Fruit and vegetables producers in Huánuco, Peru formed a consortium to sell their organic produce in supermarkets in Lima. The project, implemented by Instituto de Desarrollo y Medio Ambiente (IDMA), attained a high level of collaboration among producers. These producers still depend on the executing agency. Further support is still required to achieve economic sustainability of these small producers.
“Strengthening the Competitiveness of Organic Producers in Andean Microwatersheds”

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 projects based on good practices and to facilitate the systematic institutionalization of this knowledge. The project included several reports and case studies, available at www.cggc.duke.edu.

Acknowledgements

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

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.

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Center on Globalization, Governance & Competitiveness, Duke University
Introduction

The key to sustainable inclusion in any value chain is competitiveness; that is, the ability to provide the desired quantity and quality of a specific product in a more economical and timely manner than other suppliers. In high value agricultural markets, improved cold chain management and transport have facilitated the expansion of global trade, and now producers must compete with suppliers from all over the world. This requires continuous improvements in productivity and quality to meet product specifications of end buyers, cost-efficient market ready packaging, timely logistics, and, of course, economies of scale.

Four-Pillar Model for Value Chain Inclusion

Small- and medium-sized producers, in particular, face constraints that limit their competitiveness and prevent their participation in the value chain. We identified four major pillars that every intervention should include to raise the competitiveness of smallholders in order to include them in a sustainable way in the national or international value chain.

Access to market: Many small producers do not have the required contacts to establish relationships with potential buyers due to broad geographic, cultural and educational factors, amongst others. Inclusive business interventions must fill an important role of establishing a connection between producers and buyers. This connection requires educating lead firms about 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. Generally, this is the weakest link in any value chain intervention.

Access to training: While many small producers may have worked in agriculture their entire lives, specific training is often required in order to improve productivity and product quality, introduce new technologies and plant varieties, and facilitate compliance with food safety and other certification requirements that govern entry into the national, regional and international value chains. The training component should include technical education, entrepreneurship, financial literacy and any other social/soft skills necessary to help insert producers in the value chain. In addition, peer knowledge transfer components; such as field visits to successful farms and demonstration plots should be included. These can be powerful tools for teaching and motivating producers.

Coordination and collaboration building: Because small producers need to achieve economies of scale in order to compete in the marketplace, it is important they collaborate and work together. Additionally, and perhaps equally as important, collaboration facilitates the exchange of ideas to manage common problems, reduces information asymmetries in production and builds social capital that empowers producers to sell their products in more sophisticated markets. However, producers often fail to self-organize formally. Producers thus often need the encouragement and support of external actors to appreciate the payoffs of collective action and establish themselves as formal, legal organizations. These horizontal linkages facilitate producers’ connections with other upstream and downstream value chain actors, such as input and service providers.

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 as they have no access to formal finance channels. In addition, they often lack the necessary financial literacy to apply for or manage potential loans. These 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, thereby limiting their potential to participate in coordinated value chains. Interventions can play an important role in reducing information asymmetries and helping the banking sector to create appropriate, yet profitable, financial instruments to meet the needs of this group.
Project Description: The 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), 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. The projects benefitted 415 organic fruit and vegetables producers certified by the PGS; 100 of these producers also received organic certification granted by a third party organization since PGS was not valid in national supermarkets. These producers with third party organic certification were able to enter into the national value chain, selling a small amount of their produce in supermarkets in Lima. The remaining 315 producers participated in the local value chain selling their organic products in a local farmers’ market and were able to access higher price premiums thanks to the PGS certification. The amount sold through this channel is estimated to increase in 2012. The 415 producers created a consortium to market both fresh and processed organic products. As they still do not have the relevant management skills to independently operate the consortium, the producers still need the support of IDMA. Funding for this project was provided from four sources (1) Inter-American Development Bank (IDB), (2) Instituto de Desarrollo y Medio Ambiente (IDMA), (3) Regional Government of Huánuco and (4) Fondo de las Americas.

Lessons Learned

• The project failed to consider some key constraints that impeded small producers’ successful entry into the value chain. Specifically, limited access to finance inhibited producer expansion and improvements to productivity and diversification of crops, while poorly developed access to market potentially extended the necessary length of the project, as producers did not see economic returns of their participation until late in the project.

• This project should have addressed sustainability in the early stages of the project design. A clear exit strategy should be determined ex-ante. In particular, installing strong entrepreneurial skills within the producer groups was not incorporated into the project. Producers were not provided sufficient tools to become independent economic actors capable of managing their own businesses.

