



Thematic Evaluation

Review of the Bank's Support to Agriculture, 2002-2014

Evidence from Key Thematic Areas

Review of the Bank's Support to Agriculture, 2002-2014: Evidence from Key Thematic Areas

Office of Evaluation and Oversight, OVE



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ACRONYMS AND ABBREVIATIONS

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ANR	Non-Reimbursable Support
APAGRO	Program to Support Agrifood Production
CAN	Country Department Andean Region
CCB	Country Department Caribbean Group
CCS	Climate Change and Sustainability Division
CHD	Country Department Haiti
CIAT	International Center for Tropical Agriculture
CID	Country Department Central America, Mexico, Panama, and Dominican Republic
CIMMYT	International Maize and Wheat Improvement Center
CME	Country Office Mexico
CMF	Capital Markets and Financial Institutions Division
CRIAR	Creation of Rural Agrifood Initiatives
CSC	Country Department Southern Cone
CTI	Competitiveness and Innovation Division
ECLAC	Economic Commission for Latin America
EMBRAPA	Brazilian Enterprise for Agricultural Research
ENE	Energy Division
FAO	Food and Agriculture Organization
FOD	Food Security Fund
GDI	Gender and Diversity Division
GDP	Gross Domestic Product
GPS	Global Positioning System
ICS	Institutional Capacity of State Division
IDB	Inter-American Development Bank
IDB9	Ninth General Increase in the Resources of the Inter-American Development Bank
IFD	Institutions for Development Sector
IFPRI	International Food Policy Research Institute
IIC	Inter-American Investment Corporation
IICA	Inter-American Institute for Cooperation on Agriculture
INE	Infrastructure Sector
INT	Integration and Trade Sector
INTA	National Institute for Agricultural Technology
LAC	Latin America and the Caribbean
LAS	Land Administration System
MIF	Multilateral Investment Fund
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OIE	World Organization for Animal Health
OMJ	Opportunities for the Majority Sector
OVE	Office of Evaluation and Oversight
PBL	Policy-Based Loan
PIADAL	Independent Panel on Agriculture for Development in Latin America
PROSAP	Provincial Agricultural Services Program

R&D	Research and Development
RND	Environment, Rural Development & Disaster Risk Management Division
SCF	Structures and Corporate Finance Division
SFD	Sector Framework Document
SPH	Social Protection and Health
TC	Technical Cooperation
TIU	Trade and Investment Unit
TSP	Transport Division
WDI	World Development Indicators
WSA	Water and Sanitation Division

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Although investment in agriculture was one of the main priorities of the development community from the middle of the last century, in the mid-1980s development assistance to agriculture began to fall.

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Executive Summary

The Latin America and Caribbean (LAC) region is a net exporter of agricultural products, and the growth in net exports in LAC is the strongest of any region of the world. Nonetheless, the importance of the agriculture sector in terms of output, employment, and exports varies greatly across the region. Although the region has the resources to produce enough food for its population, some countries still face chronic food insecurity.

Although investment in agriculture was one of the main priorities of the development community from the middle of the last century, in the mid-1980s development assistance to agriculture began to fall. In 2007, food prices rose dramatically during the global financial crisis and highlighted the vulnerability of many people around the world with respect to food security. This resulted in renewed interest in the sector from the development community.

The objective of this evaluation is to assess the role of the Inter-American Development Bank's (IDB or Bank) support to agricultural development in the region since 2002. It reviews the relevance of IDB's overall support and the relevance, implementation, and effectiveness of selected projects in three key thematic areas—direct support to farmers, animal and plant health and food safety, and land administration and regularization. It seeks to identify the factors that affect the success of various types of interventions in different contexts and to provide recommendations on how the Bank can enhance its support for the sector. One purpose of the evaluation is to provide guidance for the update of the SFD in 2016.

THE BANK'S ACTIVITIES AND RELEVANCE

The Bank's support to the agriculture sector in LAC over 2002-2014 continued the declining trend from previous periods. Fewer agriculture operations were approved over the evaluation period, and their aggregate real value was smaller. Between 1990 and 2001, 103 loans worth a little over \$6.2 billion were approved, in comparison to 83 loans worth less than \$3.9 billion between 2002 and 2014. This represented a fall in the share of the Bank's total portfolio (in terms of value) from 5.3% to 2.8% between the two periods. Technical Cooperation (TC) displayed a similar trend.

However, the Bank's support to agriculture is larger than just what is classified by the Bank as belonging to that sector. In addition to the 83 loan operations classified under the code "AG"—what this evaluation calls the "AG" sector portfolio—OVE identified another 167 loans, classified in other sectors, that likely made some contribution to agriculture—the "Other" sectors portfolio. It is difficult to determine how much of the investment value that these loans represent benefits the agriculture sector specifically, but they are likely to have made an important contribution.

The Bank's support to agriculture has focused primarily on increasing the sector's growth, and secondarily on improving the income of small producers. OVE classified the objectives pursued by all 250 operations in the "AG" sector and "Other" sectors portfolios according to four overarching objectives—increasing growth, reducing risks, ensuring environmental sustainability, and increasing social welfare—and eight more immediate objectives that contribute to the overarching ones. A majority of the operations in the "AG" sector portfolio sought to increase productivity. The second most common objective was to increase producers' access to markets, which is also a key focus of the "Other" sectors portfolio. Both objectives contribute to the growth of the sector. A large fraction of operations simultaneously sought to increase the income of small producers.

A large part of the "AG" sector portfolio provided direct support to producers, while the "Other" sectors portfolio focused on providing public infrastructure. Much of the direct support to producers has been technical assistance, but it has also included subsidies for the purchase of new agricultural machinery and equipment, as well as a few loans to agricultural producers, including large firms. Investment in agricultural services—divided among agricultural health and food safety, technological R&D, land administration, statistics and information, and others—also made up a significant share of the "AG" sector portfolio. The "Other" sectors portfolio was mostly concentrated on the provision of public infrastructure works.

The Bank's financial support has tended to concentrate in countries that are poorer and/or have larger agriculture sectors relative to GDP. Haiti has received proportionally larger amounts (compared to GDP) in loans and investment

grants than any other country group. Nicaragua, Guyana, Paraguay, Honduras and Bolivia have also received proportionally large amounts in loans. All of these countries have large agriculture sectors relative to GDP as well as lower incomes per capita. The relatively greater intensity of the Bank's support to agriculture in these countries reflects the countries' larger demand for support.

The Bank has been a long-term partner in various countries and areas of work, concentrating on achieving long-term goals. This can be seen in Argentina, through the financing of PROSAP; in Argentina, Nicaragua and Peru, through the support to the agricultural health and food safety agencies; in Uruguay, through the direct support to producers; in Bolivia, through the work on irrigation; and in various land administration and regularization projects. In all these cases, the Bank has been flexible and able to adapt to changing circumstances and to policy changes brought about by new governments.

In general, the portfolio has been aligned with the Bank's strategic documents, though the amount of Bank support for the provision of private goods may need some future adjustment in light of the emphasis that the 2013 Sector Framework Document (SFD) on Agriculture and Natural Resources Management places on public goods. IDB's financing of private or mixed goods has generally sought to achieve greater sector productivity. Still, going forward, the SFD implies that the Bank will need to more clearly justify the rationale for investments it makes in private and mixed goods. This can be done in various ways: (i) demonstrating that a good or service would be supplied at a socially suboptimal level if left to the market; (ii) demonstrating that providing direct support to beneficiaries is the most efficient way of helping them overcome certain economic constraints that keep them from achieving some socially desired objective; and (iii) ensuring that, whenever possible, private goods and services—for example, sanitary certifications and laboratory services—are provided to beneficiaries in return for a fee.

Food security is a much broader topic than agriculture. However, at the strategic level, the Bank has mainly associated it with food production. The "AG" sector portfolio is only one of several sectors with relevance for food security, even though the IDB9 Agreement focused the Bank's efforts to increase food security on agricultural productivity. Indeed, food availability—an issue that mainly concerns the agriculture sector—is not generally the major challenge for food security in LAC. The central challenge is rather access to food, which is closely related to poverty.

The Bank's "AG" portfolio is not highly poverty-targeted, and the current practice in the Bank of automatically classifying all agricultural projects as poverty-oriented overstates the degree of poverty focus. In a project-by-project review of project design, OVE found that, between 2002 and 2012, 38% of the projects in the "AG" portfolio explicitly target the poor.



The projects OVE evaluated supporting land regularization and administration were comprehensive, addressing the foundations of the land administration systems and all of their functions, and embarking on mass regularization.
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RESULTS IN KEY THEMATIC AREAS

The projects OVE evaluated providing direct support to producers have generally been relevant and effective, though the relevance of a few projects is substantially lower. Some projects have provided substantial benefits to many cash-constrained farmers, allowing them to incorporate new technologies to improve their production levels. In some cases, beneficiaries have also been linked to new markets. Yet the relevance of some projects is diminished due to imprecise definition of the target population, where in a few instances the Bank's support benefitted producers that did not seem to have needed the support.

The results of projects OVE evaluated supporting agricultural health and food safety have been mixed. Incomplete economic analyses in the diagnoses of some issues have hindered project design and effectiveness, and implementation difficulties have in some cases led to a redirection of funds to large investments in infrastructure that disburse quickly. Campaigns to control and eradicate pests and diseases have largely been successful, while results for institutional strengthening vary widely across the projects. It is too early to determine the effectiveness of traceability programs. The fiscal sustainability of some services provided by the agencies has been a challenge, hindered in part by insufficient economic analyses to support the development of financing schemes for the services that have characteristics of both public and private goods.

The projects OVE evaluated supporting land regularization and administration were comprehensive, addressing the foundations of the land administration systems and all of their functions, and embarking on mass regularization. Other positive aspects of these projects have been the use of participatory regularization methodologies and the implementation of innovative cadastral technologies. Large numbers of plots were regularized. However, regularization work tended to be slow and incomplete. Also, monitoring and evaluation provisions were poor, which created implementation bottlenecks and jeopardized the integrity of the information collected. Finally, sustainability is in many cases questionable because the incentives that gave rise to informality of land tenure are still present.

