Buyer	**Training**	**Collaborative Networks**	**Finance**
Competitiveness Bottlenecks	**Productivity**	Potential for access to cutting edge technologies	Production & harvesting techniques, organization of production, maximization of resources	Information about changing techniques, best practices, improved inputs, lobby power for accessing to critical resources (ex. Access to water, electricity)	Equipment, infrastructure, improved inputs
	Quality	Information about specific quality requirements	Production & harvesting techniques	Information about changing techniques, good agricultural practices	Equipment, infrastructure, improved inputs
	Standards compliance	Information on specific standards required	Technical training to meet the standards, entrepreneurial skills	Economies of scale to reduce cost, Access to information regarding different standards.	Certification by third-party
	Economies of Scale	Bargaining power	Entrepreneurial and soft skills training to run a cooperative	Coordination and collaboration critical to reach economies of scale	
	Enforcement of contracts (Red. costs)	Understanding of buyers commitment to purchase	Entrepreneurial skills	Group pressure to avoid moral hazard challenges	Cash flow management

Source: Authors.

We propose a model for intervention in which each of these constraints is addressed in an ongoing manner (See Figure 2). The intervention instruments for overcoming these constraints are grouped under four key "pillars": (1) Access to market, (2) Access to Training, (3) Collaboration and cooperation building and (4) Access to finance.

This model is applicable to all level of beneficiaries' development (See page 21 for a discussion on different levels of development). Beneficiaries with lower capabilities will need longer interventions and usually all four pillars must be included in the intervention. Beneficiaries with higher capabilities may need support only in two of these areas as they already have managed to overcome constraints related to the other two areas.

Figure 2. Model for Sustainable Smallholder Inclusion in High-Value Agro-chains



Source: Authors.

Next, we describe the four key pillars of this approach. This is followed by an overview of a project carried out by USAID in Kenya (Case 1). This case provides an example of the successful use of the holistic approach in an intervention to include small producers in the avocado value chain.

B. The Four-Pillars Model

1. Access to Market

Access to market is often broadly interpreted as potential for inclusion in the value chain; however, in the context of this model, it refers specifically to presence of value chain linkages between producers and buyers and how they can be established. Due to broad geographic, cultural and educational factors, amongst others, many small producers do not have the required contacts to establish these relationships with potential firms (Fernández Maldonado y Figueroa, 2012). Unorganized[5] small producers do not generally participate in international trade fairs, have websites or generate publicity; often they do not know what requirements buyers may have or that there is even a potential market for their products (Consorcio de Productores Organicos de Huánuco, 2012; Knopp & Smarzik, 2008; Vargas & Plata, 2012). Buyers, particularly those located abroad in global markets, thus have no way of knowing about these potential producers, let alone establishing formal sourcing contracts with them or communicating product or quality standards. An intervention is often required to overcome this problem of asymmetric information.

The first stage of an intervention therefore requires establishing the link between producers and buyers. This connection requires educating buyers or lead firms regarding the business potential of sourcing from small producers, as well as facilitating interactions until the small producers are in a position to sustainably manage the relationship independently. In domestic markets, this could be a direct linkage between the producer and the final buyer, allowing the producer to avoid other intermediaries and capture as much value as possible from their participation; while in global chains, this link is more likely to be with an exporter intermediary. The proximity with the final buyer will also depend on the level of development of producers. For example, producers with lower capabilities and organization will require intermediaries to fill certain gap activities, while, well organized producers with higher capabilities can bypass intermediaries and sell directly to the domestic and/or foreign buyer.

2. Access to Training

While many small producers may have worked in agriculture their entire lives, specific training is often required to improve productivity and product quality, introduce new technologies and plant varieties, and comply with food safety and other certification requirements that govern entry into the national, regional and international value chains. Rural education levels are often low and technical assistance and education programs run by the government are often understaffed and inadequately prepared to cater to the needs of increasingly demanding buyers (Fernandez-Stark et al., 2011). As many of these services are provided through the respective Ministry of Agriculture, there has also been a tendency in the past of extension services focusing too heavily on production, without any attention paid to the required entrepreneurial skills for small producers to run independent, productive enterprises.

Providing training for producers to facilitate value chain inclusion must cover several elements: awareness of the need for training, technical training regarding production, entrepreneurship and financial literacy training so that producers are prepared to operate and manage their farm as a business, and finally, interpersonal or social skills training to help producers work together and effectively communicate and coordinate with other actors in the chain. This approach provides the small producer with the skills and capabilities to cultivate and commercialize products that meet the demands of their target market. In light of the poor level of rural education in many developing countries, the manner in which training programs are carried out is essential. In particular, a focus on didactic and practical training is important as many of the producers do not keep written records and rely on memory and developing new routines. Some effective training settings include on site practical sessions with the producers with real examples, visits to successful farms and demonstration plots,

[5] Unorganized in this context literally means not organized in groups.

while for farm management skills, a book template in which producers can enter all farm-related information such as labor, costs, time line, estimated quantity of production and profits can be a useful tool.

3. Coordination and Collaboration Building

Lack of scale alone prevents small producers from entering the value chain on an individual basis. First, they do not produce the quantities required to attract buyers in the chain and second, they do not have the standing to work with other actors in the chain. Thus, they must organize (or be organized) in order to achieve economies of scale required to become effective actors. **Horizontal coordination and collaboration** amongst producers facilitates the exchange of ideas to manage common problems, reduces information asymmetries in production and builds social capital to empower producers to sell their products in more sophisticated markets (Markelova et al., 2009). Self-organization, however, is a difficult task to achieve for these producers, usually due to the not trivial trade off vulnerable producers face between immediate individual benefit and longer-term group payoffs. Interventions must help producers to understand and appreciate the payoffs of collective action and establish themselves as formal organizations.

Organized producer groups, in turn, need to interact with other chain stakeholders and to understand how the chain is structured and their particular role within the chain. **Vertical coordination and collaboration** involves interactions with other actors of the chain to establish linkages, find synergies and share information in order to improve the performance of the chain as a whole. These actors can include input providers, intermediaries, buyers, industry associations, training institutions, industry services providers, finance institutions, government agencies focused on the industry development, export promoting agencies and regulatory institutions. These linkages help provide insight into challenges and opportunities faced by the sector with the ultimate goal of coordinating and defining a common industry development strategy. Interventions can play a crucial role in bringing these value chain stakeholders together.

4. Access to Finance

Entry into the value chain requires certain investments such as infrastructure, equipment and obtaining certifications. Small producers, however, often face liquidity and credit constraints and have no access to formal finance channels. In addition, they often lack the financial literacy necessary to manage any loans they may be awarded. These constraints limit their potential to make the required investments. These credit constraints have been found to prevent small producers from investing in necessary equipment, such as irrigation systems, greenhouses or cold storage, to achieve productivity improvements, to develop unused portions of their land or to upgrade into higher value products (Maertens, 2009), thereby limiting their potential to participate in coordinated chains. This is also a problem for industry expansion; for example, the lack of access to finance for infrastructure and equipment has limited the growth potential of micro and small honey producers in Nicaragua despite high international demand (Linarte, 2012).

Interventions can facilitate access to finance through various models. Frequently seen approaches include direct financing from buyers, and buyers contract's as collateral for loan provision from banks. Direct financing from buyers consists of loans to producers through schemes such as resource-provision contracts in which the buyer provides inputs such as seeds and fertilizer and other services on credit. In many cases, the buyer absorbs the financing cost for this model (Bamber, 2011, 2012). Use of purchase contract as collateral is also seen in some credit markets, where banks accept procurement contracts including technical assistance from value chain buyers as sufficient collateral to access credit (Coon et al., 2010; Maradiaga & Galo, 2011). However, in this latter model, interest rates and loan terms can be prohibitive. The executing agency should coordinate with the banking sector in this regard in order to ensure effective financial instruments are created to meet small producers needs.

C. Sustainability of Small Producer Inclusion in the Value Chain

It is important to consider the sustainability of any intervention, from an economic, social and environmental perspective. First, economic sustainability: that is, once the project comes to an end, can the producers operate as independent economic actors. Second, projects can help resolve social challenges such as improved housing, better education of children and job generation; however, they can also generate problems. For example, inclusion in the value chain for small producers is often based on "small holder efficiency" which is, in many cases, based on uncompensated female labor on family plots. The project should ensure that it does not generate more social problems than it solves. Finally, as global agriculture expands, it can take a significant toll on the environment. Interventions should consider how they can improve the producers' management of their environment.

1. Economic Sustainability

Once the project comes to an end, beneficiaries must be able continue to supply the value chain into which they have been inserted by producing competitively priced products. In order to sustain their participation in the chain, the provision of these four pillars to overcome constraints must be ongoing. This exit strategy should consider (1) who will provide the linkage with the buyer – will it be internal or carried out by another actor, (2) which actor will provide technical assistance on a regular basis, (3) how will horizontal and vertical linkages be maintained and (4) how will the beneficiaries obtain financing in the future. In addition, the ability of producers to remain integrated in the value chain, expand and upgrade, depends on their technical, entrepreneurial and interpersonal skills, while growth of their organizations depends on their being able to recruit and teach new producers in the skills developed by the project. The training approach and business model must take these factors into account.

2. Social Sustainability

Interventions should ensure that inclusion in the value chain has a positive social impact for all members of the smallholder family, including men, women and children, to ensure gainful participation as well as family commitment to ongoing production. Social challenges are context specific and key factors should be identified on a case-by-case basis, nonetheless, there are two important areas that should be considered in most cases: gender equality and urban migration. *Gender*: "Smallholder efficiency" is often derived from the use of unpaid family labor, and women in particular, as they tend to bear an unreasonable proportion of the work involved in agricultural production without receiving a fair wage, or having active participation in decision-making regarding family income. Interventions can specifically address this challenge by inviting women to participate in the project and encouraging men to understand the importance of the role their wives and daughters play. *Urban Migration:* Interventions take place in rural areas, which increasingly experience high urban migration; projects that provide potential economic opportunities can encourage youth to stay in the area, taking over their parents' operations in the long term and, in turn, guaranteeing the buyer future supply. Young adults should therefore be encouraged to participate in training where this does not prejudice their education.

3. Environmental Sustainability

The expansion of intensive agriculture globally must be done in a sustainable way, particularly to avoid exhaustion of the soil, the misuse of precious water sources and deforestation. Small producers have very limited land resources, and thus it is important to maintain their land arable, while often they have limited understanding of how to manage their scarce water and other natural resources. These factors must be taken into consideration when selecting the target product and designing and implementing the technical training.

Case 1. USAID Project: Kenya Business Development Services Project (KBDS – Kenya) [6]

The KBDS project carried out between 2003 and 2008 in Kenya sought to foster smallholder access to markets and to the commercial skills and resources necessary to compete in those markets by improving the competitiveness of the avocado value chain. Avocado production was selected due to high export demand, upgrading potential and its relative importance in the domestic market. Numerous producers also already had mature trees. The project provided support and training for the formation of producer groups, initiated linkages with buyers, provided technical training to improve production, worked with a financial institution to ensure access to credit and fostered product, process and functional upgrading. In 2003, at the start of the project, only one exporter purchased from smallholders, but by 2007, 5,320 producers sold avocados under contract to 5 exporters, and 7, 771 sold to 3 oil processing firms. **Table 3** summarizes the key initiatives carried out during the project.