• Although not its original intention, the implementation of the PGS proved to be a strong driver of fostering public-private coordination and collaboration and strengthened each of the producer groups. By the end of the project, there was a high level of social capital and empowerment amongst producers. Producers had established clear objectives to improve their production, create economies of scale by recruiting new producers and target new markets outside the region. However, coordination and collaboration with buyers in the value chain was missing.

• Training group and association leaders and offering internships were particularly successful tools to motivate producers. This approach facilitated the strong development of technical and social skills.

Overall Evaluation of Sustainable Inclusiveness

Sustainable Inclusiveness | 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.

Medium

1 For the purposes of this case study, the word organic is used to describe all produce that is cultivated and handled without the use of agrochemicals. Where these production processes have been monitored and certified by independent parties, these products will be differentiated as certified organic products.
**Institutional Arrangement**

IDMA was the executing agency of this project, playing a key role in facilitating producer organization into product specific associations, as well as an umbrella company to collectively commercialize their products. The PGS model (see box) was intended to certify organic products. However, buyers in Lima did not accept this type of certification, as it is not yet recognized by the national government. For that reason third party certification was necessary. PGS, however played a crucial role in organizing not only producers, but also other key stakeholders in this project.

**Project Stakeholders**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDMA</td>
<td>Executing agency and Co-Funder</td>
<td>IDMA is a private non-for profit organization founded in 1984 to promote sustainable development. IDMA has worked with local producers for over 20 years and has substantial knowledge regarding the principal needs of producers.</td>
</tr>
<tr>
<td>Producers</td>
<td>Beneficiary</td>
<td>415 producers. These producers presented varying levels of development; one group was already selling their production in the local farmers’ market and/or to intermediaries. Another group was producing for subsistence. Many of these producers live in remote locations.</td>
</tr>
<tr>
<td>Consortium</td>
<td>Company created by beneficiaries</td>
<td>The Consortium was created in 2011. It owns a collection center in which produce is received, graded, packaged and processed. This center was built with resources from FONDAM. (Neither MIF nor local government resources could be used to build this essential infrastructure.)</td>
</tr>
<tr>
<td>ADPE</td>
<td>Beneficiary</td>
<td>ADPE is the Organic Producers Association. It has 170 members with PGS certification and sell their products in an organic farmer’s market in Huánuco.</td>
</tr>
<tr>
<td>Organic Granadilla Producers Association</td>
<td>Beneficiary</td>
<td>Pre-existing organization that sought out IDMA because they wanted to commercialize their products.</td>
</tr>
<tr>
<td>Organic Avocado Producers Association</td>
<td></td>
<td>20 members.</td>
</tr>
<tr>
<td>Organic Gooseberry Producers Association</td>
<td></td>
<td>Pre-existing organization that sought out IDMA because they wanted to commercialize their products.</td>
</tr>
<tr>
<td>Native Potatoes Producers Association</td>
<td></td>
<td>57 members. They sell their primary grade products to supermarkets in Lima and the rest of the production to intermediaries in Huánuco.</td>
</tr>
<tr>
<td>Processed Products Association</td>
<td>Beneficiary</td>
<td>12 members. They produce jams, conserves and sell them in eco-markets, shops, and to different institutions.</td>
</tr>
<tr>
<td>MIF</td>
<td>Co-Funder</td>
<td>This project began in May 2008. MIF-Peru office (Elizabeth Minaya) supervised this project.</td>
</tr>
<tr>
<td>PGS Regional Committee</td>
<td>Validate organic production</td>
<td>PGS was established in the region to certify organic production of low-income producers adding value to their products for sale in the organic farmers’ market in Huánuco. Committee participants: IDMA, producers, regional government and local consumers association.</td>
</tr>
<tr>
<td>Regional Government-Huánuco</td>
<td>Additional Funding</td>
<td>The regional government provided resources for training purposes (Salaries to trainers and office supplies). Government representatives also participated in the Regional PGS committee certifying organic production on farms. In 2008, PGS was recognized as an organic certification at the regional level (Act No. 29,227) allowing producers to sell their products as organic within the region.</td>
</tr>
<tr>
<td>FONDAM</td>
<td>Additional Funding</td>
<td>Provided resources to build the collection center.</td>
</tr>
<tr>
<td>Organic Consumers Association-Huánuco</td>
<td>Pressure group</td>
<td>Civil society group dedicated to raising the awareness of organic production and consumption. They are represented on the Regional PGS committee.</td>
</tr>
<tr>
<td>Servicio Nacional de Sanidad Agraria (SENASA), Ministry of Agriculture, Peru</td>
<td>Public Regulatory Institution</td>
<td>SENASA does not allow the sale of PGS certified products under the organic label.</td>
</tr>
</tbody>
</table>
Description of the Value Chain