The Bank's work could be enhanced by deeper diagnosis of problems and their root causes. Some diagnoses are systematically done with sufficient care and rigor—for example, the determination of production technologies that would be most useful to agricultural producers. However, for some projects OVE found that other important diagnostic work was insufficient. Examples include studies of the situation of land tenure before a massive regularization and studies about producers' access to finance. One enhancement would be to include agricultural producers' ability to learn new technologies—a crucial aspect to determine how much technical assistance a project needs to offer. Many diagnoses of agricultural health and food safety lack sufficient economic analyses that adequately demonstrate the demand for services and the appropriate financing schemes to ensure their sustainability.

The projects OVE reviewed that provide direct support to producers could be enhanced by better addressing the root causes of problems facing producers, which would increase the likelihood of project sustainability over the long run. The projects only temporarily reduce or eliminate the factors that inhibit technology adoption and access to markets. OVE found that the menus of technologies offered were adequate, though technical assistance could have been stronger in some projects. Even with the projects' short-term benefits, however, the structural conditions that prevent producers from adopting new technologies remain the same. Therefore, the effects of these projects on technology adoption are unlikely to be sustainable over the long run—that is, further adoptions of new technologies are unlikely to occur except in exceptional cases when the intervention is large enough to place the beneficiaries on a positive, self-reinforcing path.

Bank projects have increasingly included provisions for impact evaluations but could benefit from continued efforts to strengthen monitoring and evaluation. On the positive side, the Bank has increased the use of impact evaluations, most notably for projects providing direct support to agricultural producers. Planning those evaluations and collecting data from the start of a project—not always done in the past—would help to ensure robust evaluations. In addition, better indicators with specific targets for all expected types of benefits would strengthen results matrices.

RECOMMENDATIONS

In light of the findings of this evaluation, OVE has the following recommendations for management going forward:

1. In the 2016 update of the SFD on Agriculture and Natural Resources Management, delineate clear criteria to guide any Bank financing of private goods. The relevance and development effectiveness of the Bank's operations would benefit from clearer guidance regarding the definition of public and private goods and the circumstances under which the financing of private goods or services is justified. Such guidance should also promote coordination among the various divisions whose projects provide private goods to avoid unproductive overlaps and take advantage of potential synergies. This evaluation highlighted two specific areas in which such issues could usefully be addressed:
 - a. For direct support to producers, which economic conditions—for example, market failures—justify the financing of individual subsidies for goods and services, and what are the appropriate relative and absolute magnitudes of such subsidies;
 - b. For agricultural health and food safety services, what cost recovery mechanisms should be established for private or mixed goods and services provided by the agricultural health and food safety institutions, and what economic conditions would warrant subsidizing these goods and services.
2. Promote a comprehensive and coordinated multi-sector approach to food security through the upcoming SFD on Food Security. Such approach would allow the Bank to continue to support agricultural productivity and food availability while also addressing access, utilization, and sustainability issues.
3. Adjust the project classification system in the Bank to more accurately reflect the contributions of the agriculture portfolio to poverty reduction. Automatic classification of all “AG” operations to “Poverty Reduction and Equity Enhancement” is not accurate and should end. Even if the Bank follows the IDB9 Agreement that classifies all support to small farmers as poverty-oriented (which is itself not entirely accurate), it is still the case that many but not all the Bank's agriculture projects support small farmers.

4. Ensure adequate upstream diagnostic work to fine-tune project identification and design. Alternatively, begin with a pilot project that acts as a diagnosis phase. Thorough upstream analysis can help Bank staff and counterparts fully understand the nature and root causes of structural problems, and in turn steer the Bank's support toward a more sustainable focus on such root causes. If information is unavailable for such analysis, it may be worthwhile to conduct a pilot phase and evaluate it before engaging in a full-scale project.
5. Continue enhancing monitoring and evaluation to promote learning and long-term effectiveness. The Bank has made significant efforts to improve project evaluability and conduct impact evaluations in recent years, and further efforts to define indicators, gather baseline data, and build evaluation designs in projects from the beginning will continue to add value.



Small family farms account for over 40% of total agricultural production in many countries, including all of Central America, and over 50% of agricultural employment in the sector in most countries.

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1 Introduction

Though the growth of agricultural net exports in the Latin America and Caribbean (LAC) region has been the strongest of any region in the world, countries in the LAC region differ markedly and many challenges remain. Continuing to improve productivity and competitiveness, especially for small producers, will be essential to improving food availability and farmers' incomes.

Agriculture no longer receives the amount of attention from the development community that it once did. In the mid-1980s official development assistance (ODA) to agriculture began to fall, in part due to the success of the Green Revolution (WB IEG 2011). In the Bank's first three decades (1961-1990), 22% of the Bank's total lending portfolio (in volume) was in the agriculture sector, but it has declined since then. The agricultural share of all ODA in LAC fell from 20.3% in 1980 to 6.5% in 2000 (FAO 2012), closely mirroring the decline of agriculture as a share of lending by the IDB (RE-291).

There was a resurgence of support for agriculture by the development community in the late 2000s, but in the case of the IDB it was short-lived. In 2007, food prices rose dramatically during the global financial crisis and highlighted the vulnerability of many people around the world with respect to food security. As a result, the global community once again prioritized agriculture and food security.¹ However, agriculture's share of IDB support has remained low, as discussed further in Chapter 3.

The Strategy for Agricultural Development in Latin America and the Caribbean (GN-2069-1) was approved in 2000 and governed the Bank's support to the sector during almost all the period covered in this evaluation. It provided a broad list of priorities for the Bank's engagement in the sector: (i) consolidation of economic reform programs and transition support; (ii) state reform and services



Between 1961 and 2007 LAC had the highest agricultural productivity growth among developing regions. The main factor behind productivity growth is the introduction of more efficient technologies: genetically modified crops, no-till farming, and the use of global positioning systems for fertilization and harvesting (Ludena 2010).
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for the agriculture sector; (iii) development of financial and capital markets and risk management; (iv) development of land markets; (v) sustainable use of natural resources; and (vi) development of human resources and rural infrastructure for production and improvements in the quality of life in rural areas (IDB 2000).

In 2013 the Bank approved a new Sector Framework Document (SFD) on Agriculture and Natural Resources Management (GN-2709-2), which focuses on increasing productivity and agricultural income for rural families. To do this the Bank is to: (i) support reform of sector policies that promote efficient markets, encourage private investment, and prioritize efficient agricultural public expenditures; (ii) provide rural infrastructure and agricultural services with public goods characteristics; (iii) support producers to manage risks in the face of natural threats; (iv) support work to overcome liquidity constraints, “with special attention to correcting market failures and providing access for groups that are excluded, such as women and indigenous people [; (vi)] ensure that public expenditure on private goods focuses on a reduced number of cost-effective mechanisms of direct support through income transfers decoupled from the production of specific commodities, use of inputs or prices, and with an emphasis on small producers;” (vii) “promote sector policy and governance frameworks that favor the sustainable use of natural resources and that do not encourage their over-exploitation or degradation [; and (viii)] establish clear and secure property rights regarding critical natural resources” (GN-2709-2; pp. 24-25).

The objective of this evaluation is to assess the Bank's support to agricultural development in the LAC region since 2002, with an emphasis on the relevance, implementation, and effectiveness of its projects in key thematic areas. It first analyzes the overall relevance of the portfolio of projects supporting the sector in the context of the strategy approved in 2000, including the activities supporting food security. It then looks in depth at a sample of IDB-financed operations in several key areas, seeking to identify factors that influence outcomes in different contexts. One purpose of the evaluation is to provide information on the Bank's work that can be useful for the update of the SFD in 2016. This is the second broad evaluation of IDB's interventions related to agriculture carried out by the Office of Evaluation and Oversight (OVE). (See Box 1.1 for conclusions from the first evaluation.)

The following questions helped to guide the evaluation:

- Relevance
 - Has the Bank responded in a relevant manner to the challenges the agriculture sector faces in the region?
 - Have the Bank's projects been appropriately designed to fit specific country contexts?
- Implementation and effectiveness
 - Which factors help to explain whether program implementation succeeds or fails, and how do they differ across thematic areas and countries?
 - Has the Bank's support to the sector been effective in reaching desired objectives?
 - Are the Bank's achievements likely to be sustained over time? What factors support/hinder sustainability?

To assess the relevance of the Bank's support to the sector, OVE reviewed the entire IDB lending portfolio that provides support to the agriculture sector for the period 2002-2014, including both public and private sector windows. The portfolio included all projects classified as belonging to the agriculture sector ("AG" code) as well as projects classified in other sectors that provided support to agriculture. The evaluation focuses primarily on support provided by the Environment, Rural Development & Disaster Risk Management division (INE/RND), which is responsible for developing most of the projects classified by the Bank as belonging to the agriculture sector. However, it also considers relevant support for agricultural development from other sector units: Transportation (INE/TSP), Water and Sanitation (INE/WSA), Integration and Trade (INT), and Institutions for Development (IFD), among others.

BOX 1.1 MAIN FINDINGS AND RECOMMENDATIONS OF OVE'S PREVIOUS EVALUATION
OF THE SECTOR (RE-291), COVERING 1991-2001

Main findings

- 1) In the 1990s the Bank moved away from capital-investment finance to support for agricultural services programs such as research systems, helping improve the programs' efficiencies and forging public-private partnerships.
- 2) Given agriculture's weight in the regional economy, the Bank should rethink its current allocation of resources to the agriculture sector.
- 3) The Bank should focus on initiatives that have a demonstration effect and can be replicated.
- 4) The Bank did not develop initiatives to fill the void for rural financial services created by the closing of many state-owned agricultural banks in the region.

Main recommendations

- 1) Update the Agriculture Policy to align it with the relevant mandates and strategy papers.
- 2) Increase coordination across the different IDB Group institutions and departments to support rural and agricultural development.
- 3) Give more attention to the outcome tracking and sustainability of the models adopted to support agricultural services programs.
- 4) Consider support to improve the productivity of basic household staple crops.
- 5) Scale up support for rural poverty alleviation efforts through agricultural research, rural education, and rural road improvements using a locally based approach.
- 6) Revisit approach to rural finance.

To explore project relevance, effectiveness, and implementation, the team conducted an in-depth review of a sample of projects financed by the Bank in the three most common thematic areas: animal and plant health and food safety, direct support to producers for technology adoption and access to markets, and land administration and regularization.² These thematic areas represented over 70% of total approvals in the "AG" portfolio during the period. The evaluation methodology was comparative: in addition to reviewing each project individually in their specific contexts, various aspects of the projects were compared side by side in an attempt to draw broader lessons from them (see Annexes II, and III as well as RE-410-1 for detailed discussions).