This case provides a good example of a comprehensive approach to value chain interventions. First, all four pillars were included in the design as shown in the table. Additionally, the KBDS strength was that its exit strategy was clear from the start; indeed the executing agency's guiding principal was "stay out of the supply chain at all times." The intervention focused on capacity building for different actors in the value chain, ensuring that all necessary services would be available post project and creating direct links between the producers and the buyers. Financial services actors were connected with producers through a pilot project, which helped to reduce information asymmetries and provided ongoing credit for not just the producers in the program, but a broader range of agricultural actors.

Of particular importance was the competitive selection of group management officers from producer groups. These individuals were mentored alongside the KBDS staff, in connecting with buyers, technical skills as well as business and managerial skills. These group managers would later go on to establish independent service firms to provide important market linkage services to connect exporters and producer groups, as well as to serve the role of providing producer groups with group formation training, production forecasting, technical assistance, coordinated spraying, pruning, grafting and other services, and contract negotiation.

[6] Information for this case was taken from Knopp, David and Ken Smarzik. (2008). Building an Avocado Cluster in Central Kenya: Growing Inclusive Markets, UNDP and Sebstad, Jennifer and Donald Snodgrass. (2008). Impacts of the KBDS and KHDP projects in the tree fruit value chains of Kenya. Washington, D.C.: United States Agency of International Development.

Table 3. Kenya Business Development Services Project Holistic Project Design

Access to Market	Access to Training
• It was clear that a successful producer-buyer linkage would drive the entire market system and ultimately, the success of the project. • KBDS involved buyers, in this case the exporters, early on by signing memorandums of understanding before even recruiting producers. This generated buy-in, and also highlighted the project's commercial aspect, which was important to overcome donor-fatigue in the area. These large exporters already had significant experience exporting fresh produce to Europe due to the success of the country's fresh vegetable sector. • Initially, given the general lack of preparation of the producers groups, KBDS provided the direct link with these buyers, but at the same time, they selected, trained and mentored group managers from each community to handle communication with the exporter firms and facilitate contract negotiations. • Towards the end of the project, these group managers established independent market linkage firms. To avoid principal-agent problems, the market linkage firm was selected and agreed upon by both the producer groups and the exporter and provided services for both parties. The firms were paid a service fee on a percentage basis of the final contract.	**For producers:** • A critical focus was placed on entrepreneurial training, that is, production forecasting, where producers were taught how to take inventory of their trees (number, variety, age), and develop projections for the entire season, by month and even week. • Technical assistance was provided by agronomists from the corresponding exporter firm initially, and later by market linkage firms, twice a week. Young men from the village were trained as pickers to assist producers to harvest the correct fruit. Graders were trained in variety, size, and quality requirements. • Farmer group leaders were trained in EurepGAP standards requirements, although certification itself was not carried out as part of the program. **For support services:** • All support services personnel were recruited from the villages of the participating producer groups. • Training was offered on the technical aspects of spraying, grafting and pruning, as well as general business and financial management and marketing skills. • Appreciation for the value of spraying, grafting and pruning services was generated through initiatives including farmer field days, sensitization meetings, and exposure visits. • Market linkage firms were trained in the administrative and managerial skills needed by the producer groups to organize production and work with the buyers.
Chain Collaboration & Coordination	**Access to Finance**
• KBDS initially helped to organize producer groups and to promote cooperation, set up record keeping, manage logistics etc. In total 465 producer groups were created. • Self-selection into the program was key: Producers were given the responsibility to organize themselves into groups of 25-30 producers with a minimum count of 5 trees per farmer. Over a period of 4 months, group formation activities were carried out, and legal status as "Self-Help Groups" was obtained for the groups. • Contracts were signed with the exporter as a group, rather than individually. Charges for services were also made at the group level, and deducted from a group bank account prior to the producer receiving access. Moral hazard issues such as side-selling and other problems were resolved by the group as a whole. • In addition to these horizontal linkages, KBDS also involved different upstream and downstream actors. Over the course of the program, they supported the development of spraying, pruning and grafting services and helped them connect with producers. Uptake of these services was immediate. • They also helped connect financial institutions to the producers.	• Spraying services were by far the most significant expense, as producers had to spray 7 times per harvest cycle. This was prohibitive for small producers with no access to formal credit channels, while it created significant overhead for the exporters when it was incorporated as an embedded service of resource-provision contracts. • KBDS thus encouraged each producer group to establish a bank account with Equity Bank to receive payments by the exporter; in exchange, the bank developed a pilot credit program to provide loans for spraying. Repayment was deducted from the exporters payment prior to distributing funds to the producers. Repayment the first year exceeded 95%. • Equity Bank now extends credit to groups, based on an exporter supply contract and an established history of buying and selling with a lead exporter. Equity Bank is replicating this type of value-chain financing scheme for the delivery of agrochemical spray services in the mango and coffee sectors.

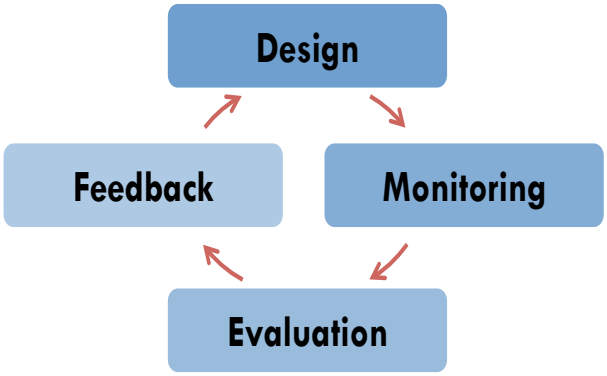
IV. Practical Guidelines for Using the Four-Pillar Model in the Development of IDB-MIF Inclusive Business Projects in High-Value Agro-Food Chains

In order to incorporate the Four-Pillar model into existing IDB-MIF practices for inclusive business projects in the agro-food sector in a systematic way,[7] we propose approaching projects in a simple four-stage cycle: Design, Monitoring, Evaluation and Feedback.

- **Design:** Project design requirements should be based on the Four-Pillar model guidelines;
- **Monitoring:** IDB-MIF officers monitor the implementation of the project to ensure all proposed activities are carried out;
- **Evaluation:** The project should be evaluated according to specific, additional criteria to assess the sustainable inclusion of the beneficiaries in the value chain; and,
- **Feedback:** Finally, the project process should be reviewed in light of the evaluation and the lessons learned recorded to incorporate them in the design of future interventions.

In this section, we discuss how each of these stages can be used to improve the process and impact of value chain interventions in the agro-food sector.

Figure 3. IDB-MIF Project Cycle: Inclusive Business



Source: Authors.

[7] Generally, an IDB-MIF specialist receives an application for co-financing of a project from an executing agency. The project design is carried out principally by the executing agency, with guidance and approval from the IDB-MIF team. During implementation of the project, IDB-MIF specialists monitor the process, providing oversight and facilitating disbursement of funds. Finally, IDB-MIF requires two mandatory evaluations: at the mid-point and at project termination.

Selecting a Good Partner

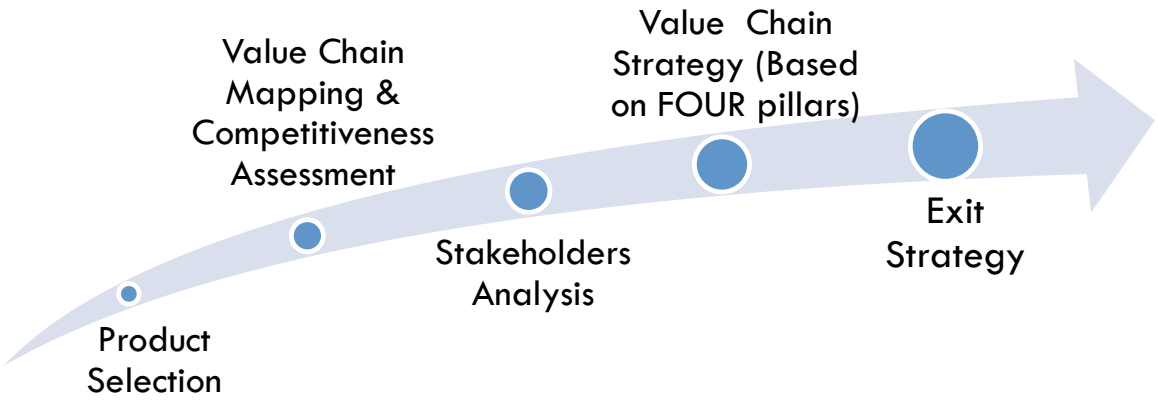
While the IDB-MIF specialists do not have control over the agencies that approach them to co-finance projects, to help ensure success, it is desirable that the agencies implementing these inclusive business projects exhibit certain characteristics:

- They have local knowledge as well as experience in the selected value chain. This allows them to more easily and quickly develop trusting relationships with producers and other value chain actors, such as the buyers.
- They collaborate with others actors; that is, they actively seek out opportunities to work with other agencies and actors working to promote the competitiveness of the selected value chain. In this way, synergies can be developed and scarce projects resources can be leveraged.
- They include an experienced field officer in the project design. These individuals should have experience and expertise in the selected industry and be familiar with the major issues faced by the target beneficiaries groups.
- They are willing and able to participate in design and implementation changes to incorporate the Four-Pillars model ensuring that they will follow the new IDB-MIF design requirements.

A. Design

The project design stage is the most critical step to guarantee the sustainable inclusion of beneficiaries in the value chain. This stage has five major steps that every intervention should include (See Figure 4):

Figure 4. Elements for a Project Design



Source: Authors.

1. Product Selection

Two important considerations regarding product selection determine whether small producers can and should be part of the value chain: (a) labor-capital intensity ratio, smallholders can compete in crops in which they have comparative advantage over large producers due to labor intensity; (b) commercial viability, that is, the selected crop should have a strong, existing market demand.

a) ***Suitable crop for small- and medium-sized producer production***. Small producers have a comparative advantage over large producers in certain crops as a result of labor intensity of cultivation or advantages of geographic dispersion of crop for weather and disease management. Certain crops are significantly more labor intensive than capital intensive. This is often due to the nature of the product that prevents mechanized planting and harvesting such as coffee (Berrios, 2012), or requires constant monitoring for disease prevention, such as organic fruits and vegetables and stevia (Consorcio de Productores Organicos de Huánuco, 2012; Dávalos, 2012; Fernández Maldonado y Figueroa, 2012). While small producers may have higher capital costs, they generally have lower labor costs, potentially outweighing economies of scale of larger producers. This cost differential can account for as much as 40% of production costs (van der Meer, 2006). When strict labor laws require costly social protection, such as paid vacation, health care provision and pension contributions, unregulated family labor on smallholder plots becomes substantially more competitive, albeit potentially at a high cost for female members of the family who typically play an important role in production but whose labor is often uncompensated (Bamber & Fernandez-Stark, 2011). In addition to labor cost advantages, the product's vulnerability to disease and weather affects the efficiency of small versus large-scale production. Diseases that rapidly spread through production and are difficult to contain can result in a large producer losing their entire crop, potentially disrupting the supply chain.[8] Geographically separating production into multiple plots can help minimize this risk, and favors diverse smallholder production over large producers.

b) ***Commercial viability***. The crop produced must have an existing, strong or growing market demand. New crops, with underdeveloped markets and fluctuating demand, generate significant uncertainty and can result in short-term shocks which vulnerable small producers are not able to withstand. This can lead to their rapid exclusion from the chain. To the extent that poor people have few resources to cope with such unpredictability, participation in existing chains should be sought out where possible (Humphrey & Navas-Alemán, 2010). Furthermore, small producers face sufficient difficulties in entering value chains without having to cope with the challenges of developing markets for new products.[9]

This was an important lesson learned for producer groups in Bali seeking to connect directly with consumers to market their organic rice. Already facing challenges of improving the consistency and quality of production, and seeking ways to finance costly certification, they found that consumers were "uneducated" and tended to buy rice "based on the packaging." As demand for organic rice was still very limited, producers found themselves without a market (VECO et al., 2008).