Fruit and Vegetables Value Chain - Summary Project Intervention

<table>
<thead>
<tr>
<th>Program Beneficiaries</th>
<th>415 Huánuco, Peru</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Intervention points</td>
<td></td>
</tr>
<tr>
<td>Value Chain Segments</td>
<td></td>
</tr>
<tr>
<td>Inputs</td>
<td>Production</td>
</tr>
<tr>
<td>IDMA (Technical assistance)</td>
<td>Small producers: Average – 1-2 ha</td>
</tr>
<tr>
<td>Inputs: Seeds, Technical assistance, Organic fertilizer Contracts, Certification</td>
<td>Outputs: Wide range of ecological (PQS-certified organic) fruits &amp; vegetables</td>
</tr>
<tr>
<td>Key Markets: Huanuco Farmers’ Market</td>
<td>Key Markets: Big supermarkets in Lima</td>
</tr>
</tbody>
</table>

Source: Authors.

The fruit and vegetable value chain illustration above shows that this project attempted to intervene in several different segments of the chain. In this project both farmers' producing for the local Huánuco market and those with third party organic certification needed to improve their competitiveness level to effectively and directly enter the local and national market channels and to bypass the lower prices obtained from intermediaries. Several value chain bottlenecks were addressed such as: product image, product certification, quality, productivity, value-added processing of second and third grade products and developing packaging and branding tools. There is still much work to be done with respect to productivity and product quality improvements. The consortium collection center operates under capacity and the low level of sales impedes investing in productivity and quality. Other pending tasks include expanding the buyer portfolio for produce and finding a market for the processed products.

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2 During the project design stages, it is imperative to perform an evaluation of the beneficiary’s competitiveness using a market study as benchmark. Criteria for competitiveness evaluation include: Productivity, product/service quality, standards and certifications, produce/service image, packing, logistics, economies of scale, necessity to add value to the product/service, assess if the product/service is suitable for SMEs commercialization. See introductory note for further information.
Model for Value Chain Inclusion

Small- and medium-sized producers are often excluded from the value chain because they face resource, skills and market knowledge constraints. As noted above, four major constraints found to affect the success of agro-food inclusive business projects are access to finance, access to training, access to markets and coordination and collaboration amongst producers and other value chain actors. Below we discuss how each of these constraints was addressed in this project.

Evaluation of the Four Pillars in this Project

**Access to Finance**
- No finance component was included in this project.
- Producers do not have access to formal financial systems.
- Cash flow is complicated due to payment delay from buyers (supermarkets pay 45 days after products were received).
- Capital is required to buy inputs and also to increase productivity (Ex. better infrastructure).

**Access to Training**
- Training was a major component of this project and was very successful with producers mastering skills taught.
- Technical training focused on organic production and productivity improvements. All producers obtained PGS certification and 100 received third party organic certification.
- Entrepreneurship training on commercialization and costs.
- Interpersonal skills training focused on the importance of collaboration and working together effectively.
- Training sessions were practical, with area experts for each subject. The most effective training method was through “pasantas” in which producers traveled abroad to see different examples of successful entry of small producers into the value chain.

**Coordination & Collaboration Building (horizontal and vertical)**
- This is a strong pillar in the project.
- For PGS certification, producers were organized in community groups with a lead producer. PGS institutionalization had several positive spillovers including producer empowerment, development of social capital and strong public and private partnership.
- Previously, some producers were organized in associations, but this project allowed the creation of a consortium open to more producers.
- In order to reach effective collective action and ensure sustainability, both social capital and capable commercial agents were necessary. This had not yet been fully achieved by the end of the project.