Given the large heterogeneity in the region, OVE conducted country case studies to help assess the extent to which Bank programs have been designed to address specific country contexts. OVE chose to focus on countries where the Bank had a relatively large agriculture portfolio³ and to include countries with agricultural productivity both above and below the regional average.⁴ The 4 countries selected were Argentina, Bolivia, Nicaragua, and Uruguay. The agriculture loans in these four countries represent one-third of the Bank's total agriculture portfolio (see Annexes IV, V, VI, and VII for detailed discussions).

The LAC region is a net exporter of agricultural products, and the growth in net exports in LAC is the strongest of any region of the world.

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2 The Agriculture Sector in LAC

The LAC region is a net exporter of agricultural products, and the growth in net exports in LAC is the strongest of any region of the world. Since 2000, agricultural production in LAC has increased by more than 50% (FAO 2012), and currently the sector represents over 5% of GDP and around 15% of total employment (World Bank WDI). The Global Harvest Initiative (2012) projects that if the growth rate of total factor productivity in LAC is maintained at the current level of 2.7%, by 2050 the region will still be meeting and exceeding its food demand, becoming an even larger net exporter.

Between 1961 and 2007 LAC had the highest agricultural productivity growth among developing regions, with most of the growth occurring since the 1990s (Ludena 2010). The main factor behind productivity growth, which averaged 1.7% annually, is the introduction of more efficient technologies: genetically modified crops, no-till farming, and the use of global positioning systems for fertilization and harvesting (Ludena 2010).

While the export and productivity data are helpful in understanding the overall situation of the agriculture sector in LAC, they hide large heterogeneities and challenges across and within countries. For example, even though the region is a net exporter of agricultural products, the Southern Cone countries have the most favorable situation, especially vis-à-vis the Andean and Central America sub-regions (including Mexico), which are net importers of cereals and oils (PIADAL 2013). Nonetheless, during 2001-2010, all South American countries except Venezuela were net exporters, while all Caribbean countries were net importers and Central American countries a mix of net exporters and net importers (Valdes 2013, based on FAOSTAT). Productivity increases have also

varied across the region. During 2002-2013 the increase in production of the 10 principal agricultural products grew at a very high rate in Paraguay (112%), Uruguay (78%), and Bolivia (66%), while the rate was very low or negative in Barbados (6%), Jamaica (-5%), and Trinidad and Tobago (-19%) (FAOSTAT). It is also important to note that the level of agricultural production and the technology used vary greatly within countries across the region, from advanced mechanized farming to subsistence farming.

The importance of the agriculture sector in output and employment also varies greatly across the region. Whereas the agriculture sector accounts for over 5% of GDP in LAC, it represents as much as 20% in countries such as Paraguay and Guyana. The sector's share of total employment also varies sharply across the region, from as little as around 1% in Argentina to over 30% in Bolivia and Nicaragua (World Bank WDI).

Therefore, the food and commodity price increase that began in 2007 had vastly different effects across the region. At a national level, the higher food prices benefited net exporters of agricultural products compared to net importers. Within countries, the higher prices created a boom for many producers, especially in the Southern Cone, but hurt consumers throughout the region who had to spend a higher share of their incomes on food. The increase in food prices affected poor consumers—rural and urban—the most, since they spend a higher share of their income on food. For example, the poorest 10% of the population in Honduras spends over 80% of their income on food (World Bank 2014).

A. POLICY ENVIRONMENT

LAC accounts for 11% of global public expenditures on research and development (R&D), more than any other region in the developing world. Public expenditures on agricultural R&D account for approximately 1.2% of agricultural GDP—at least double that of any other developing region (but still only half the amount spent in high-income countries) (FAO 2012). These expenditures allow the region to have some of the world's leading centers for research and innovation in agriculture.⁵ Nevertheless, the level of investment in R&D varies greatly across the region: 75% of public expenditure on agricultural R&D in LAC is made by only three countries—Brazil, Argentina, and Mexico, with Brazil alone accounting for 42% (FAO 2012).

At the same time, many governments in the region provide private goods in the form of subsidies and public credit for farmers. Historically, many governments in LAC have allocated over 50% of their rural spending to subsidies, and some much more (see Table 2.1). According to some authors, these types of support do not yield returns as high as investments in public goods (Lopez and Galinato 2007).

TABLE 2.1 PERCENTAGE OF SUBSIDIES IN RURAL GOVERNMENT EXPENDITURES IN SELECTED COUNTRIES

<i>Countries</i>	<i>Subsidies as a Percentage of Total Rural Expenditures</i>
Argentina	59
Brazil	87
Costa Rica	48
Dominican Republic	80
Ecuador	69
Guatemala	27
Honduras	9
Jamaica	58
Mexico	66
Nicaragua	37
Panama	51
Paraguay	32
Peru	64
Uruguay	19
Venezuela	54

Source: Lopez and Galinato 2007.

Note: The shares are annual country averages, 1985-2001.

LAC countries have signed over 40 free trade agreements since 1992, fostering increased trade in agricultural products and inputs. The case of cereals and oilseed crops shows how the import of technologies and increased trade has transformed the sector in countries such as Argentina and Uruguay, where the planting of these crops is displacing cattle production.

B. CHALLENGES

Despite positive trends, the region still faces important challenges—for example, increasing productivity and competitiveness, which are important for improving rural incomes, especially for family farms. Small family farms account for over 40% of total agricultural production in many countries, including all of Central America, and over 50% of agricultural employment in the sector in most countries. Also, in Chile, Colombia, and Ecuador, family farms control over 40% of total arable land (ECLAC, FAO, and IICA 2013). Although some family farms have access to advanced production techniques, most are characterized by relatively low levels

of productivity. Some of the causes include scarce access to technology and credit, difficulty accessing markets, and low availability of infrastructure (ECLAC, FAO, IICA 2013).

While it is important that the region continue to increase productivity to maintain excess supply in a world with growing demand for food, it must also address poverty. Internal migration in LAC has made the region the most urbanized in the world, and as a result, poverty has become primarily an urban phenomenon. Nonetheless, rural poverty rates remain high—around 50% of the rural populations is considered poor and 30% indigent—and the agriculture sector remains important for rural income and employment. The rates of rural poverty vary from 71% in Honduras to 8% in Chile (ECLAC, FAO, and IICA 2013).

Food security remains a challenge to many in the region. Despite high levels of agricultural production, over 35 million people in the region are food-insecure, and poverty is a main factor (USDA 2014). The IFPRI Global Hunger Index (IFPRI 2013) lists 13 countries⁶ as having “moderate” and “serious” levels of hunger, while Haiti falls in the “alarming” level. The region also faces nutritional challenges, with adverse effects on child health and intellectual development. Over 3% of the region’s children under the age of 5 are underweight, and around 13% suffer from stunting (UNICEF-WHO-World Bank 2012).⁷

Weaknesses in government services supporting animal and plant health and food safety can cause significant production and export losses in the region. According to some simulations, due to animal diseases and failures in the meat and dairy processing industries, the Central American region loses almost \$1 billion per year, and if exotic diseases were to enter the region, annual losses could add up to an additional \$1.4 billion (RUTA, 2012). In the Southern Cone, losses caused by the foot-and-mouth disease crisis in 2001-2003 were huge. Estimates suggest that the cost for Uruguay was \$700 million (10% of the country’s exports) while Argentina lost \$1 billion in 2001 alone due to failed exports (OVE, 2009; PROSAP, 2007). Further, the detection of the disease in limited areas of Argentina in 2003 and 2006 and its reappearance in Brazil and Bolivia in the mid-2000s demonstrated the weaknesses of the national vigilance systems. In Peru, fruit flies have led to losses of more than 30% in fruit and vegetable production (SENASA, 2009). Even more, challenges remain to exploit the various trade agreements that have created opportunities for the agriculture sector, but also require compliance with tougher sanitary and phytosanitary measures.⁸

Also, transport and logistics costs remain relatively higher for LAC producers than for agricultural producers in advanced economies, hurting LAC competitiveness (Moreira et al., 2008 and 2013). In fact, transportation costs in LAC range between 18% and 32% of the final cost of agricultural products, whereas the average for

OECD countries is 9%. Increasing infrastructure to the levels of the OECD countries could increase agricultural exports from LAC by up to 28% (Chaherli and Nash 2013). Furthermore, some producers face challenges to competitiveness due to government policies such as import and export taxes.

The region faces major challenges in land tenure, which in rural areas inhibits the productivity of the agriculture sector. Land is an important factor of production in the agriculture sector and lack of tenure security over it can have large negative impacts on investment and agricultural productivity. In LAC, land tenure informality and insecurity are very common, especially among small agricultural producers. Regularization of tenure and improved land administration are therefore important to improve agricultural productivity in the region.

In addition, farm practices and public investment in research should address climate change adaptation and mitigation. Climate change poses a threat to agriculture in LAC, causing increased temperatures and reduced rainfall in certain areas, while also contributing to more frequent droughts and floods. Increasingly, rural poor in areas of the Andes valleys, Northeast Brazil, the semiarid basins of Argentina and Chile, and areas of Central America and Mexico that are dependent on rain-fed maize production are deemed to be the most vulnerable to crop water stress, yield reductions, and drought. Also, estimates show that increased land use for agriculture (especially raising cattle) and deforestation in LAC account for nearly half of the world's emissions of greenhouse gases related to agriculture and land use change. OVE's recent evaluation of the Bank's support for addressing climate change noted that the agriculture sector needs to return to significant financing of public goods, especially for small- and medium-scale farmers, with emphasis on climate change and climate variability. For example, financing of improved hydrological monitoring and forecasting of weather and short-term climate should be priorities. (OVE 2014: RE-495-1 Annex II).

Finally, access to finance also remains a challenge to most farmers in the region. In the 1980s, while many countries in LAC liberalized their financial markets, they closed down agricultural development banks, which had been primary sources of finance for the rural sector (IFC 2011). Although data on access to finance for agricultural producers are scarce, a related indicator helps illustrate the magnitude of the problem: 46% of the rural population in LAC has an account at a financial institution, which is half of the share in high-income OECD countries (World Bank Global Findex 2014).



The Bank has provided support for rural infrastructure in Argentina for many years.