[8] Due to the nature of the value chain, producers are often contracted to an intermediary of some sort (often an exporter) who in turn has contracts with key buyers. If a large producer cannot supply their intermediary due to weather or disease, that intermediary, in turn, may be forced to breach their contract with their buyer. Given significant competition around the world for access to these chains, repeated failure to supply the buyer with the contracted quantities can lead to exporters being excluded.

[9] This is not to say that small producers cannot join in the production of new crops with a strong emerging demand, such as quinoa or sesame seeds. Rather, products where demand is uncertain and limited due to lack of awareness on the part of consumers should be avoided by small producers who are vulnerable to fluctuations.

2. Value Chain Mapping & Beneficiaries Competitiveness Assessment

Once the appropriate crop selection for the intervention has been made, the next step is to identify and map the segments of the value chain and highlight those segments in which the beneficiaries currently participate, or can potentially participate. Following this, a competitiveness assessment should be carried out; that is, the key competitiveness bottlenecks the beneficiaries face should be identified. This determines the selection of the activities that must be included in the project to overcome those issues.

a) ***Identify value chain activities and map where the beneficiaries may fit in the chain.*** Create a value chain diagram identifying the most important segments of the chain. E.g. Inputs, production, processing, etc. For example, Figure 5 below highlights the key stages of a generic high-value agriculture value chain. Identify in which segment(s) of the chain the beneficiaries are currently participating. It is probable that most beneficiaries will fall in the production stage of the chain.

Figure 5. Key Stages of a Generic High-value Agriculture Value Chain

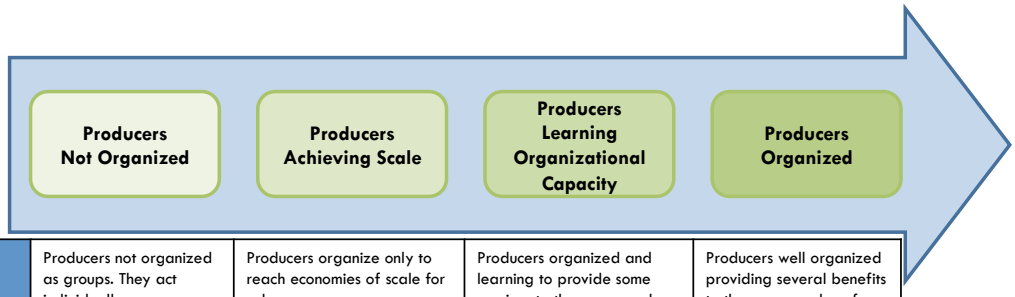
Source: Duke CGGC.

b) ***Identify key beneficiaries competitiveness bottlenecks***. Usually smallholders face specific competitiveness bottlenecks that limit their participation in value chains. Identify these issues is a first step of this process. An assessment will reveal a list of issues such as product quality, productivity, standards compliance, economies of scale and seasonality. Crop and beneficiary bottlenecks are usually context specific and thus may vary from case to case.

c) ***Determine the level of beneficiaries' organizational development and capabilities***. Smallholders present a wide range of organizational development (See Figure 6) and skill level. It is important to assess this level in order to determine suitable activities for the beneficiaries, the length of the intervention and the strategy of the inclusion project. Case 2 illustrates how one project may include different levels of beneficiaries and thus may require several complementary approaches.

- Remember that the beneficiaries may not yet be participating in the value chain; it is important to identify a role in which project beneficiaries will be competitive actors in the chain.
- Look for best practices from other countries that have made progress in including smallholders in the selected crop value chain. They may offer interesting ideas for the intervention strategy.

Figure 6. Organizational Development Level of Beneficiaries



PRODUCERS ORGANIZATION	Producers not organized as groups. They act individually.	Producers organize only to reach economies of scale for sale.	Producers organized and learning to provide some services to the group and perform new activities	Producers well organized providing several benefits to the group and perform sophisticated activities
INTERMEDIATION	No direct access to buyers. Producers require an intermediary. Some are organized under an outgrower model.	Usually require chain intermediaries to reach the final buyer. May also operate as outgrowers.	Producers begin to buy pass intermediaries and sell directly to final buyers.	Do not require an intermediary and can sell directly to the final buyer.
ADMINISTRATION & MANAGERIAL CAPACITY	NA	Producers are not yet capable of managing administrative tasks.	Producers begin to manage administrative tasks.	Producers can perform administrative tasks
PARTICIPATION IN THE VALUE CHAIN (EXAMPLE)	Producers sell individually to a exporter company that provides technical assistance and credit for inputs.	Grouped producers sell to an intermediary, but with greater bargaining power to obtain better prices.	Producers sell through an intermediary but they are learning to bypass the intermediary to sell directly and capture more value	Producers sell to a foreign buyer directly without the need of an intermediary.

Source: Authors.

Case 2. IDB-MIF Project: Strengthening the Competitiveness of the Paraguayan Stevia Value Chain

The project focused on improving the competitiveness of the stevia value chain in Paraguay. The project consisted of three key components: (1) increasing the quality and quantity of stevia production by small producers, (2) strengthening producer groups or associations, and (3) fostering innovation and technology transfer to improve both plant variety quality and prospects for in-country value-added processing. The largest component of the project, however, was the inclusion of new producers into the value chain. Participating firms recruited new producers and provided them with specific inputs for production, training and technical assistance and guaranteed purchase of their harvest. The project also included competitive awards for innovative projects and technology development; winning projects included a service-based initiative to empower producers to bypass intermediary brokers and connect directly with buyers in foreign markets, and a project focused on developing new varieties of stevia, with higher content of Rebaudioside-A (Reb-A).[10] The project took place during a time of considerable shifts in the world market for stevia. In 2008, the Food and Drug Administration in the United States approved only the derivative Reb-A for human consumption; this was followed by Reb-A approval in several countries in Europe and overall, European approval was granted by the European Union in 2011. Many producers had expected the approval of a broader range of stevia derivatives. Specifically, the substance "stevioside" was not approved, despite its long-term use as a sweetener in Asian markets.

[10] Several natural substances can be derived from the stevia plant (scientifically known as steviol gylcosides, which includes glucose as part of its structure). One of the best-tasting and sweetest of all the steviol glycosides is high purity Rebaudioside-A (Reb-A), which can be up to 400 times sweeter than sugar. For more information regarding Stevia, please see www.globalsteviainstitute.com.

This project included seven exporter firms each of which recruited producers in their respective geographical areas. As a result of the different levels of organization of the producers in different areas, this project included more than one organizational model.

1) **Producers Not Organized:** In the department San Pedro, producers were not organized in groups, and indeed there was a

2) reluctance on the part of individual producers to coordinate and collaborate. As a result, exporters in this region recruited and contracted new producers individually. In these cases, the exporters were eager to improve the producers' organization as the transaction costs of working with individual producers of just ¼-½ ha each were significant.

3) **Producers Learning Organizational Capacity:** In other areas in the south of the country, producer groups already existed, although in very basic forms having originally come together to access government funds. The project thus helped organize and consolidate these producer groups. The groups received legal advice regarding how to formalize their organizations and skills development to improve teamwork and collaboration and management of their organization's production. Contracts were signed with individual producers, although a general agreement was signed with the producer group. This agreement provided a bonus for the group if, as a whole, they supplied their contracted amount providing incentives for collaboration.

Source: Authors, Paraguay Field Research.

d) ***Design the strategy and specific activities to overcome the competitiveness bottlenecks according to beneficiaries' organizational development and skill level.*** The strategy and activities will depend on the organizational and capability level of the beneficiaries. For example, with respect to their organizational level, geographically dispersed, un-associated producers would benefit from participation in an outgrower model, as was implemented in the Department of San Pedro in Case 2. These producers needed an external party to organize them as they were not yet in a position to self-organize. Regarding skill level: some producers have significant experience cultivating a crop, but may not have the entrepreneurial skills required to manage their cash flow and production in coordination with the buyer. In this case, they require less technical training focused on production, and more time should be spent developing their business administration skills.

Case 3 describes an IDB-MIF project carried out in Nicaragua and Honduras to improve the competitiveness of rural apiculture producers which provides an important example of how training was adapted for different levels of experience and expertise.

Case 3. IDB-MIF Project: Development of Micro and Small Rural Apicultural Producers (Nicaragua and Honduras)

The project focused on improving the competitiveness of micro and small producers in the beekeeping sector: strengthening value chain actors and activities in each country, improving technical capabilities and improving the supply chain environment by linking actors and creating synergies. The project benefitted around 540 apicultural producers in both countries. In Nicaragua 412 producers across 4 areas received training, while in Honduras the 130 producers were in 2 areas. Beneficiaries included micro (1-20 hives) and small (21-100 hives) beekeeping producers. This is a secondary/complementary occupation for the majority of producers. The project included a cascading training model by which knowledge was transferred from international experts to university graduates, who trained producer leaders who then trained micro and small producers. The teaching format was modified according to the audience. The executing agency, Swisscontact, was very successful in partnering with several organizations working on the same productive sector to create synergies and leverage limited resources. High demand for honey, particularly in Europe, eased sales and led beneficiaries to plan business expansions, however actual growth was complicated by the lack of finance in this sector. In Nicaragua, most honey is exported through intermediaries (exporters and cooperatives) that buy the honey directly from the micro and small producers, while in Honduras, a strong domestic market provided sales opportunities for beneficiaries to local supermarkets.

Number of Beneficiaries	Targeted Product	Targeted Stage of the Value Chain	Executing Agency	Funding		Project Duration & End date
				IDB	Counterpart	
542	Honey	Production	Swisscontact (Intl NGO)	$982,026	$448,700 (+$200,000)	36 months Ongoing 2012

Cascading Training Model

This training system follows a cascading model in which every student signed a commitment to transfer knowledge to students in the strata below them. Since knowledge of apiculture was almost nonexistent in Honduras and Nicaragua prior to the project, foreign experts were engaged to teach a first, free diploma to industry participants, who in turn offered programs to peer trainers, and then to producers. The programs were so successful that a second version of the diploma was offered, although no longer free of charge (many students were then sponsored by institutions: banks, governments, NGOs, etc.) This model includes several levels:

- In the *first level*, UNAM-LEON University offered a seven-month diploma in apiculture to 35 students in which foreign experts taught six modules 1. Technical capacity/production; 2. Sanitary management; 3. Nutrition; 4. Quality; 5. Processing; 6. Commercialization. Local university professors observed the course and were incorporated into the teaching staff with the foreign experts for the second program. In the long term, the entire course will be taught by local professors. The course approach was almost 100% theoretical.
- In the *second level*, peer trainers were trained in 3-4 day programs at the university. Many peer trainers were selected from the cooperatives based either on their technical abilities or their experience and success with the product. In this level 50% of the course content was theoretical and 50% practical.
- Finally, in the *third level*, producers participated in training activities in their territories. 70% of the training was practical.