**Access to Market**
- Market access was not well planned. Needed the help of an influential organization.
- A key assumption of the project was the validation of PGS certification to sell organic products within Peru. However PGS was only validated at the regional level. PGS was not validated by buyers in Lima and they had to pursue a third party organic certification.
- 100 producers obtained the organic certification to sell their products in Lima; however, they are selling just 5% of their production.
- The growth of the local market in which producers sell their ecological products at the farmers’ markets was an important source of demand.
Project Results

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 415 producers were certified under PGS</td>
<td>• Increased family income</td>
</tr>
<tr>
<td>• Out of these 415 producers, 100 were</td>
<td>• Increased investment in education for children</td>
</tr>
<tr>
<td>certified as organic producers by a third party organization</td>
<td>• Producer empowerment</td>
</tr>
<tr>
<td>• Sales in the farmers’ market in the local city grew</td>
<td>o Producers feel proud of their achievements selling their products in</td>
</tr>
<tr>
<td>• Producers established their own collection center</td>
<td>Lima</td>
</tr>
<tr>
<td>• Producers formed a consortium to commercialize their products</td>
<td>o Women also participate in the project; usually they are in charge of</td>
</tr>
<tr>
<td>• The 100 organic certified producers will sell all their production</td>
<td>selling the products in the farmer’s market.</td>
</tr>
<tr>
<td>to a supermarket in Lima in 2012</td>
<td>• Increased sense of responsibility and commitment by the producer</td>
</tr>
<tr>
<td></td>
<td>• New producers are being invited to participate in the consortium</td>
</tr>
</tbody>
</table>

"""We´ve learnt that we have to produce what the market demands. We have been learning, learning, and learning about quality."""" (Victoriano Fernandez, President of the Native Potato’s Association).

Sustainable Value Chain Inclusion of Small Producers: An Evaluation

This project has advanced in terms of incorporating small producers from the Huánuco region in the value chain; however, the producers still do not have the skills to run the consortium without external support. According to the inclusion model, only two pillars were fully included in this project:

• Producers had a comprehensive training that included technical, entrepreneurial and social skills. The format of the training was didactic and the scholarships to learn from best practices in other countries were extremely motivational for producers.

• During the project, substantial producer networks were developed, leveraging social capital to improve collaborative initiatives. Collaboration and coordination with other actors of the chain still needs to be incorporated into the business model.

• The access to market component was not well conceived in the design stage, and thus it was not successful in the implementation phase. Buyer committed to purchase the production was only achieved at the end of the project. Innovative approaches to commit the buyers need to be included from the beginning of the project.

• Access to finance was not included in the project design and was a drawback, as producers did not have the capital to improve or expand their production.
Positive elements that facilitated the project included:

- High demand for organic products
- Producers were already producing without the use of agrochemicals
- The executing agency had been working with the beneficiaries for a long time. High level of trust
- Female empowerment. The farmers’ market in Huánuco is mainly run by women. Additionally they run the processing activities in the collection center.

Some challenges limited the success of the project:

- Low level of development of the beneficiaries. Some of them were producing at a subsistence level with no sales experience and many of them previously did not belong to any group or association. They required more time to convert the producers into economically sustainable, independent participants of the value chain
- Poor infrastructure. Some beneficiaries needed to walk for hours to deliver their produce
- The assumption that the PGS would be an accepted standard for organic products was misguided. Thorough research of the standards within sophisticated fruit and vegetable value chains would have revealed the importance of well-recognized certifications for the chain.

This project is remarkable as poor producers were able to commercialize clean, packaged, organic produce to leading supermarkets in Lima, Peru. Beneficiaries however, continue to need external support to run the consortium independently. A comprehensive evaluation is provided in the table below.
## Sustainable Value Chain Inclusion of Small Producers in Peruvian Produce Chains: An Evaluation

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Evaluation</th>
</tr>
</thead>
</table>
| **Selected Value Chain**         | **Target Product** 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** The level of development of the beneficiaries was very low. This was the first time that they 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.  

**Inclusion four pillars** There were some missing components in the project design such as access to finance and access to market that limited the inclusiveness.  
**Competition** 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 still 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 producer 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/Potential to add value** 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** 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** 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** 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.  
| **Impact**                        | **Spillovers/impact** This project has several positive impacts: Many beneficiaries had never commercialized their products; this project has brought producer empowerment. Producers feel proud of their achievements selling their products in Lima. Additionally, families increased their income, and extended education for children. Women also participate in the project; usually they are in charge of selling the products in the farmer’s market. New producers are invited to participate in the consortium.  
**Potential for replication** Aspects of coordination and collaboration both amongst producers and between producer groups and other value chain actors were strong. This model could be replicated for other projects. |

### Project Budget
The initial budget for the project was US$ 662,920, with US$397,990 provided by MIF and US$ 264,930 provided by IDMA. Additional funds were provided by the Regional Government of Huánuco (Training and office suppliers) and FONDAM (collection center).