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3 Relevance of the Portfolio

A. THE PORTFOLIO AT A GLANCE

The Bank has been supporting the agriculture sector since its foundation. Between 1961 and 1989, it approved an annual average of more than 17 loans worth over \$1 billion⁹ to the agriculture sector, which amounted to approximately 25% of the value of the Bank's entire lending portfolio (26% in terms of number of loans). At the beginning of the 1990s, however, the Bank's support to the sector fell abruptly (Figure 3.1), in terms of both financing and number of operations:¹⁰ between 1990 and 2014, only 7 loan operations—worth a total of just over \$400 million—were approved per year, amounting to roughly 4% of the Bank's lending (8% in terms of number of loans) (Table 3.1).

The Bank's support to the agriculture sector during the 1990s followed general trends in the development community. As noted above, ODA to the agriculture sector generally fell during this time. In the second half of the 1990s, the IDB reorganized and placed agriculture within socially and environmentally sustainable development. An increased focus by all multilateral development banks (MDBs) on private sector development and the privatization of state-owned enterprises affected their support to agriculture, which had been traditionally channeled through direct loans to state-owned enterprises (IICA 2004). After the IDB's Seventh Replenishment in 1989, the Bank began to use policy-based lending (PBLs) in the sector. Such lending focused on policy reforms, often making financing to agriculture contingent on reducing or eliminating price controls, farm credit subsidies, international trade constraints, and state participation in commodity marketing (OVE 2004). In addition, the Seventh Replenishment ended a previously existing provision whereby the percentages of total project costs financed with foreign exchange were "scaled so as generally to favor relatively less developed countries and agricultural and social projects by making foreign exchange more readily available to them" (CA-277).

FIGURE 3.1
Percent of Total Lending
Directed to AG Loans

Source: OVE with data from WDI.

Note: The shaded area represents LAC's agricultural GDP as a share of the region's total GDP (data are available only from 1965 to 2013).

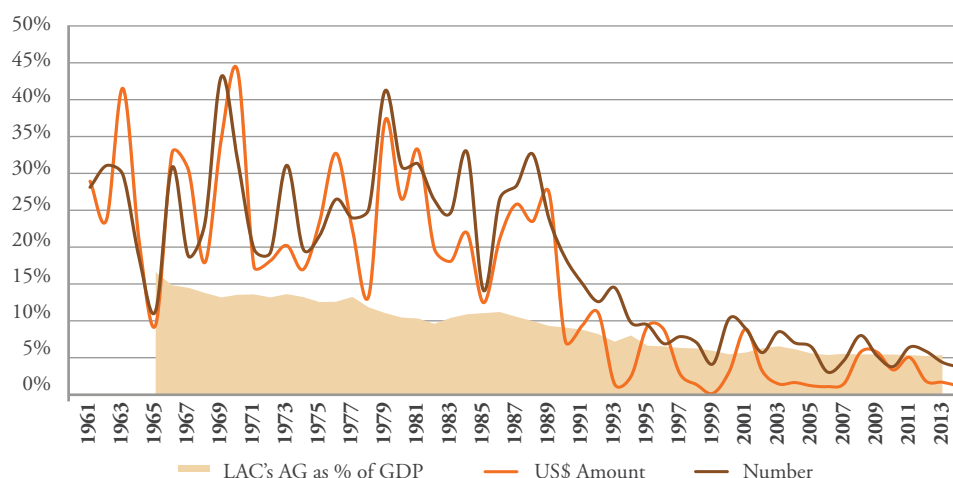


TABLE 3.1 BANK SUPPORT TO THE AGRICULTURE SECTOR (ANNUAL AVERAGES)

		1961 - 1989	1990 - 2014
Loans	# operations	14.4	7.4
	\$ million	1,064.8	404.4
	% of #	26.3%	7.9%
	% of \$	24.5%	4.0%
TCs	# operations	22.1	16.6
	\$ million	26.8	8.7
	% of #	23%	6%
	% of \$	31%	5%

Source: OVE

Note: Includes all Bank operations classified in the agriculture sector under the "AG" code. It excludes the MIF and the IIC.

Over 2002-2014, the Bank maintained the downward trend in support to agriculture observed during 1990-2001, resulting in fewer and smaller operations (see Table 3.2). During the 1990s, 103 loan operations for a total of \$6,244 million were approved, whereas during the 13 years covered by this evaluation, the Bank approved 83 operations—\$3.9 billion—to support the sector.¹¹ Technical cooperation (TC) was also lower between 2002 and 2014 than in the 1990s. During the 1990s, 227 TCs (\$137 million) were approved in the agriculture sector, while 187 TCs (\$79 million) were approved during 2002-2014 in the agriculture sector (classified under the sector code "AG").

TABLE 3.2 BANK SUPPORT TO THE AGRICULTURE SECTOR, 1990s VS. 2000s

		1990 - 2001	2002 - 2014
Loans	# operations	103	83
	\$ million	6,244	3,865
	% of #	10.4%	5.3%
	% of \$	5.3%	2.8%
TCs	# operations	227	187
	\$ million	137	79
	% of #	6.9%	3.8%
	% of \$	8.4%	2.5%

Source: OVE

Note: Includes all Bank operations classified in the agriculture sector under the "AG" code. It excludes the MIF and the IIC.

The Bank's support to agriculture over 2002-2014 also differs from that in 1990-2001 in terms of content. The PBLs that promoted liberalization policies during the 1990s (10 operations in seven countries) were no longer used. Only six PBLs were approved (2009-2013) in three countries, and their policy contents were more geared toward institutional strengthening and modernization.¹² Rural roads were rarely financed in agriculture projects,¹³ as they were passed on to the Transportation Division after another Bank reorganization.

Between 2008 and 2011 the sector's share of Bank lending recovered temporarily. In 2007-2008, with the onset of the food price crisis and the international financial crisis, the Bank's overall lending to the region increased significantly, rising from \$6.6 billion in 2006 to \$16 billion in 2009 (a 140% increase). Meanwhile, lending to the agriculture sector increased from \$72 million to \$912 million (a 1,158% increase). However, between 2009 and 2014, the Bank's overall lending has decreased by about 15%, while lending to the agriculture sector has fallen 84%.

Lending operations to the agriculture sector—classified under the “AG” code—have generally been managed by either RND or the private sector windows; however, many other areas of the Bank also support the sector. The agriculture sector is affected by the work of many if not all IDB Group sectors and windows. For instance, the improvement of a highway—a loan in the transportation sector—could benefit the agriculture sector by reducing the transport costs of inputs and products. For that reason, it is important to take into account projects classified in other sectors that also affect agriculture. OVE reviewed all Bank loan operations approved between 2002 and 2014 and determined that an additional 167 operations worth \$13 billion likely contributed to the agriculture sector (Box 3.1). The Bank's agriculture portfolio can thus be divided in two: 83 operations classified in the “AG” sector, and 167 operations classified in “Other” sectors (Table 3.3). Several divisions manage projects in both portfolios (Figure 3.2).

Relative to the countries' GDPs, the Bank's financial support to agriculture between 2002 and 2014 has been highest in Haiti (Figure 3.3). Haiti has received proportionally larger amounts in loans and investment grants than any other country group. CID countries come second, followed closely by Caribbean and Southern Cone countries.

The Bank's financial support has tended to concentrate in countries that are poorer and/or have larger agriculture sectors relative to GDP (Figure 3.4). This is reasonable and likely reflects higher demand for Bank support in those settings.

TABLE 3.3 BANK SUPPORT TO THE AGRICULTURE SECTOR LOAN OPERATIONS, 2002 - 2014

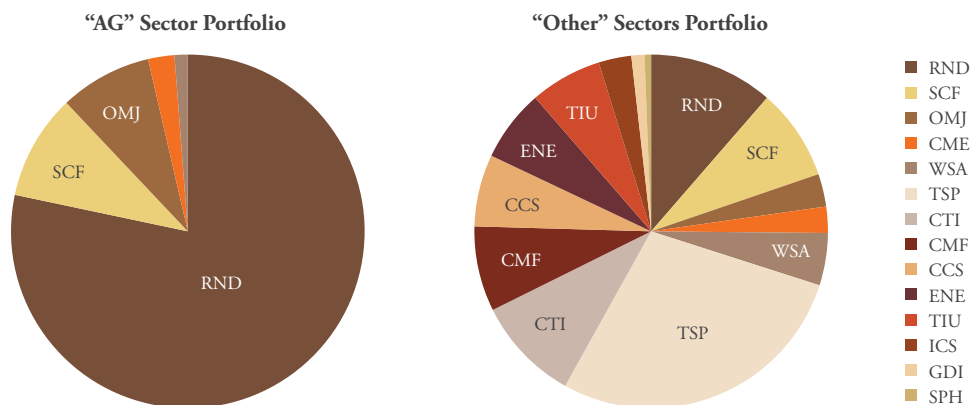
	Number		Amount	
	#	%	(\$million)	%
“AG” portfolio	83	5.3%	3,865	2.8%
“Other” portfolio	167	10.7%	13,043	9.6%
TOTAL	250	16.1%	16,908	12.4%

Source: OVE

Note: Includes all Bank operations classified in the agriculture sector under the “AG” code. It excludes the MIF and the IIC.

FIGURE 3.2
Number of Operations by
Bank Division, 2002-2014

Source: OVE



In absolute terms, the portfolio—especially the “AG” sector part—is also concentrated, though in different countries. Five countries received a little more than half of all the projects approved in the “AG” sector portfolio—about 46% of the dollar value (see Table 3.4).

An in-depth review of the Bank’s work in four countries with substantial Bank support—Argentina, Bolivia, Nicaragua, and Uruguay¹⁴—shows that its support has been in multiple thematic areas common to various countries, revealing common interests and needs across countries but also the Bank’s positioning. In all four countries the Bank has worked on animal and plant health issues, trying to adapt its support to the different needs and levels of development of the various agencies involved. The same is true of the Bank’s collaboration with projects that provide direct support to producers: the Bank has been present in all four countries with very different projects. The Bank has thus been able to adapt its projects to local contexts, remaining present and relevant in various themes and contexts at the same time.

The Bank has provided long-term partnership and flexibility. In all four countries, the Bank has been providing support in at least one thematic area for many years: rural infrastructure in Argentina, animal and plant health in Argentina, Bolivia, and Nicaragua,¹⁵ direct support to producers in Uruguay, irrigation in Bolivia. This long-term engagement represents a stable source of funding and technical assistance on issues that are highly relevant for these countries. At the same time, this stability has been flexible enough to allow for the countries’ changing economic contexts, priorities, and policy approaches. The Bank has maintained its presence by adapting its collaboration in ways that satisfy the countries and the Bank’s views.