Identifying leaders in producer communities can be a useful approach to developing local capacity. As members of the communities, these leaders are in good position to quickly establish trust between the producers and the executing agency and can help to generate buy-in.

e) ***Define the points of intervention along the chain***. Select the segments of the chain that require certain intervention to meet the goal of including the producers in the value chain. For example, producers may be unable to source certain inputs required for entry into the chain, such as drip irrigation equipment or spraying services as in the KBDS project (Case 1, Page 15) due to the absence of this supply firm in the local market. It may be necessary to intervene in more than one segment of the value chain in order to increase its competitiveness and ensure the entry of small producers.

3. Stakeholder Analysis

Next, a stakeholder analysis of potential actors who participate in the chain or could deepen the impact of the intervention in the geographical location selected is critical to the project design.

a) ***Identify stakeholders that should play a role in the intervention in the chain.*** The chain is dynamic and a number of actors are involved in different segments and geographic locations. Key actors are the principal agents directly related to improving the chain's performance, while secondary actors are indirectly related to the chain development. Both principal and secondary actors, which may also include government, educational and financial institutions or other development agencies, should be identified and incorporated into the project design where possible. Case 4 highlights how CABEXE, a sesame export association in Bolivia, managed to leverage multiple different stakeholders to support the development of the value chain and ensure the inclusion of small- and medium-sized producers.

Case 4. Multiple Donors: CABEXE Smallholder Sesame Production in Santa Cruz de la Sierra, Bolivia[11]

The Bolivian Chamber of Sesame Exporters (CABEXE) is an association of exporters of sesame products established in Santa Cruz de la Sierra, Bolivia in 2005. CABEXE was founded to organize and promote the growth of the sesame industry in the face of increasingly strict standards by strengthening coordination within the value chain. The initiative focuses on strengthening the long-term business relationship between processors and small- and medium-sized producers by fostering the provision of inputs (seeds, fertilizer, etc), technical assistance, credit and guaranteed access to market. The association groups eight exporter firms, each of which works with several cooperatives totaling 7,000 small- and 2,000 medium-sized producers. The association carries out research and development and promotion of the industry, exploring new market opportunities both domestically and internationally. Information is disseminated through each of the eight partner firms. The organization has agreements and works closely with numerous upstream and downstream chain actors.

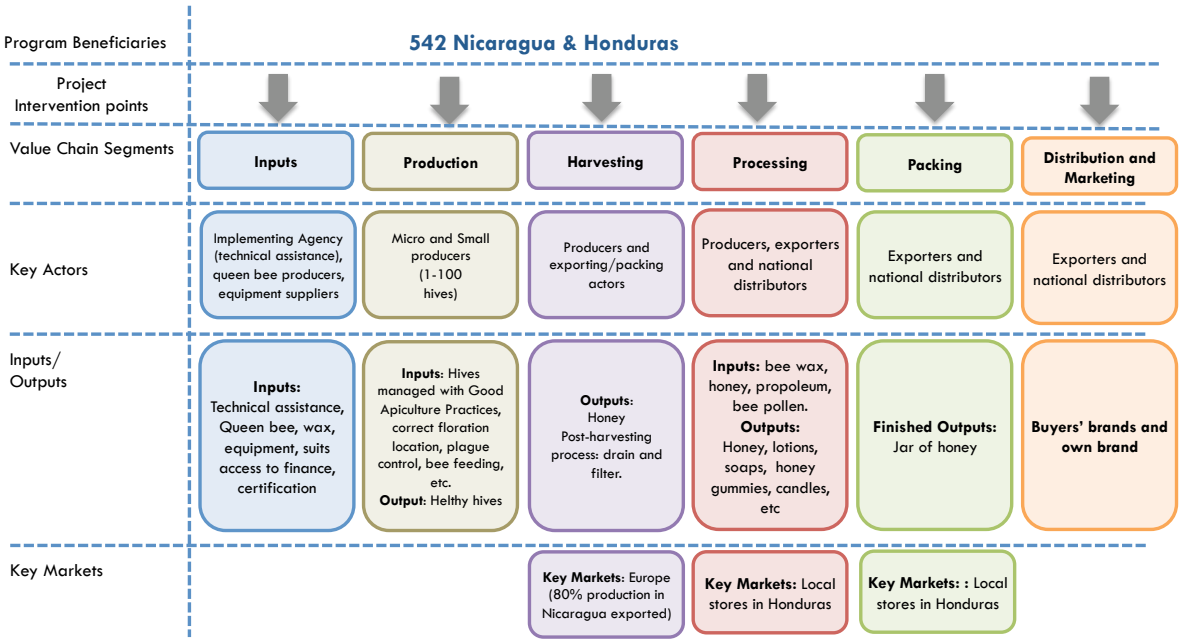
Key Collaborations with Stakeholders:

- **Production**: 8 exporters firms came together to form CABEXE. Each firm works with cooperatives of small- and medium-sized producers and jointly market their products in the international market through CABEXE.
- **Production**: In 2008, CABEXE received funding from the IDB to help develop and diffuse norms for the production of sesame in Bolivia. This helped to improve the consistency of supply.
- **Production**: In 2009, CABEXE received USAID funding to institute traceability measures to enable exporters to guarantee the quality and food safety of their products and comply with strict international standards.
- **Financial Institutions:** In 2010, CABEXE worked with Banco de Desarrollo Productivo de Bolivia to develop new financial instruments to integrate small producers in formal financial institutions.
- **R&D:** CABEXE collaborates with universities and research facilities on an ongoing basis to improve quality and productivity.
- **Marketing**: Since it was founded in 2005, CABEXE has developed agreements with institutions supporting exports: Departmental Chamber of Exporters (CADEX) and the Institute of Foreign Trade (IBCE) to strengthen the export performance of producers.
- **Marketing**: CABEXE negotiated with the National Prenatal and Breastfeeding program and World Food Program emergency aid to become a registered supplier, helping to guarantee a market for their product.

[11] The information for this case was derived from information supplied by CABEXE for the 2011 FOROMIC Award for Excellence in Business Development: Sustainable Inclusion of Producers in Agricultural Value Chains.

Following points 1-3, developing a visual aid of the value chain, highlighting the key stages, key actors, inputs and outputs at each stage and key markets as well as the points of intervention in the value chain can be useful. Figure 7 below provides an example of this.

Figure 7. Value Chain Diagram: Development of Micro and Small Rural Apicultural Producers Project (Nicaragua and Honduras)



Source: Authors, Nicaragua Field Research.

4. Value Chain Strategy based on the Four-Pillars Model

a) ***Align the competitiveness bottlenecks with the Four-Pillars model.*** In the second step of the project design, the beneficiaries' competitiveness bottlenecks were identified. In this step, that information should be aligned with the Four-Pillar model. Table 4 provides an overview of two key competitiveness bottlenecks (See Table 2 for an extended version of this table). For example, a key competitiveness issue for beneficiaries is low productivity; if this identified as a problem, it should then be examined to understand the factors that lead to this low productivity and how these can be overcome. Low productivity can be due to lack of good agricultural practices and this is linked to the training pillar, the producer may not have the necessary equipment to implement the good agricultural practices, which is linked to access to finance, or low productivity may be directly related to poor management, this is linked to the entrepreneurial training. This exercise helps one to understand the root cause of the problem and how the four pillars can be used as instruments to overcome the problems.

Table 4. Selected Competitiveness Bottlenecks & Intervention Instruments (Abbreviated, see Table 2 for a full version)

		Four Pillars for Inclusiveness (intervention instruments)			
		Link to Buyer	**Training**	**Collaborative Networks**	**Finance**
Competitiveness Bottlenecks	**Productivity**	Potential for access to cutting edge technologies	Production & harvesting techniques, organization of production, maximization of resources	Information about changing techniques, best practices, new/better inputs, lobby power for accessing to critical resources (ex. Access to water, electricity)	Equipment, infrastructure, improved inputs
	Quality	Information about specific quality requirements	Production & harvesting techniques good agricultural practices)	Information about changing techniques, good agricultural practices	Equipment, infrastructure, improved inputs
	Others				

Source: Authors.

b) ***Establish clear activities to cover each pillar.*** Once the link is established between the chain bottlenecks and the pillars, it is time to design the project activities involving the pertinent stakeholders as highlighted in Case 4 in Bolivia. In this stage all activities should be planned with the goal of sustainable inclusion of the small- and medium-sized producer in the value chain. It is important to ensure that all four pillars are covered in order to have an impactful intervention. In some cases, especially when the beneficiaries' organizational development is high, it may not be necessary to include the four pillars because some of them are already covered by them. For example, often, established cooperatives have a well-functioning finance system in place, and thus finance is not a core constraint to their competitiveness in the value chain. Case 5 which describes a project carried out by GIZ in Ecuador to incorporate small producers in the organic cacao value chain illustrates how a project may only require limited interventions in each of these pillars.

Case 5. GIZ: Promotion of the Organic Cacao Value Chain amongst small producers in Esmeraldas and Napo, Ecuador.

The project used the GIZ Value Links model[12], which focused on improving the efficiency and competitiveness of the selected chain to positively impact the income of specific groups of small producers, and significantly improve sustainable management of natural resources. The project worked with three existing and experienced cacao associations (Aprocane, Kallari and Fonmsoeam) in Ecuador to help them access and upgrade in the global value chain. Each of these associations had been formed with particular community based goals – Aprocane, for example, was formed to protect their land and forests from the advancement of commercial forestry operations by providing the communities with a sustainable alternative to generate income.

This GIZ project worked specifically with established (although still inexperienced) associations, which already had cacao plantations under production to consolidate their entry into the global value chain. This example of later stage interventions is important in ensuring long-term sustainability of organizations. They provided technical assistance where improvements were required for productivity and quality, but their focus was principally on improving the managerial and organizational capacity of the cooperatives to function independently and efficiently as commercial actors in the global organic cacao value chains.

- **Access to Market:** While the cooperatives had mostly been producing and selling cacao through intermediaries since 2000, the GIZ project consolidated their position as suppliers to the global value chain by helping the cooperatives to establish direct linkages with buyers.
- **Access to Training:** Most producers in the project were already experienced cacao producers. Prior initiatives from other organizations and firms had already provided producers with basic skills. In some cases, these other initiatives were still ongoing during GIZ's interventions, and GIZ worked in cooperation with these organizations to provide any additional training that was required to improve the quality of the production. GIZ also worked with the associations to renew their plantations and improve the biodiversity of their land, but focused principally on their managerial and administrative skills training.
- **Collaboration and Coordination:** GIZ worked with existing producer associations. The project's most important contribution was connecting these associations with other value chain actors, both upstream and downstream, such as the agreement with the National Institute for Agricultural Research to improve plant varieties and the Project for the Development and Defense of Natural Resources to improve forestry management for cacao production. In addition, GIZ helped to foster value chain coordination by establishing roundtables bringing together both public and private stakeholders.
- **Access to Finance:** Producer access to credit from formal financial channels was scarce. Thus in general, GIZ pursued a flexible approach to credit and financing. GIZ worked together with cooperatives to help finance 50% of investments. In some cases, the local government and public sector provided resources for infrastructure investments, in other cases, buyers provided credit directly to the cooperatives through "advance payments."