The Bank has also supported the sector through knowledge products. Since 2011 all “AG” sector loans have included provisions for ex-post impact evaluation. Not only is this in line with the Bank’s general move toward increased evaluability, but Management’s data indicate that the impact evaluation designs of “AG” sector loans have tended to be methodologically more robust than the Bank’s average.¹⁶

BOX 3.1. CRITERIA FOR INCLUSION OF LOAN OPERATIONS IN THE “OTHER” PORTFOLIO

To identify projects that support agriculture and are categorized in sectors other than agriculture OVE adopted the following procedure. First, after interviews with all the Division Chiefs in VPS, it excluded a few sectors whose operations admittedly bore very little-to no relationship with agriculture—Health, Education, Urban Development & Housing, and Tourism. Second, it reviewed all loan documents of projects approved between 2002 and 2014 in the remaining sectors to verify whether they worked on any of the topics related to agriculture (see the list below). This list of topics was partly determined from the interviews with Division Chiefs. If the projects did work on those topics, they also had to comply with the criteria listed on the last column of the following table.

Sector	Topic related to agriculture	Criteria for inclusion
Energy	Hydroelectric generation	If irrigation is mentioned as an activity
	Rural electrification	If project builds the infrastructure
	Biofuels	Yes
Water & sanitation	Irrigation	Irrigation for agricultural purposes
Financial markets	Insurance/Risk financing	If agricultural producers/firms mentioned as beneficiaries
	Lending	
Transport	Border Crossings	If agricultural activities mentioned as beneficiaries
	Rural roads	Yes
	Road maintenance	If rural roads or agricultural activities mentioned as beneficiaries
Environment	Forestry	If considered as a form of agricultural activity
	Governance (sustainable development plans)	If includes land titling or resource management activities
	Disaster Risk Management	If related to producers and agriculture
Science and technology	R&D Technology diffusion	If includes agricultural R&D If mentions agricultural technology
Private firms	Markets development	If mentions agricultural products
	Microenterprise development	If mentions agricultural firms/producers
	Small and medium enterprise	
Industry	Manufacturing	If related to agroindustry
Trade	Export promotion	If includes export promotion of agricultural products
Social Investment	Support to labor organizations	If involves support to agricultural producers
	Capacity building	
	Poverty alleviation	
Reform and modernization of the State	Agriculture statistics	If works on agricultural statistics
Regional Integration	Everything	If agricultural or general topic

In recent years the sector has also developed a number of knowledge products that have helped to inform the policy dialogue with client countries. Agrimonitor, a database of agricultural policies and related public expenditures, stands out among them.

FIGURE 3.3

**Relative Support to Agriculture
by Country Group**

Source: OVE

Note: The bars represent total lending through the “AG” and “Other” sectors portfolios as percentage of average GDP (2002–2013), averaged over all countries in the group.

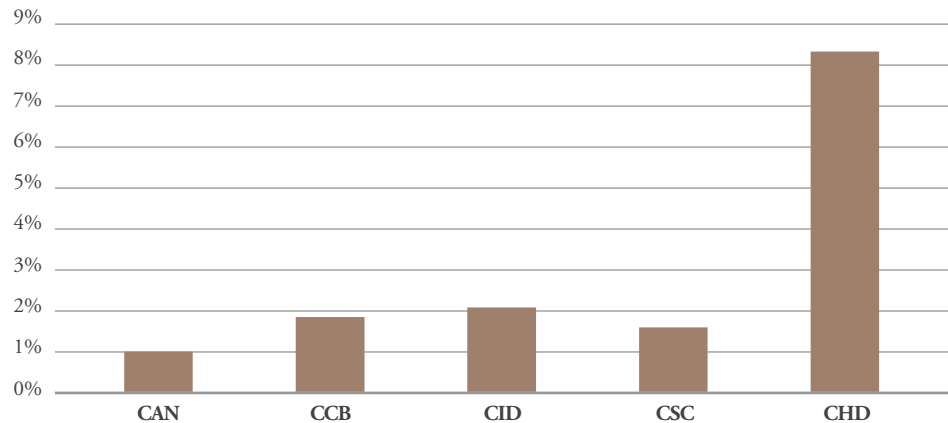


FIGURE 3.4A

**Relative Support to Agriculture
vs. Income**

Source: OVE with WDI data.

Note: Income is measured as the 2002–2013 (or closest available) average of real per capita GNI (Atlas method). Sector size is the 2002–2013 average of agricultural production as percentage of GDP. Relative support to agriculture is the sum of all lending (in US\$ of 2014) as a percentage of the 2002–2013 average of GDP.

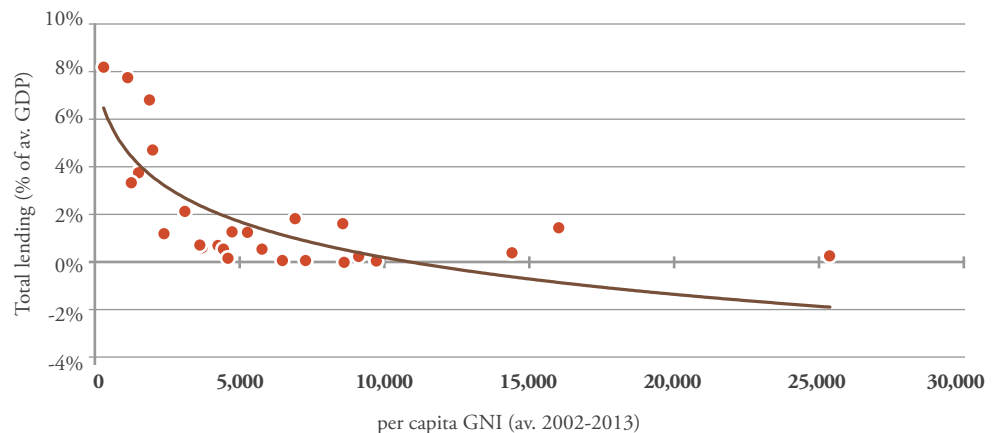


FIGURE 3.4B

**Relative Support to Agriculture
vs. Sector Size**

Source: OVE with WDI data.

Note: Income is measured as the 2002–2013 (or closest available) average of real per capita GNI (Atlas method). Sector size is the 2002–2013 average of agricultural production as percentage of GDP. Relative support to agriculture is the sum of all lending (in US\$ of 2014) as a percentage of the 2002–2013 average of GDP.

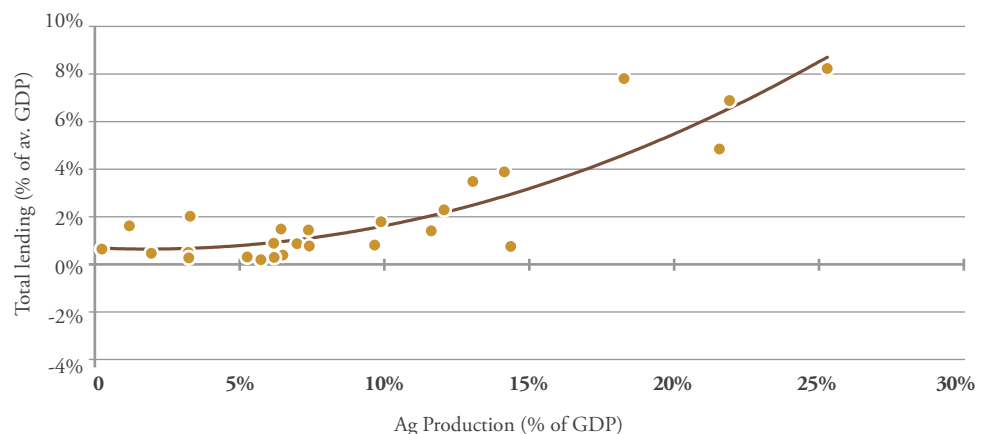


TABLE 3.4 TOP 10 COUNTRIES IN AGRICULTURE PORTFOLIO, 2002-2014

Source: OVE

	“AG” sector portfolio		“Other” sector portfolio	
	Number	Value	Number	Value
1	Argentina	Mexico	Brazil	Argentina
2	Haiti	Argentina	Argentina	Brazil
3	Peru	Peru	Peru	Mexico
4	Bolivia	Haiti	Bolivia	Bolivia
5	Nicaragua	Nicaragua	Mexico	Costa Rica
6	Dominican Rep.	Brazil	Nicaragua	Peru
7	Paraguay	Paraguay	Panama	Uruguay
8	Mexico	Dominican Rep.	Honduras	Paraguay
9	Uruguay	Panama	Paraguay	Ecuador
10	Brazil	Uruguay	Ecuador	Honduras
Total Share	79%	88%	66%	79%

B. THEMATIC RELEVANCE OF THE PORTFOLIO

The Strategy for Agricultural Development in Latin America and the Caribbean (GN-2069-1) (“Agricultural Strategy”) guided the Bank’s support to the sector from 2000 to 2013. Hence, the thematic relevance of the portfolio is assessed in terms of its consistency with the Strategy’s areas of prioritization. The Strategy—approved just two years before the beginning of the period covered in this evaluation—laid out six priority areas for investment: (i) consolidation of economic reform programs and support for transition; (ii) modernization of the State and basic services; (iii) development of land markets; (iv) development of rural financial markets; (v) sustainable use of natural resources; and (vi) strengthening human resources and rural infrastructure.

Meanwhile, Bank projects mostly provided direct support to producers and public infrastructure. To better understand the portfolio, OVE established a classification of the projects’ areas of work and objectives (Box 3.2). The activities and objectives of all 250 loan operations in the “AG” and “Other” sectors portfolios were classified accordingly. The “AG” sector portfolio is heavily concentrated on projects providing some type of direct support to farmers—normally technical assistance and/or financing to purchase machinery or equipment or even to build private infrastructure such as plants and warehouses.¹⁷ This represents a large effort by the Bank—both in terms of the number of projects and financially—to provide private goods, although it should be noted that projects that provided these private goods also provided public goods in many cases. The majority of projects included in the “Other” sectors portfolio provide public infrastructure—mostly roads projects from the Transportation division (61%), although there are also a few electrification projects.

BOX 3.2 CLASSIFICATION OF OBJECTIVES AND AREAS OF WORK

To take a more nuanced look at the portfolio of agriculture projects, OVE established a classification of the projects' areas of work and objectives. The categories are not mutually exclusive, and projects typically pursue more than one objective through more than one area of work.