Source: GIZ, Ecuador.

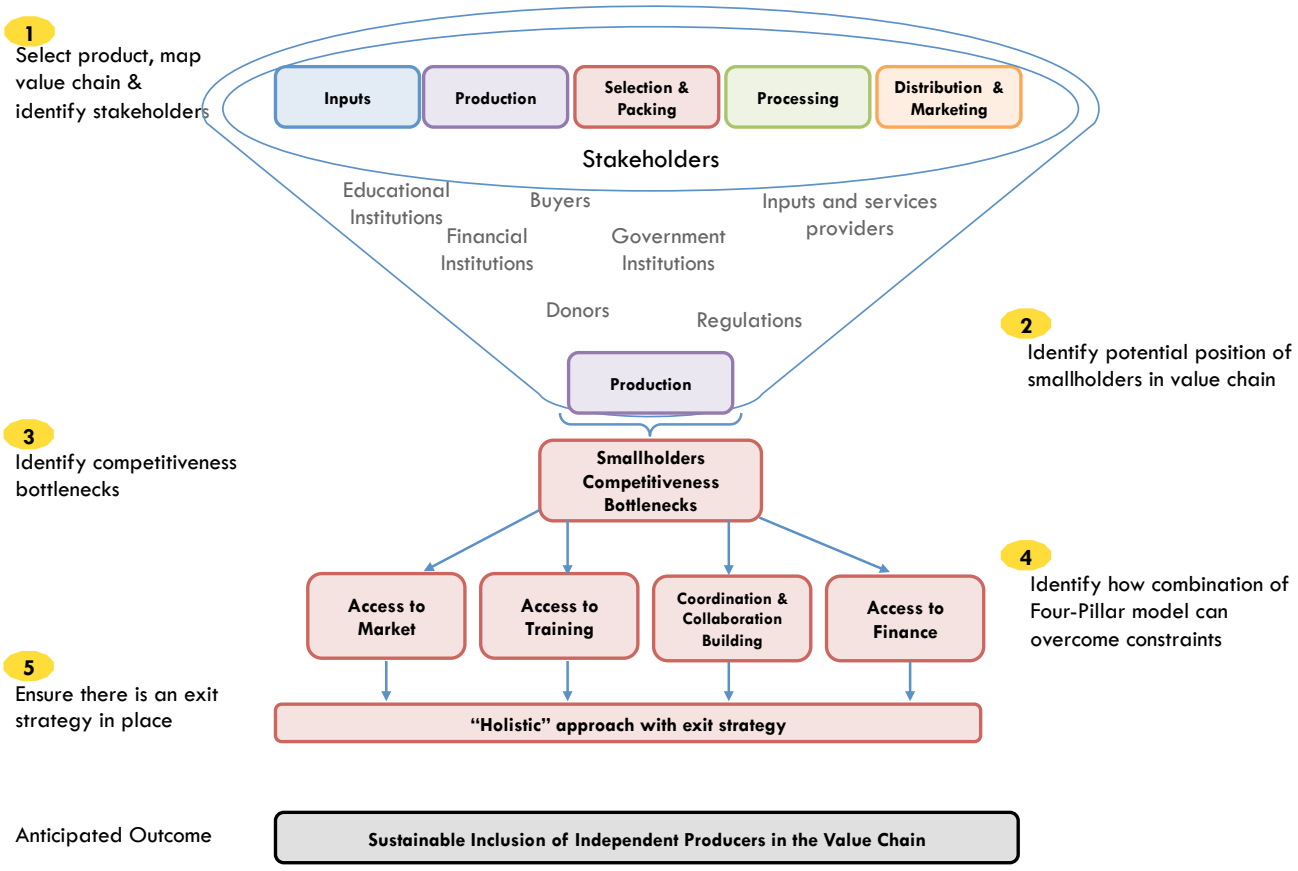
[12] See valuelinks.org

5. Formulate an exit strategy

Before finalizing the design stage of the project, it is essential to ensure an exit strategy is in place. All actors and activities should be positioned to function without the assistance of executing agency once the program comes to an end. It is important to keep this exit strategy in mind throughout the entire project implementation process. The executing agency should serve as a facilitator and capacity building actor that supports the beneficiaries to enter the value chain as independent productive agents.

In the KBDS Avocado project in Case 1 (Page 15), the executing agency adopted the mantra "Stay Out of the Value Chain" to remind themselves of the importance of the exit strategy.

Value Chain Approach to Smallholder Inclusion in the High-Value Agro-Food Chains, Using the Four-Pillar Model



Source: Authors

Additional Tools & Tips

In Table 5 below, we present a **project design checklist** using an IDB-MIF project: Development of Micro and Small Rural Apicultural Producers (Nicaragua & Honduras). This checklist will help to guide and inform that all elements are included and aligned for the intervention.

Be sure to share similar guidelines with the executing agency to facilitate and expedite the project design process.

Table 5. Project Design Checklist: Development of Micro and Small Rural Apiculture Producers

Criteria	Considerations	Check
Commercial Viability	Is organic Honey a commercial viable product? Review business plan and market analysis.	
Targeted Product	Is organic honey suitable for competitive small and medium production?	
Executing Agency	Does the executing agency have experience working with small and medium apicultural; producers in Honduras and Nicaragua? Is the executing agency knowledgeable in the commercialization of honey? Is this intervention designed in conjunction with the field technicians who will implement the project?	
Beneficiaries	What is the level of development of the apicultural producers? Are they already associated? Are they commercializing their products? If so, where? Nationally or/and internationally? Is the project designed according to the level of beneficiaries' organizational development?	
Competitiveness benchmark analysis	Are the apicultural producers competitiveness bottlenecks identified? Are these addressed by the project activities according to beneficiaries organizational development?	
Value chain mapping	Are the honey value chain segments identified? Are the beneficiaries mapped in the value chain? Are the intervention points in the chain clearly identified?	
Stakeholders	Are the key stakeholders identified? Are other honey value chain actors important for the chain performance identified?	
Inclusion of four pillars model for inclusiveness	Are the four pillars well included in the project design (according to the competitiveness bottlenecks of the honey producers)?	
	Is a market strategy in place that involves the buyers?	
	Does the proposed training program include both technical and entrepreneurial skills?	
	Is the finance aspect included in the project design?	
	Are there programmed activities devoted to strengthening the coordination and collaboration among producers and with other value chain actors?	
Duration of the program	Is the length of the proposed program sufficient to achieve the specific objectives stated for the program, in addition to ensuring economic sustainability?	
Coordination	Is there a plan to coordinate with other agencies working in the apicultural industry and same beneficiaries?	
Sustainability	Is there an exit strategy in place that allows the beneficiaries to sustain their participation in the apiculture value chain without the executing agency's help?	

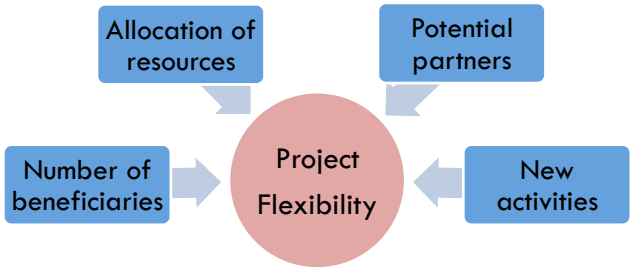
B. Monitoring

In this stage, IDB-MIF specialists monitor the activities perform by the executing agency. The main objective is to ensure that the goals are reached according to the design within the time allotted. However, it is important to allow for a certain degree of flexibility during implementation, as high-value agriculture chains are highly dynamic and the markets evolve on an ongoing basis.

Areas that may require modifications during the course of the project include, but are not limited to:

1. **Number of beneficiaries**: This often changes due to unforeseen challenges that arise in recruiting new beneficiaries who are willing **and** able to participate;
2. **Allocation of resources**: This should have a degree of flexibility in order to cover specific tasks and activities that arise during the implementation, or to redirect resources initially allocated for specific purposes if these are cannot be practically implemented.
3. **Potential partners**: Allowing for flexibility to bring on new partners during the course of a project can be an effective strategy to create synergies and achieve more impactful outcomes;
4. **New activities to respond to changing market dynamics**: Unforeseen market changes can demand changes in the activities designed for the project. For example, new standards may emerge regarding packaging or shipping requirements for key markets. Producers will need to be trained to meet these new market conditions.

Figure 8. Flexibility Requirements During Implementation



Source: Authors.

Case 6 highlights how flexibility facilitated the expansion and impact of the IDB-MIF initiative to improve the competitiveness of Central American Coffee production.

Case 6. IDB-MIF Project: Supporting the Competitiveness of Central American Coffee (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua)

The project focused on improving the competitiveness of selected small and medium specialty[13] group coffee producers in five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) following the international coffee crisis in the early 2000s. There were two key components: (1) technical assistance for cultivation of high quality coffee and (2) establishing links with foreign buyers. Producers were trained in the requirements of high quality coffee for global markets, the potential price premiums paid for quality coffee and in improved production practices to obtain this quality. In order to market and certify the quality of the coffee in Central America, the project brought the international cupping award "The Cup of Excellence" to the region.[14] The project also provided administrative and technical support to help producers obtain certifications required by foreign buyers. Different buyers selected the beneficiaries' organizations to work with in the future, committing to purchase their coffee once they reached certain quality thresholds. This project also included an investment component to improve equipment and infrastructure. Each cooperative was required to provide matching funds for these investments. The majority of the beneficiaries selected were experienced coffee growers.

Number of Beneficiaries	Targeted Product	Targeted Stage of the Value Chain	Executing Agency	Funding		Project Duration & End date
				IDB	Counterpart	
6,000	Coffee	Production	Technoserve	$3,000,000	$1,615,450	54 months

Monitoring

Number of Beneficiaries: The project was initially open to 3,000 producers, translating to a very high cost per beneficiary. The project was thus extended by 18 months to include an additional 3,000 beneficiaries.

Allocation of Resources: The purchase of highly sophisticated and expensive grading equipment was initially included in the project design; however, once the project was underway the executing agency reevaluated the necessity of purchasing this equipment. The resources were reallocated to strengthening other components of the project, including training and infrastructure for the wet processing stage which is a key step to obtain high quality coffee.

Potential Partners: Due to changes in Costa Rica's institutional regulations in the middle of implementation, the project partner had to be replaced.

New Activities: Buyers required specific certifications, however, training for theses standards were not incorporated in the original project design. As this was a requirement for market entry, and producers were not in a position to obtain these certifications on their own, these trainings were incorporated into the project.

[13] Specialty coffee refers to Arabica coffee grown at a specific altitude, above 1,200 meters above sea level. The climate at this altitude is particularly good for producing highest quality coffee.

[14] "The Cup of Excellence" is a strict competition that selects the very best coffee produced in a country for a particular year. Winning coffees are chosen by a select group of national and international cuppers. The final winners are awarded the prestigious Cup of Excellence® and sold to the highest bidder during an internet auction.

C. Evaluation

In this section, we propose an extended approach to project evaluation to provide a comprehensive view not only of immediate impacts and outcomes, but also long-term sustainability of the producers' inclusion in the value chain. First, we discuss general evaluation criteria that are commonly used to assess the success of an intervention; then, we discuss new criteria to be included in future examinations, and apply it to Case 7 below.