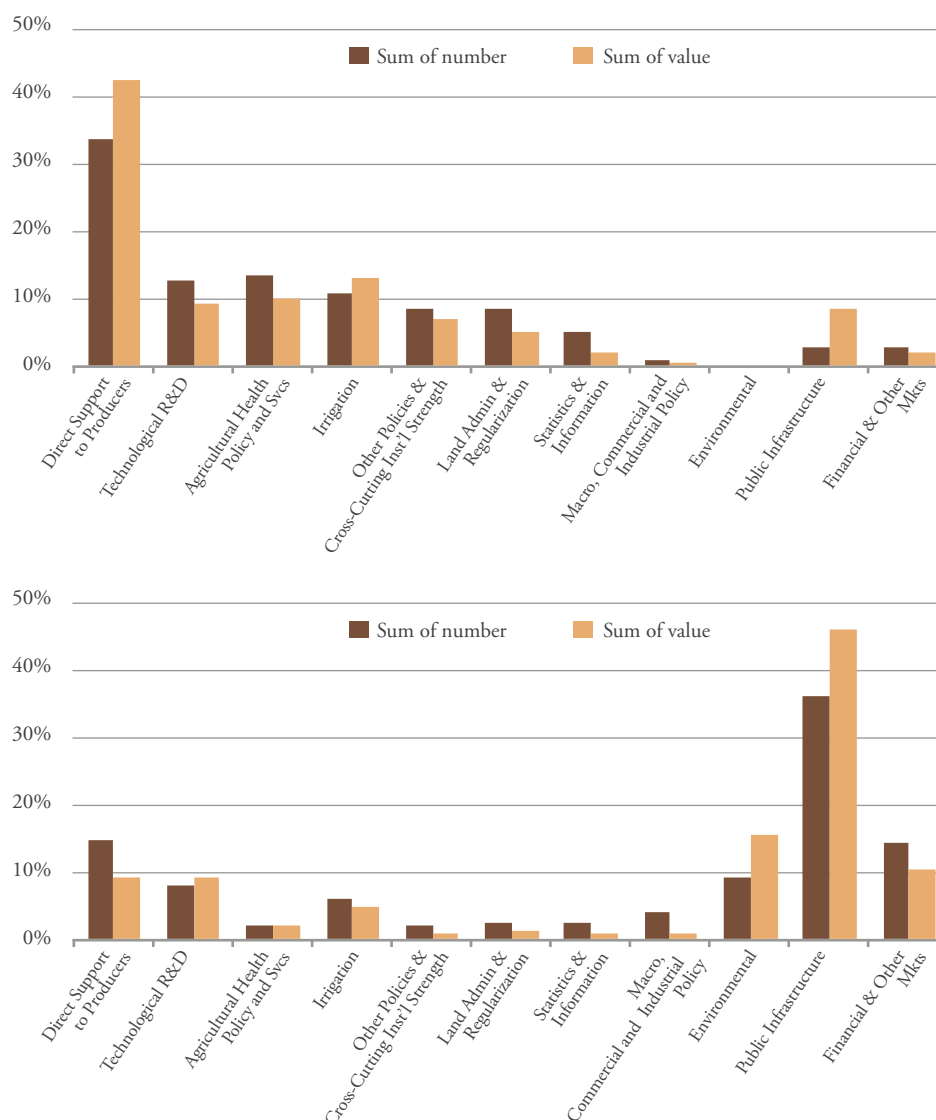
Areas of work. The classification is done on two levels. The first separates those areas of work that chiefly affect the agriculture sector from those that also affect other sectors, and from those that have an indirect effect on agriculture. The second level of classification is thematic, based on the activities typically covered by Bank projects, but it attempts to cover most themes on which work in the sector could be done.^a

Objectives. The classification presents four overarching development objectives—Growth, Reduction of Risks, Environmental Sustainability, and Social Welfare—containing what may be considered agriculture's main contributions to development.^b Each of these four objectives depends on the achievement of other, more immediate objectives. To achieve growth, producers require increases in profitability—which typically result from cost reduction or productivity increases—and increased scale and sales. Hence, **Productivity** and **Access to Markets** are listed as more immediate development objectives that contribute to Growth. Reduction of risks implies addressing two sources of risk: **Price and Production Risks**. To promote Environmental Sustainability, producers need to adopt **Good Practices**, and the public and private actors in the sector need to practice adequate **Resource Management**. Finally, promoting the welfare of the people dedicated to agricultural activities and those directly affected by them requires two types of action: first, to increase the **Income of Small Producers**—whose livelihoods may depend chiefly on agricultural activities—and maximize their contribution to **Rural Development**; second, to ensure that the products of agricultural activities are **Safe and Nutritious**.

AREAS OF WORK	Belonging to the Agriculture Sector	Direct Support to Producers
		Technological R&D
		Agricultural Health Policy and Services
		Irrigation
		Other Policies & Cross Cutting Inst'l Strengthening
	Affect more than Ag Sector	Land Administration and Regularization
		Statistics and Information
	Outside the Agriculture Sector	Macroeconomic, Commercial, and Industrial Policy
		Environmental
		Public Infrastructure
		Financial and Other Markets
OBJECTIVES	Growth	Productivity & Production
		Access to Markets
	Risk Reduction	Price Risks
		Production Risks
	Environmt Sust.	Good Practices
		Resource Management
	Social Welfare	Income of Small Producers & Rural Development
		Safe and Nutritious Food

^a The classification also includes all the different groups of projects described in the approach paper for this evaluation (RE-467).

^b PIADAL (2009) mentions five "contributions to development" that "society has begun to demand from agriculture" (p. 29, translated from Spanish). The five contributions are to (i) economic growth, (ii) food security, (iii) overcoming rural poverty, (iv) mitigation of environmental impacts and risks, and (v) territorial development.

**FIGURE 3.5A****Areas of Work of “AG” Sector Portfolio**

Source: OVE.

Note: The graphs represent the share of each area of work in the corresponding portfolio. Dark bars are calculated in terms of numbers and light bars in terms of dollar values. A single project can work in more than one area. Dollar amounts are calculated at the project level, not area of work. Hence, dollar amounts are duplicated for projects with more than one area of work.

FIGURE 3.5B**Areas of Work of “Other” Sectors Portfolio**

Source: OVE.

Note: The graphs represent the share of each area of work in the corresponding portfolio. Dark bars are calculated in terms of numbers and light bars in terms of dollar values. A single project can work in more than one area. Dollar amounts are calculated at the project level, not area of work. Hence, dollar amounts are duplicated for projects with more than one area of work.

The portfolio was broadly aligned with the Agricultural Strategy. The Bank invested in all the Strategy’s six priority areas, albeit to different degrees (Figure 3.5). Programs providing direct support to producers invested in human resources, in some instances also promoting practices that made good use of natural resources and providing support during the transition to more open economies (areas vi, v, and i). Public infrastructure, such as roads, electrification and even semi-public¹⁸ infrastructure for irrigation (area vi), received a large share of Bank resources. Projects supporting technological R&D, agricultural health services, and statistics and information typically strengthened the respective government institutions (area ii). The Bank also worked on land administration and regularization (area iii). Environmental policy (area v) and rural financial markets (area iv) received relatively little attention. All of these areas remain highly relevant for the region’s agriculture, given the challenges of infrastructure, human capital, land markets, public services, use of natural resources, and access to finance discussed in Chapter 2.

Access to finance in agriculture is a highly relevant area where the Bank has had relatively little engagement. Financial markets play a crucial role in facilitating investment yet are still inaccessible to many agricultural producers in LAC. Moreover, the Bank's direct financing could potentially inhibit the development of financial markets if it served as a temporary substitute.

The specific objectives of the portfolio are consistent with agriculture's main contributions to development. The operations from the "AG" and "Other" sectors portfolios are strongly focused on pursuing growth through increases in productivity and greater access to markets (Figure 3.6). Several of the areas of work discussed above are aligned with these objectives: direct support to producers, public infrastructure, irrigation, technological R&D, and agricultural health. There is also an important focus on enhancing social welfare, mostly through increasing the income of small producers. This objective has often been pursued jointly with the other two objectives, since several operations provided some type of direct support to small producers to improve their incomes through higher productivity and/or better access to markets.

FIGURE 3.6A

Objectives of "AG" Portfolio

Source: OVE.

Note: The graphs represent the share of each objective in the corresponding portfolio. Dark bars are calculated in terms of numbers and light bars in terms of dollar values. A single project can work toward more than one objective. Dollar amounts are calculated at the project level, not objectives. Hence, dollar amounts are duplicated for projects pursuing more than one objective.

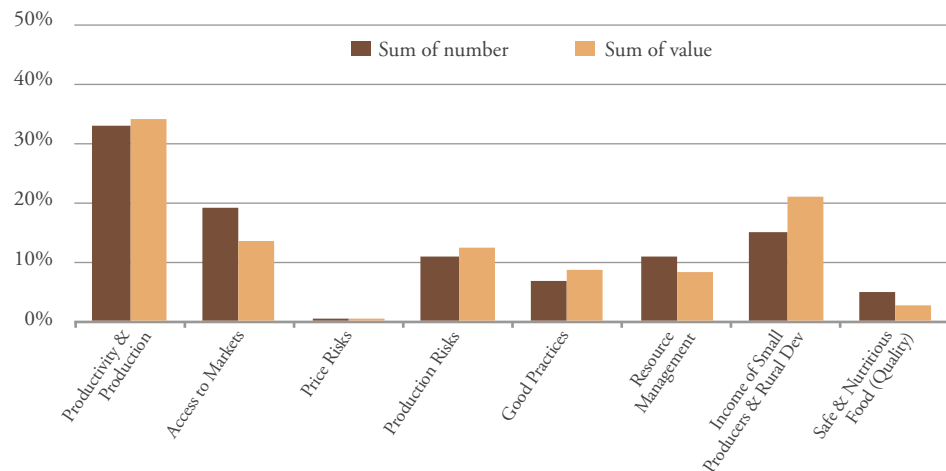
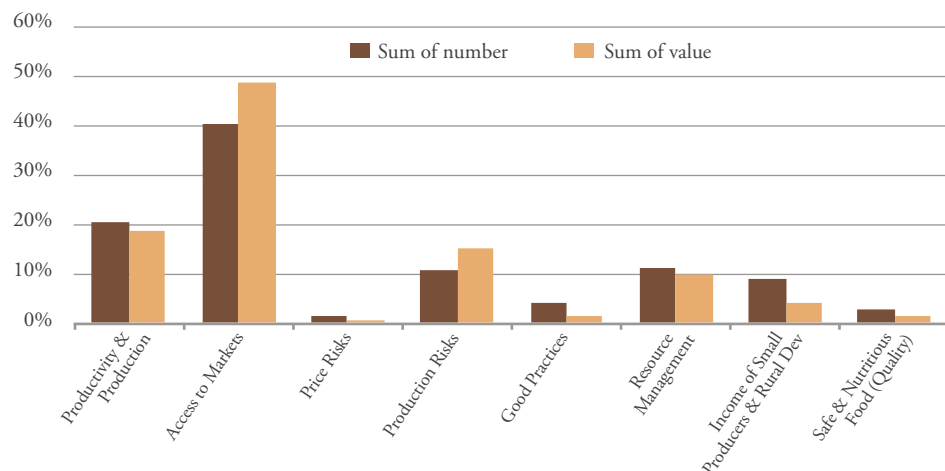


FIGURE 3.6B

Objectives of "Other" Portfolio

Source: OVE.