1. General Intervention Evaluation Criteria

Currently, all projects are evaluated in some way to determine if they reach their desired outcomes and impacts and to measures the potential spillovers.

- **Outcomes** are the actions taken over the course of the project; For example, in Case 7 below, 100 producers were certified as organic producers by a third party. Ideally, these outcomes should correspond directly to the project design, although for a variety of reasons, in practice, problems often arise during implementation that inhibit the direct translation of the design into outcomes. Examples of these problems are included in the existing IDB-MIF Project Performance Monitoring Report: EA lacks knowledge of bank procedures, national policy changes, executing agency policy changes, bank policy changes, lack of monitoring, etc.

- **Impacts** of the project are the development effects of the actions taken during the course of the intervention on the beneficiaries; For example, from the same case, increased income or improved income stability, empowerment, incorporation of women as recognized productive members of the family, increased expenditure on children's' education, etc.

- **Spillovers** include the impact the project has on individuals, communities and organizations that are not direct beneficiaries of the program. In addition, spillovers can include general improved technology adoption and better resource management for other 'non-project' crops cultivated by beneficiaries as a result of technical assistance and training by qualified agronomists. When these spillovers are positive, they improve the cost/benefit analysis of the project as a whole. For example, in the case below, the Participatory Guarantee System (PGS) certification system helped to lend credibility to the potential for public-private alliances to solve regional problems.

Case 7. IDB-MIF Project: Strengthening the Competitiveness of Organic Producers in Andean Microwatersheds (Peru)

This project focused on improving the competitiveness of organic fruit and vegetable producers in the Huánuco region of Peru. The project consisted of four components: (1) improve commercialization and supply of organic produce, (2) validate the Participatory Guarantee System (PGS),[15] a regional, multi-stakeholder organic certification process and develop manuals for distribution in other regions, (3) improve both productive and business management skills of producers and (4) strengthen networks and collaboration and cooperation among producers. The projects benefitted 415 organic fruit and vegetables producers who were certified by the PGS; 100 of these producers also received organic certification granted by a third party organization. These 100 producers were able to enter into the national value chain, selling a small amount of their produce in supermarkets in Lima. The amount sold through this channel is estimated to increase in 2012. The remaining 315 producers participated in the local value chain selling their organic products in a local farmers' market. They were able to access higher price premiums thanks to the PGS certification. The 415 producers created a consortium to jointly market both fresh and processed organic products. As they did not yet have the relevant management skills to independently operate the consortium, at the end of the project, the producers still required the ongoing support of the executing agency, Instituto de Desarrollo y Medio Ambiente (IDMA). Funding for this project was provided from four sources (1) IDB-MIF (2) IDMA (3) Regional Government of Huánuco and (4) Fondo de las Americas.

Number of Beneficiaries	Targeted Product	Targeted Stage of the Value Chain	Executing Agency	Funding		Project Duration & End date
				IDB	Counterpart	
415 (100 organically certified)	Organic Fruits & Vegetables	Production (90%), Packing (5%), Sales (5%)	IDMA (National NGO)	$397,990	$264,930	33 months 2011

Outcomes	Impacts

• **415 producers were certified under PGS**
• **Out of these 415 producers, 100 were certified as organic producers by a third party organization**
• **Sales in the farmers' market in the local city grew**
• **Producers established their own collection center**
• **Producers formed a consortium to commercialize their products**
• **The 100 organic certified producers will sell all their production to a supermarket in Lima in 2012**
	• Increased family income
	• Extended education for children
	• Producer empowerment
	  ○ Farmers felt proud of their achievements selling their products in Lima
	  ○ Women also participated in the project; principally, they were in charge of selling the products in the farmer's market.
	• Increased sense of responsibility and commitment by the farmers to the producer groups
	• New producers are being invited to participate in the consortium

[15] This system required the participation of numerous different actors from the community including regional government, universities, producer associations and consumer groups. This thus provided a forum for these different stakeholders to meet and discuss challenges faced in developing the organic producer market in the region.

2. Inclusive Business and Value Chain Criteria

In order to improve value chain interventions with inclusive business foci and to systemize the development of these projects, we propose broadening the evaluation criteria beyond these initial factors to include others that assess the design and implementation of the project within the global value chain framework. These include examining whether the target product was appropriate for small producers, whether activities corresponded to the level of beneficiaries selected, whether the beneficiaries were able to become competitive producers in the target product value chain, whether the producers will be in a position to upgrade into higher value products or stages of the value chain in the future and how sustainable their inclusion is from the economic, social and environmental perspectives.

Table 6 provides an overview of how each of these criteria relates to the success of an intervention and provides an example of how it may be used with Case 7.

Table 6. Criteria for Design and Post-Project Evaluation: Small Producer Inclusion in the Global Value Chain Framework

Target Product	Target products vary in market demand and value, depending on inputs, labor and technology required for their production. Certain products have higher labor intensity than capital intensity, making smallholder production more efficient and suitable for value chain participation. In addition, other production models and certifications such as organic or free trade are often better suited to smallholder production.	
Case 7. Peruvian Organic Produce	Organic produce is well suited to small and medium production due to high labor intensity and higher margins resulting from lower input costs (on farm organic fertilizer) and a price premium. Commercial viability: Local and growing demand for organic product in national supermarkets. Organic certification is essential.	
Beneficiaries	Understanding the level of development of the beneficiaries will help to set the goals, activities to be developed and time required to implement a project. The beneficiaries level of education and experience cultivating a particular crop, for example, will determine the content and design of training programs; at the same time, whether the beneficiaries have previously participated in the value chain will provide indications regarding their knowledge of buyers needs, etc. Beneficiaries with established crops may be better positioned to enter new or more complex chains as they have already have access to key resources. Beneficiaries with lower levels of development will require more help and time.	
Case 7. Peruvian Organic Produce	The level of development of the beneficiaries was very low. This was the first time that they had attempted to sell their produce outside their territory and, for some of them; it was the first time they had sold their crops. Many of them were not associated prior to the program.	
Competitiveness Assessment	Even in cases where small producers have a comparative advantage in crop production, they may face certain constraints that limit their ability to compete in value chains. For example, they often lack access to financial resources to invest in the necessary infrastructure, equipment or irrigation systems to achieve sufficient productivity and quality levels, while a lack of specific technical knowledge can inhibit their ability to improve these factors. Furthermore, in certain cases, due to their poor economies of scale and lack of transportation, buyers often eschew their inclusion in their sourcing strategies as the transaction costs of visiting and working with a large number of small producers is too high. Different socioeconomic levels often exclude small producers from sourcing networks, limiting their ability to establish linkages with buyers within the chain. A competitiveness needs assessment is thus mandatory in a value chain intervention to identify the key competitive bottlenecks to improve productivity and quality. The vast majority of these constraints can be overcome by improving access to four key elements: credit, training, associations and market linkages. Aspects of risk in both the production and commercialization of the product should also be considered to ensure that vulnerable producers are not unnecessarily exposed to significant risks from which their recovery may be unpredictable. In agro-food value chains, two important factors increase the risk for producers: climate and disease. In addition to the producers not being able to fulfill their quotas due to climate and disease, buyers also face the risk of producers selling their produce to higher bidders. This can be problematic for sustained value chain inclusion.	

Case 7. Peruvian Organic Produce	Prior to the program, producers needed to improve their productivity, product quality, economies of scale and gain access to the market. Through the project, they were able to improve market linkages – although they sill needed support in this aspect; they developed minimum economies of scale to supply the Lima markets; and they improved productivity and product quality by incorporating new techniques taught by experts – however, they still needed to improve the high grade percentage of their crop. Risks: Low level of farmer education and low economic development in Huánuco. They lacked administrative skills to run the consortium. Infrastructure was not well developed and many producers had to walk for hours in order to deliver their products.	
Upgradeability	Interventions are often focused on entry into the value chain, however, as other new producers enter the value chain, locally, regionally or internationally, the beneficiaries of the program must be positioned to continue to add value to their product. We refer to this as "upgradeability": upgrading can be as simple as producing a product of slightly higher value (product upgrading), incorporating a new technology to improve productivity such as drip irrigation systems (process upgrading), or upgrading into higher value segments, such as packing or processing of fresh produce before sale (functional upgrading). Each of these stages increases the producers' returns of participation in the value chain.	
Case 7. Peruvian Organic Produce	Organic product range can be expanded to include other fruits and vegetables in the future, while second and third grade products can be used for processing, creating value-added products such as jam and juice concentrates. A processing facility was built at the consortium's packhouse for this purpose.	
Economic Sustainability	Once the project comes to an end, beneficiaries should be able continue to supply the value chain into which they have been inserted. Without the financial and technical resources of the project, producers must be able to continue to produce competitively priced products, establish a business model that can afford necessary costs such as certification, replace inputs or technology such as renovation of irrigation systems. For producers to remain integrated in the value chain, and continue to expand their potential to capture the gains of their participation, they must develop technical, entrepreneurial and interpersonal skills. In addition, members of the community should be in a position to recruit and teach new producers in the skills developed by the project.	
Case 7. Peruvian Organic Produce	At the end of the project, a financial component and strengthened access to market still needed to be incorporated into the value chain intervention to achieve sustainability. There was a strong need to generate profits in order to hire managerial personnel and sustain the initiative. Producers were not capable of managing the consortium.	
Social Sustainability	Project should ensure that inclusion in the value chain has a positive social impact for men, women and youth. Interventions should foster gender equality; "smallholder efficiency" is often derived from the use of unpaid family labor, and women in particular as they often bear an unreasonable proportion of the work involved in agricultural production without receiving a fair wage, or having active participation in decision-making regarding family income. In addition, interventions take place in rural areas, which often experience high urban migration; projects that provide potential economic opportunities can encourage youth to stay in the area.	
Case 7. Peruvian Organic Produce	The project has included two key aspects: **Gender Component:** Empowerment of women; women were beginning to be recognized as important actors in commercialization and also as part of the decision-making process. **Youth & future professionals:** Families were investing in their children´s education because they want to professionalize their farm activities in the future with their help.	
Environmental Sustainability	The expansion of intensive agriculture globally must be done in a sustainable way to avoid exhaustion of the soil, misuse of precious water sources, deforestation, etc. This factor must be taken into consideration when selecting the target product and designing and implementing the technical training.	
Case 7. Peruvian Organic Produce	Organic cultivation has important environmental benefits, as it avoids excessive use of the land and agro-chemicals. Additionally, beneficiaries have a diversity of crops in their farms that help the soils richness.	

Given the role of IDB-MIF to act as a "development laboratory", to build and support successful models for including small- and medium-sized enterprises, the potential for replicating the project is an important evaluation criterion. The key questions to be asked are: "Can the project be replicated in part or in its entirety in other locations or industries?" and "Are there best practices from this project that can be leveraged in other projects or cases where certain practices should not be repeated?" The information from this assessment should be shared with other IDB-MIF specialists.

Potential for Replication	The mandate of IDB-MIF is to experiment with projects that have the potential for replication in other places in order to maximize potential impact for development.	
Case 7. Peruvian Organic Produce	Aspects of coordination and collaboration both amongst producers and between producer groups and other value chain actors was strong. This model could be replicated for other projects.	

Finally, we include an overall assessment of the project's ability to fulfill the goals of the two IDB agendas, Inclusive Business and High-value Agriculture, by sustainably including small- and medium-sized producers in the value chain.

Sustainable Inclusiveness	This criterion evaluates the degree to which previously excluded producers or producers vulnerable to being pushed out of the chain were integrated effectively into the value chain in a sustainable way. This evaluation criterion takes into account the needs identified in the competitiveness assessment, the manner in which these needs were addressed through the provision of the Four-Pillars, and the economic, social and environmental sustainability of the project.	
Case 7. Peruvian Organic Produce	The intervention identified a product group in which the participants could compete (organic) and helped them to improve their productivity and horizontal coordination to achieve economies of scale. The producer associations established were strong and were in a position to upgrade in the future. The product was environmentally friendly, and the project focused on including both women and children in the initiative. The key challenges to sustained inclusiveness lay in economic sustainability: the lack of access to finance and direct access to buyers meant that producers continued to rely on the executing agency at the end of the project and were not yet ready to be independent.	

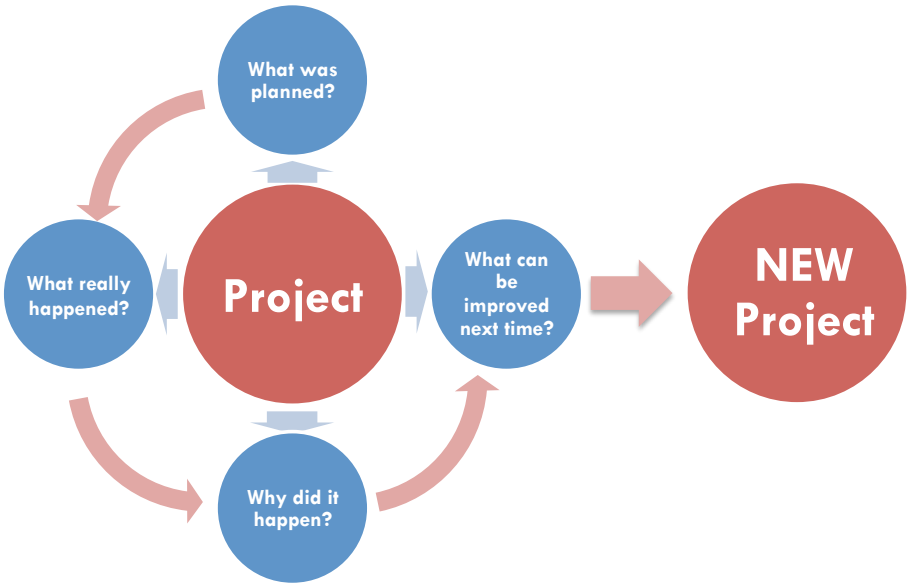
D. Review & Feedback

Following the completion of a project, it is critical to capture the lessons learned through the design, monitoring and evaluation stages. While policy makers often focus on assessing mainly the "outcomes and impact" of interventions, evaluating the "process" helps to institutionalize knowledge and improve the efficiency and effectiveness with which future projects can be carried out.

The following questions are a simple, yet useful guide to uncovering these lessons:

1. What was planned?
2. What really happened?
3. Why did it happen?
4. What can we do better next time?

Figure 9. Process Review to Capture Best Practices & Avoid Pitfalls



Source: Authors.

The outcome of these reviews allows for best practices to be identified for replication, and unsuccessful practices to be improved or excluded from future projects. Ideally, all actors involved in the design and implementation of the intervention should be included in this review.

Case 8, an intervention focused on facilitating the entry of Peruvian cacao producers into the global organic cacao value chain, illustrates certain key lessons captured during the review and feedback stage that can be useful to enhance the design and implementation of future projects.

Why is feedback so important?

- National and global value chains are highly dynamic with new actors and countries entering and exiting on an ongoing basis. Constant learning from cases in the field can keep policy formulation abreast with realities on the ground.
- Within the IDB-MIF projects, there is a wide range of actors carrying out interventions in varying social and economic contexts. Each of these actors and contexts brings unique experiences to the process of including small- and medium-sized producers into the value chain. These contributions can enrich both the design and implementation stages.
- In practice, limitations and circumstances on the ground can constrain implementation of well-intended design. Harnessing the lessons learned in each stage of a project is important to streamline design and maximize scarce funding resources.

Case 8. IDB-MIF Project: Conversion to Organic Cacao Cultivation (Peru)

This project involved the conversion of 200 members of Cooperativa Naranjilla Industrial (COOPAIN) in the province of Tocache, Peru from conventional cacao production to certified organic production through the provision of technical assistance and training, strengthening of producer groups and a guaranteed sales channel. The goal of the project was to increase the quantity, quality and value of the organic cacao production in a sustainable way that was consistent with market demand by using technology improvements at the production level. Beneficiaries were small producers, with between 2 and 22 ha of conventional cacao under production, and several producers had previously cultivated coca plants for the illicit cocaine trade. The project was implemented to both increase product supply and to improve the incomes and livelihoods of the members of the cooperative. Beneficiaries continued to be among the most productive members of the cooperative, and were considered important role models for recruiting new organic producers. In addition to converting producers to organic cultivation, the project also included a pilot initiative in organic chocolate production. Beneficiaries earned additional utilities from the export of this higher value added product. Following the success of the project, COOPAIN changed its business model to focus on 100% organic cacao production, which is exported in a range of primary, intermediate and processed products (beans, paste, powder, liquor and chocolate) to destinations in Asia, Europe and the United States.

Number of Beneficiaries	Targeted Product	Targeted Stage of the Value Chain	Executing Agency	Funding		Project Duration & End date
				IDB	Counterpart	
200	Organic cacao	Production	Cooperativa Naranjillo	$100,000 ($87,307)	$67,000 ($127,000)	27 months 2008

Key Lessons Learned During Case Review:

- It is often difficult to build trust amongst small producers who are disconnected from commercial chains, or have been taken advantage of by intermediaries in the past. The success of the project execution depended to a large degree on COOPAIN's local experience, knowledge and structure, which allowed for direct representation of producers in the organization's decision-making committees.
- Businesses plan and market analysis were important factors in ensuring economic sustainability and scale of the project. Diverse product lines allowed them to respond to changes in demand in the export market, shifting between cocoa beans and derivatives.
- Certification costs were no longer a barrier to entry for new producers, allowing the cooperative to maximize on economies of scale. While the first 200 producers were certified under project financing, following the project, the cooperative incorporated certification as an operating cost allowing them to spread the cost across all members.
- Producers found it difficult to manage their income and cash flow, plan their production schedules, determine the optimal investment levels for production expansion and understand cost and price structures. Further attention should have been paid to business administration skills to ensure consistency of timely supply.
- Conversion to organic production takes time. Significant returns on investment in organic production were only seen after three years and producers saw an initial decline in product quality and yields in the first year of transition. Adequate time for producers to reach sustainable production is essential.

V. Lessons Learned from Case Review

In this final section, we summarize the key lessons learned through the evaluation of five IDB-MIF projects and three successful interventions carried out by other development agencies. These lessons are organized in four primary groups:

- First, **a proactive market approach to the intervention is essential**. This includes assessing the role that small producers would play in the value chain, comparing their potential competitiveness versus other producers in the absence of constraints, reviewing the requirements of the market, and developing an exit strategy to ensure that the producers can continue to compete sustainably once project resources are withdrawn.
- Second, it is important to understand that **not all small- and medium-sized producers are the same.** This is a heterogeneous group with a wide range of socio-economic and education levels, and whose experience both in the cultivation and commercialization differs significantly. **This lesson has important implications for project design**, specifically in terms of the length of the project required and the content of training programs, which must be customized to meet their specific needs. This requires flexibility in approach.
- Third, **overcoming competitiveness bottlenecks is essential** using the Four-Pillar approach, but this approach must be flexible and adjusted according to the levels of experience and organization of producers.
- Finally, **there are important factors regarding implementation that must be considered to ensure success:** the executing agency must have local experience and expertise and be in a position to quickly generate trust between the producers and other actors in the chain. The organization must be prepared to coordinate and leverage potential synergies with other actors to maximize use of scarce resources.

Figure 10. Key Lessons Learned

Market approach is essential	Not all small producers are the same, this has important implications for project design	Competitiveness bottlenecks must be overcome	Characteristics of the executing agency are key
• A clear market analysis is essential • Producers must be seen as productive agents • Close attention must be paid to value chain requirements • Sustainability must be a driving principle of the project design and implementation	• Producers have a range of socio-economic and education levels and whose experience both in the cultivation and commercialization differs significantly • The length of each program is therefore important - some beneficiaries need more initial assistance than others according to their level of development • Customization of projects according to the beneficiaries' level of development and trust between different actors are essential for successful inclusion in value chains	• Training must go beyond production to include entrepreneurial and interpersonal skills components. • Intervention should link small and medium players with important buyers nationally and internationally. • Developing producer associations is essential for generating economies of scale for small producers to join value chains. • Access to credit is a necessary condition for value chain inclusion.	• Lack of basic equipment and infrastructure can significantly inhibit a project's success • Success depends to a large degree on the local experience and knowledge of the executing agency. • Alignment and synergies with other agencies in the sector can allow limited project resources to be leveraged considerably • Find innovative ways to perform value chain activities • The length of each program is important.

Value chain inclusion interventions require a **clear and standardized methodology**. Projects need a blueprint to guide design and implementation and evaluate impact.

Source: Authors.

Lessons Learned

Market approach to interventions

1. A clear **market analysis** of the products that are intended for commercialization is essential to ensure a commercially viable product, an adequate supply and sustainable access to market. This includes a thorough understanding of the product characteristics, certifications and standards that must be met and growth prospects of the market. In the stevia case (Case 2), exporters involved in the project opted to continue to produce a particular variety of the plant, even though there were signals from the market that a different variety would be preferred. This left exporters and producers facing considerable uncertainty. In the IDB-MIF organic fruits and vegetables project (Case 7), opting for PGS certification to supply the national value chain was erroneous given that it was only recognized as an organic certification at the regional level

2. Producers must be seen as **productive agents of the value chain**, and as such, a fundamental part of each project is the development of an appropriate, feasible business plan for producers. Producers should be taught how to analyze and adapt different aspects of this business plan to the realities of the market, such as basic cost and price models. Regular business challenges such as cash flow and human capital management should also be considered.

3. **Paying close attention to value chain market standards requirements is essential for securing access to market.** The KBDS avocado project (Case 1), along with the organic cacao project in Ecuador (Case 5) and sesame in Bolivia (Case 4) all highlighted the importance of meeting market standards requirements. While only the organic cacao case required certification of processes by a third party, all three cases included measures to improve traceability and quality according to national and/or international standards..

4. **Sustainability as a driving principle of projects from initial design through completion is important for long-term success.** The cacao case (Case 5) highlighted that the cooperatives that had received considerable support from development agencies in their early stages of development were not yet in a position to sustainably remain in the value chain, and the initiatives carried out by GIZ were essential to consolidate the inclusion of these actors in the market, or the initial investments from other agencies would have been lost. Likewise, the exit-strategy emphasized in the avocado case (Case 1), in which the executing agency steered clear of directly filling value chain roles, was important to ensure that all of the required roles would be filled by commercial value chain actors once the intervention concluded.