Note: The graphs represent the share of each objective in the corresponding portfolio. Dark bars are calculated in terms of numbers and light bars in terms of dollar values. A single project can work toward more than one objective. Dollar amounts are calculated at the project level, not objectives. Hence, dollar amounts are duplicated for projects pursuing more than one objective.



Only a minor portion of the “AG” sector portfolio explicitly targets poor producers, even though the entire portfolio is classified by the Bank as poverty-oriented. OVE analyzed the 2002-2012 “AG” sector portfolio¹⁹ in depth and determined that 38% of the loans in the portfolio targets poor producers (see Box 3.3). Yet the IDB9 Agreement (AB-2764) indicates that all support to small farmers should be classified as poverty-oriented, and the Bank’s project classification scheme widens this still further to include all “AG” sector loans as falling under the “Poverty Reduction and Equity Enhancement” classification (GN-2650), regardless of whether they target the poor explicitly or even provide support to small farmers.

BOX 3.3 POVERTY AND IDB INVESTMENT IN THE AGRICULTURE SECTOR

In late 2013 OVE undertook a specific study to analyze the extent to which the Bank’s projects classified as “AG” and approved during 2002-2012 were targeted to the poor. OVE placed each project in one of four categories:

- Poverty-targeted: if the project directs resources exclusively to groups considered poor.
- Subgroup-targeted: if the project is designed to benefit groups or geographic areas where a high proportion of the population is poor.
- Not targeted: if the project will generate greater growth or efficiency in general for inhabitants in rural areas, including the poor.
- No poverty focus: if the project does not specifically benefit any poor populations.

This analysis shows that 11% of projects (by number) were poverty-targeted and 27% were subgroup targeted. Forty-one percent of projects were not targeted, while 21% did not have a poverty focus at all. A full 86% of the volume of resources invested in the “AG” portfolio was either not targeted or not poverty-focused.

Source: Székely, 2013 – The IDB and the Poverty Agenda in Latin America and the Caribbean.



This evaluation looked at the sector portfolio’s relevance for food security and found, as expected, that it has been highly concentrated on the availability of food and, to a lesser extent, on access and utilization.

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One area in which there has been little work by the Bank is reduction of exposure to price risks. Among the 250 projects reviewed, only four mentioned the intention of reducing agricultural producers’ exposure to fluctuations in the prices of their products. Agricultural insurance markets are not well developed in the region, and this could be an area for further Bank support.²⁰

The objectives identified in the portfolio are also broadly consistent with the 2013 Sector Framework Document (SFD) on Agriculture and Natural Resources Management (GN-2709-2). Although the SFD was approved after most of the portfolio under review was approved, it is useful to analyze the consistency between the two in order to identify what changes the Bank should make in future to better align them. The SFD presents three broad objectives, or “dimensions for success”, that can be summarized as: (i) increase productivity and manage climate impacts, (ii) increase agricultural earnings for rural families, and (iii) exploit natural resources

sustainably and reduce the region's carbon footprint. These correspond almost directly to seven of the eight objectives in the classification presented above – with 'access to markets' and 'good practices' incorporated into the "lines of action" of the first and third "dimensions for success". This leaves only 'reduction of price risks' without counterparts in the SFD's lines of action.

Though the "AG" and "Other" sectors portfolios are thus generally aligned with the SFD, the AG portfolio is relatively more concentrated on private goods. The SFD places strong emphasis on financing public goods. Private goods should be financed only when justified, emphasizing small producers and in a manner that is cost-effective and non-distortionary (p. 25). In contrast, the AG portfolio has a major focus on direct support to producers, which is essentially the financing of private goods.

C. RELEVANCE FOR FOOD SECURITY²¹

At a strategic level, the Bank has focused mainly on the agriculture sector as the basis for IDB's work on food security, though the challenge of food security in the region is much broader. OVE reviewed past strategic documents²² that relate to food security and found that the concept has almost always been tied to food availability rather than to other dimensions of food security (Box 3.4). IDB9 stated that it is "essential that food security be built *through enhanced agricultural productivity*" (AB-2764),²³ and the Food Security Fund (FOD)²⁴ also focuses on agricultural productivity. In practice, however, the Bank contributes to food security through various sectors in addition to agriculture, including transport, social protection, health, and water and sanitation. These other sectors relate to access, utilization, and stability dimensions of food security – dimensions of key importance in the region. More efforts to recognize, support, and identify synergies among Bank actions can help strengthen the Bank's contributions to food security going forward.

This evaluation looked at the "AG" sector portfolio's relevance for food security and found, as expected, that it has been highly concentrated on the availability of food and, to a lesser extent, on access and utilization. OVE classified the 83 loans (\$3.9 billion) of the "AG" portfolio approved between 2002 and 2014, according to three of the four dimensions of food security (see Box 3.4).²⁵ Of the 83 projects, 66 (\$3 billion) are related to at least one dimension.²⁶ Of these 66, 100% have at least one objective related to the supply or availability of food. Only 8 of these projects have objectives or components related to the appropriate utilization of food for healthy nutrition. Finally, 29 of the 83 projects (\$1.3 billion) were designed to explicitly benefit small farmers, which could contribute to improving access to food for poor rural households. The Bank's agriculture portfolio addressing utilization is small and consists exclusively of support to food safety programs. Besides being few in number, the programs for food safety have been incorporated as a small component in wider programs for agricultural health.

BOX 3.4 FOOD SECURITY: DEFINITION AND CHALLENGES IN LATIN AMERICA AND THE CARIBBEAN

The Rome Declaration on World Food Security defined food security as existing “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (WFS 1996). On the basis of this definition, the FAO identifies the following four dimensions of food security:

- **Food availability:** The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).
- **Food access:** Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. [...]
- **Utilization:** Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. [...]
- **Stability:** To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity).^a

LAC’s main necessity in terms of food security is access, followed by utilization. Poverty is the primary factor limiting access to food. Poor families spend a large proportion of their incomes on food; therefore, declines in income or increases in food prices have large negative effects on these families. In LAC there are 164 million poor people, of whom 23% suffer from undernourishment while the rest remain vulnerable (ECLAC 2013). In terms of utilization, some countries in the region have high levels of infant malnutrition, which may reflect lack of access to food as well as inadequate diets in the home. In LAC 6.9 million children under the age of five suffer from malnutrition. The extreme case is Guatemala, where 48% of children are stunted and 13% are underweight. In Bolivia, Guyana, Honduras, Haiti, and Nicaragua the incidence of stunting is greater than 20% (World Bank WDI).

However, the availability of food in LAC is generally not a major reason for food insecurity. Food production represents 127% of the region’s needs in terms of calories. Further, all of the countries in the region, with the exception of Haiti, have enough food at their disposal to feed their populations. Climate change and international food prices are threats to the stability of food and nutritional security, especially among the most vulnerable populations.

^a FAO, 2006; available (May 2015) at: <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf>



The Bank's portfolio focused on increasing productivity and access to markets.
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D. SUMMARY

In sum, the Bank's support to the agriculture sector during 2002-2014 has been smaller and significantly different from that of previous periods. The 83 loan operations that make up the "AG" sector portfolio represent a smaller share of the Bank's lending than similar operations did in the 1990s. The amount of support has been bigger (as a share of GDP) in poorer countries and countries with larger agriculture sectors. The orientation of this portfolio has also been somewhat different, with the heavy emphasis on market liberalization in the 1990s being largely replaced by one on institutional strengthening. Overall support to agriculture Bank-wide has been significantly greater than what is captured by those 83 operations, however, as 167 additional projects in other sectors likely contributed to agricultural development.

The portfolio was broadly aligned with the 2000 Agriculture Strategy. This portfolio focused on increasing productivity and access to markets, often through the provision of direct support to producers and of public infrastructure. This concentration on private goods is somewhat at odds with the more recent 2013 SFD's emphasis on public goods, as discussed further in the next chapter. Although most of the portfolio was not informed by the SFD, the finding suggests that

the Bank will have to make some adjustments to better align the portfolio and the SFD. Neither environment nor the critical topic of rural finance were major areas of focus. The Bank, through IDB9, stressed agricultural productivity in its efforts to address food security, though inadequate access to food (rather than food availability) is the main issue in food security in the region. Finally, OVE found that only 38% of the operations were explicitly poverty-targeted, though IDB9 classified all agricultural support to small farmers as poverty-oriented and the Bank's current guidelines classify all agricultural operations as contributing to poverty reduction.



A large number of Bank projects provide direct support to agricultural producers with the goal of increasing their productivity and incomes.

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4 Direct Support to Agricultural Producers²⁷

Low productivity is one of the challenges faced by agriculture in LAC, and part of the problem is small producers' low levels of technology adoption. Technology adoption is difficult because it can be costly and risky, and requires information that is not always readily available. Among the barriers to technology adoption identified by the literature (Box 4.1), three very important ones for LAC small producers are the lack of financing, technical assistance, and access to markets.

A large number of Bank projects provide direct support to agricultural producers with the goal of increasing their productivity and incomes through technology adoption and increased access to markets. These projects typically make it easier for beneficiary producers to adopt different production technologies by providing them with substantial discounts for the purchase of productive capital (mostly machinery, tools, and equipment) and with technical assistance both for selecting the technology and for using the productive capital properly. In addition, the projects finance the design and implementation of business plans of producers' associations to improve their access to markets.