Beneficiaries differences and implications for intervention design

5. **Not all small- and medium-sized producers are the same.** This is a heterogeneous group with a range of socio-economic and education levels and whose experience both in the cultivation and commercialization differs significantly. These groups require different tools for integration into the value chain. They also have different potential to participate in the chain. These differences must be taken into account in all stages for the project design, monitoring, evaluation and review and feedback. For example, the organic fruit and vegetable producers in Peru (Case 7) took three years to organize and produce organic crops at a quality level for sale in their proposed primary market, and were only just beginning to sell their producer there when the project came to an end. This necessitated a second intervention.

6. T**he length of each program is important.** Some beneficiaries need more initial assistance than others according to their level of development (for example, education, experience and socio-economic

levels). There are also some cases in which the interventions will take longer to make an impact. For example, the transition to organic production takes three years for the European cacao market (Case 5 & 8). During this time, producers are unable to market directly to their new clients. Project length should correspond to the time taken for producers to become economically sustainable participants of the value chain.

7. **Customization of projects according to the beneficiaries' level of development and trust between different actors are essential for successful inclusion in value chains**. For example, in the avocado and sesame cases (Cases 1 & 4), as is often the case, producers were not in a position to work directly with buyers due to a lack of education and sophistication. They required an intermediary to work on their behalf who would not take advantage of them. In the avocado case, the group management officers – who were from the same communities as the producers, but had received training during the project – went on to fill that role. In sesame case, producers were connected to the global industry by the industry association, CABEXE. The producers had to trust that these firms were acting in their best interest, while the buyers had to trust that these firms could successfully coordinate the producers to meet supply requirements.

Overcoming Competitiveness Bottlenecks

8. Training must go beyond production techniques to include both entrepreneurial and interpersonal skills components. The combination of these **three training approaches** is important to produce a quality product, to foster producer independence in sales, and to promote effective collaboration amongst producer groups. The most popular element that all interventions examined in this report included was access to technical training focused on good agricultural practices to raise productivity and quality. However, the entrepreneurial training was not always successfully incorporated in the project and many producers continue to lack the skills necessary to run their farms as a business after the project concluded.

9. **Access to market** is often limited by a lack of contacts and business prowess. Inclusive business projects would benefit from the engagement of influential actors, such as the executing agency or the IDB, with important buyers in the sector. The intervention should thus play a **more active role in linking small and medium players with important buyers** nationally and internationally. For example, in the coffee case in Central America (Case 6), although the cooperatives included in the project were already exporting their coffee, connecting the cooperatives with the international buyers at the outset allowed them to circumvent local intermediaries and earn higher returns for their products. It also facilitated the transfer of information regarding buyers' quality requirements to the producers.

10. Developing and empowering producer associations and connecting them with other actors in the value chain is an important step in achieving the necessary **economies of scale for small producers to join national and international value chains**. Many small producers operate on less than 25 hectares of land and often lack the resources to fully develop it. As such, no one producer can produce sufficient quantities to access the market. In the honey project (Case 3), local cooperatives were linked with larger export cooperatives to further leverage their economies of scale.

11. **Access to credit** is a necessary condition for value chain inclusion. Producers lack resources to invest in new technologies and required infrastructure to upgrade their operations to meet the standards of coordinated global value chains. Access to finance was the Achilles' heel of these five IDB-MIF projects studied, only one of the projects facilitated access to finance despite its importance for beneficiaries to enter and sustain their participation on the value chain. Due to information asymmetries, financial institutions are often reluctant to extend credit to small producers. Pilot projects with Equity Bank in the

Kenya avocado case (Case 1) and the Banco de Desarrollo Productivo de Bolivia in the sesame case (Case 4), however, illustrate the potential for success with coordinated initiatives that include the buyers and executing agencies.

Agency requirements for implementation

12. **Infrastructure:** the presence or lack of smallholder's individual or cooperative basic equipment and infrastructure can significantly inhibit a project's success. IDB-MIF grants in four of the five IDB-MIR cases did not allow for the purchase of equipment. In the honey case (Case 3), this undermined the producers' ability to expand their supply or upgrade their processing. In the coffee case (Case 6), IDB-MIF funds were matched by cooperative funds in the construction of new infrastructure for processing. This was important in facilitating functional upgrading of the producers.

13. The success of the project execution depends to a large degree on the **local experience and knowledge o**f the executing agency. It is often difficult to build trust amongst small producers who are disconnected from commercial chains, or whom have been taken advantage of by intermediaries in the past. In the stevia project (Case 2), two years into implementation, firms still faced trust issues with their producers, who had been misled by intermediaries in the past.

14. Executing agencies that are not chain actors face important challenges to ensure the sustainability of the smallholder inclusion once they withdraw. External NGOs often take charge of critical administrative or market linkage roles where producers lack the capacity to do so themselves (see Case 7), rather than providing training for these more complex roles. In these cases, an exit strategy that ensures the development of these specific competencies among producer groups is essential (as in Case 1). On the other hand, executing agencies that are integrated chain actors can be better positioned for the sustainability of the project.

15. Where possible, **alignment and synergies with other agencies** working in the sector can allow limited project resources to be leveraged considerably and, in turn, to increase the number of beneficiaries of different initiatives. For example, in the honey case (Case 3), resources were limited for the task of establishing an entire industry. By working with other agencies, the IDB-MIF project was able to leverage access to different resources. This also occurred in the case of the coffee project in Central America (Case 6).

16. **Find innovative ways to perform value chain activities.** In the avocado case (Case 1), exporter firms initially provided the expensive spraying services to the producers on credit. However, due to the significant cost of these services, they began to explore alternative options for this service and by collaborating with the banking sector, independent fee-based spraying firms were established. In the cacao case (Case 5), GIZ worked to fill in gaps that were not covered by previous intervention programs – namely to strengthen the managerial and organizational skills of the associations – but they also helped provide financing for the construction of collection centers.

Value chain methodology to interventions

17. Finally, value chain inclusion interventions require a **clear and standardized methodology**. Projects need a blueprint to guide design and implementation and evaluate impact. These five projects did not intentionally consider the value chain methodology and the four essential pillars for inclusion in their design. As a result, a market-oriented perspective with a view to the producers' competitiveness was missed. The value chain approach allows one to identify the competitiveness bottlenecks faced by small producers, key value chain actors, national/international buyers and certifications and standards required by the chain among others.

VI. Terminology

Beneficiaries	These are the small- and medium-sized producers who benefit from inclusion in the value chain thanks to the project. Understanding the level of development of the beneficiaries will help to set the goals, activities to be developed and time required to implement a project. The beneficiaries level of education and experience cultivating a particular crop, for example, will determine the content and design of training programs; while, whether the beneficiaries have previously participated in the value chain will provide indications regarding their knowledge of buyers needs, etc. Beneficiaries with established crops may be better positioned to enter new or more complex chains as they have already have access to key resources. Beneficiaries with lower levels of development will require more help and time.
Competitiveness	The ability to produce the required quantities of the product, with the desirable qualities and certifications, at the right time and place and at a lower cost than other actors. Usually, it is difficult for smallholders to participate in national and/or international value chains because they face typical competitiveness bottlenecks such as lack of quality, low productivity and they do not meet product and process standard
Economic Sustainability	Once the project comes to an end, beneficiaries should be able to continue to supply the value chain into which they have been inserted. Without the financial and technical resources of the project, producers must be able to continue to produce competitively priced products, establish a business model that can afford necessary costs such as certification, replace inputs or technology such as renovation of irrigation systems.
Environmental Sustainability	The expansion of intensive agriculture globally must be done in a sustainable way, particularly to avoid exhaustion of the soil, the misuse of precious water sources and deforestation. These factors must be taken into consideration when selecting the target product and designing and implementing the technical training.
Governance	Governance analysis allows one to understand how a chain is controlled and coordinated when certain actors in the chain have more power than others. Gereffi (1994, p. 97) defined governance as "authority and power relationships that determine how financial, material and human resources are allocated and flow within a chain."
High-value Agriculture	High-value agriculture or agro-food products are non-bulk agricultural commodities that either require special handling, such as fresh fruits and vegetables, or are processed in one or more stages post-harvest, such as specialty coffee and honey, prior to reaching the end market. The terms high-value agriculture and high-value agro-foods (also agri-foods) are used synonymously in the literature to refer to this broad range of non-traditional agricultural crops. The agricultural production is destined to the agro-food industry for human or animal consumption.
Impact	The impacts of the project are the effects of the project on the beneficiaries – ie. increased income or improved income stability, empowerment, formalization of relationships between producers and buyers, etc.
Market Linkage Firm	These firms help to connect different actors along the value chain. This facilitates trade relationships between the small producers, local firms and cooperatives, and the external market. These firms act as brokers connecting buyers to producers and vice versa, and charging fees for this service. Unlike the intermediary model, the market linkage firm does not sell or market clients' products; rather it connects clients to markets.
Outcomes	The outcomes are the immediate results of actions taken in the project – ie. 200 producers were trained in good agricultural practices. Ideally, these outcomes should correspond directly to the project design, although for a variety of reasons, in practice, problems often arise during implementation that inhibits the direct translation of the design.
Positive spillovers	Benefits from the project that impact non-participants, be it individuals, communities or organizations that are not direct beneficiaries of the program. Positive spillovers may also include general improved technology adoption and better resource management

	in non-project crops cultivated by the beneficiary as a result of technical assistance and training by qualified agronomists.
Potential for Replication	This refers to whether or not a project can be replicated in another place. The mandate of IDB-MIF is to experiment with models that can later be carried out in other places in order to maximize potential impact for development.
Social Sustainability	Interventions should ensure that inclusion in the value chain has a positive social impact for all members of the smallholder family, including men, women and children, to ensure gainful participation from inclusion in the value chain as well as family commitment to ongoing production. Social challenges are context specific and thus key factors should be identified on a case-by-case basis.
Standards	Public and private requirements for a product and/or processes to enter to certain markets. These standards are generally very rigorous, making it more difficult for smallholders to participate in value chains.
Sustainable Inclusiveness	The degree to which previously excluded producers or producers vulnerable to being pushed out of the chain are integrated effectively into the value chain in a sustainable way. This takes into account the needs identified in the competitiveness assessment, the manner in which these needs were addressed through the provision of the four pillars, and the economic, social and environmental sustainability of the project.
Target product	This is the product or group of products chosen for producers to cultivate in order to enter the high-value agriculture value chains. Products vary in market demand and value, depending on inputs, labor and technology required for their production. Certain products have higher labor intensity than capital intensity, making smallholder production more efficient and suitable for value chain participation. This, along with other production models and certifications such as organic or free trade are often better suited to smallholder production.
Upgrading	Economic upgrading is defined as firms, countries or regions moving to higher value activities in GVCs in order to increase the benefits (e.g. security, profits, value-added, capabilities) from participating in global production (Gereffi, 2005b, p. 171). Upgrading in agro-food chains can be as simple as producing a product of slightly higher value (product upgrading), incorporating a new technology to improve efficiency such as drip irrigation systems (process upgrading), or upgrading into higher value segments, such as packing or processing of the fresh produce before sale (functional upgrading). Each of these stages increases the producers' returns of participation in the value chain.
Value Chain	The value chain describes the full range of activities that firms and workers perform to bring a product from conception to consumption and beyond. It examines the labor inputs, technologies, standards, regulations, products, processes, and markets in specific industries and locations, thus providing a holistic view of industries both from the top down and the bottom up.

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