These projects temporarily reduce or remove the constraints that normally keep producers from acquiring new technology or financing business plans. Indeed, the subsidy substitutes for the loan a producer could need to purchase productive capital or technical assistance. It also reduces the financial resources that get invested in an activity with uncertain returns, thereby reducing the disincentive to adopt technologies that risk aversion may cause. Further, projects give producers information about the technologies available and sometimes even ensure the quality of the productive capital purchased, thus reducing information asymmetries. The same logic applies to the expenses required to produce and implement a business plan.

The benefits provided by these projects constitute mainly private or mixed goods²⁸ to temporarily circumvent these barriers. First, they finance purchases of private goods, such as machinery or equipment. Second, they finance agricultural extension services,

which, depending on the type of information they provide, can be public or private goods. “Knowledge delivered by extension may be information embodied in products (improved seed, machinery) or it may be more abstract, disembodied information on agricultural practice [some of] which tends to be a public good [while the rest] tends to be a toll good.”²⁹ In most projects, however, the information provided is farm-specific or tied to private goods (e.g., how to use a machine purchased with the project’s support).

BOX 4.1 BARRIERS TO TECHNOLOGY ADOPTION AND ACCESS TO MARKETS

The literature has identified several barriers to technology adoption. Many—though not all—are related to market failures. When a market fails, its access is limited or disadvantageous to some or all potential participants. This can discourage investment, since a producer needs to have some certainty that its production will reach its target market in conditions that make the investment profitable. Hence, insufficient access to input and product markets is itself a barrier to technology adoption and can be caused by the same types of factors that cause other markets to fail. Below is a classification of the barriers to adopting technology and to accessing markets for final products.

Barriers to technology adoption

- a. Individual or social aspects (e.g., risk aversion or cultural reluctance to technological changes)
- b. Institutional restrictions (e.g., import and export quotas and prohibitions)
- c. Inefficiencies in financial markets (e.g., lack of access to credit to buy machinery)
- d. Inefficiencies in insurance markets (e.g., lack of financial insurance against production losses)
- e. Inefficiencies in markets for production factors (e.g., insufficient supply of machinery or complementary inputs)
- f. Inefficiencies in markets for final products (i.e., insufficient access to markets for final products, see below)
- g. Inefficiencies in markets for technologies
 - i. Inefficiencies in markets for technical assistance (e.g., insufficient or expensive supply of technical assistance).
 - ii. Information asymmetries (e.g., lack of knowledge about available technologies)
 - iii. Positive externalities (i.e., incomplete appropriation of the benefits of the new technology)
 - iv. Public goods (i.e., free rider problem)

Barriers to access markets for final products

- a. Institutional restrictions
- b. Inefficiencies in financial markets
- c. Inefficiencies in the market for final product
 - i. Lack of local markets (i.e., competitive disadvantage of high transportation costs)
 - ii. Nonconvexities (i.e., minimum scale requirements to sell in a market)
 - iii. Noncompetitive behavior (i.e., barriers lifted by monopolists preventing entry in a market)

OVE evaluated a sample of projects of this type to identify conclusions and recommendations that could be useful for future projects. Twenty³⁰ Bank projects managed by RND have the objective of bolstering technology adoption and/or access to markets. OVE selected four³¹ projects to visit specifically for this evaluation:

- The Non-Reimbursable Support (ANR) component of the Provincial Agricultural Services (PROSAP) II (AR-L1030)
- Direct Support for the Creation of Rural Agrifood Initiatives (CRIAR) (BO-L1040)
- Program to Support Agrifood Production (APAGRO) (NI-L1020)
- Productivity Support and Development of New Livestock Products (UR0141)

In addition, the team evaluated other projects in the countries visited (AR0061, AR-L1120, AR-L1063, UR0137, and UR-L1064) because they are linked to the sampled projects and constitute de facto programs in which the long-term collaboration of the Bank can be appreciated. Finally, the team also incorporated the information collected by OVE in the context of other evaluations (CR0142, DR0138, DR-L1031, HO-L1010, and PR-L1001). In sum, nine projects were analyzed with primary information and five others with secondary information. The main findings are summarized below (see Annex A.2 for a full discussion).

A. DESIGN

The Bank has consistently followed a market-like approach in all its projects providing direct support to producers. The projects reviewed present a great deal of variation, showing that the Bank has tried to adapt them to the local context while learning through some degree of experimentation with ways of delivering the subsidies, size of the subsidy, and so on. One highly prevalent feature, however, is the attempt to create (temporary) markets, or avoid distorting them when they already exist. Projects thus typically allow a wide menu of items to be partially financed or even bring agricultural producers (demand side) and providers of agricultural equipment (supply side) together in a controlled market-like environment.

Project relevance is enhanced by combining support for technology adoption and improving access to markets. The projects evaluated have generally had two objectives: to promote technology adoption and to increase access to markets. These objectives are closely related because insufficient access to markets may be a barrier to technology adoption, and because some of the other factors that cause a low level of technology adoption are also responsible for insufficient access to markets (see Box 4.1). Therefore, combining both objectives has increased the relevance of the projects at design. In some cases (e.g., AR-L1063, AR-0061, AR-L1030, AR-L1120), the intervention addressed both objectives through the same intervention; in others (e.g., BO-L1040, NI-L1020, UR0137, UR0141, and UR-L1064), each objective was pursued through separate components.



These projects typically make it easier for beneficiary producers to adopt different production technologies by providing them with substantial discounts for the purchase of productive capital (mostly machinery, tools, and equipment) and with technical assistance both for selecting the technology and for using the productive capital properly.
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The project diagnostics lacked adequate economic analyses to demonstrate whether these interventions were the best option to address the producers' constraints. Direct support to agricultural producers that face important barriers to technology adoption and access to markets may be a well-justified development intervention, as it may increase their productivity and sales. However, it should be carefully compared to investments in public goods—such as infrastructure and policies—that might also address their constraints. Generally, justification for the provision of private goods (direct support to producers) should be based on two determinations: first, that the intervention seeks a socially desirable objective, such as reducing poverty or increasing employment and growth; second, that the target population faces certain barriers that prevent it from reaching that objective, and that such barriers can be more efficiently overcome by using public resources to provide private goods rather than public goods.³²

Project relevance suffered in some cases from deficiencies in diagnosis and a consequently poor definition of the target population. Projects generally do not include thorough diagnoses of the barriers to adopting technology and accessing markets. Lack of financing is often mentioned along with other causes such as insufficient information, but there is rarely a nuanced analysis of which specific population groups face which barriers. In line with this, most projects reviewed define the target population in broad terms, often as “poor,” “subsistence,” “family,” “small,” or “medium” producers. Although these terms may have a specific definition in the country where the projects are implemented, they often cover heterogeneous groups of producers facing different economic constraints.

Inadequate identification of target populations and the barriers they face may have led to the inclusion of some producers who did not need the support provided. An evaluation of PROSAP's ANRs (AR-L0061 and AR-L1030), for instance, found

that more than 50% of the beneficiaries interviewed said they would have made the investment even without the program's support.³³ In the case of Uruguay's *Programa Ganadero* (UR0137 and UR0141), some large and consolidated firms were able to benefit from the projects even though there is no indication that they faced any barriers to access markets. In other instances, insufficient diagnoses led to providing technical assistance that may have fallen short of what was necessary to fully adopt a new technology. In CRIAR (BO-L1040), for instance, beneficiaries received only a brief one-time explanation about how to use the agricultural machinery or equipment they had purchased with the project's subsidy, which in many cases seems to have been insufficient to fully adopt the new technology.³⁴

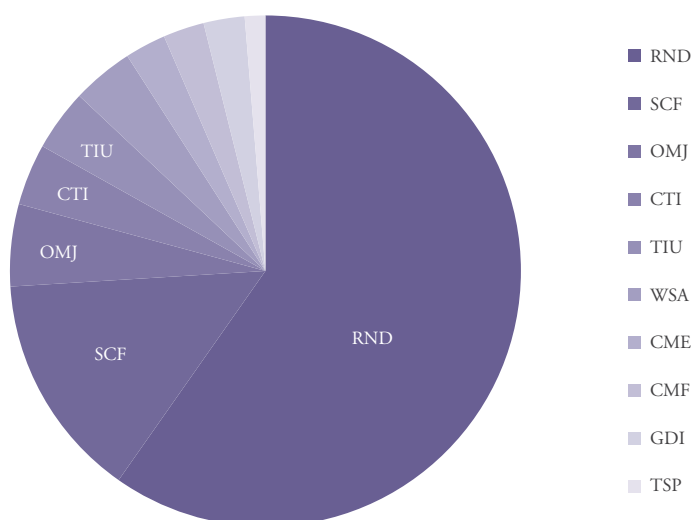
Despite the shortcomings in diagnosis noted above, the Bank has made substantial efforts to address other aspects of design in these projects. In some of the projects reviewed (e.g., AR-L1063, BO-L1040, NI-L1020, UR0137, and UR0141) careful consideration was given to various aspects of the intervention—for example, eligibility criteria, size of the subsidy, menu of technologies offered, and delivery mechanism. This reveals strong efforts to tailor the projects to their various contexts as well as openness to experimentation, since the consequences of tweaking many of these aspects were not known at the time the projects were designed.

OVE found some weaknesses in monitoring and evaluation frameworks of the projects reviewed. Results matrices have sometimes relied heavily on the internal rate of return—a limited and non-specific indicator—to track outcome achievement. A relatively large proportion of projects reviewed have impact evaluations, though the majority are methodologically limited by poor data availability, which reflects the fact that most impact evaluations were not included in the initial project design. More recent projects have begun to include impact evaluations in their designs,³⁵ which should allow for more methodologically solid evaluation of the projects' outcomes and impacts in both the short and long run. This is particularly important to learn which of the variations in design are most effective and efficient.

The fact that several Bank divisions work on projects providing direct support to producers creates potential for lack of coordination. While OVE did not find strong evidence of lack of coordination in the projects it analyzed, it did note that a large number of projects in different divisions provide direct support to producers, sometimes in the same geographic areas and using similar eligibility criteria (Figure 4.1). In addition, it found one instance where some beneficiaries of a project had also benefited from another project —PROVIAR and PROSAP, both managed by the same division— without either project acknowledging it explicitly.³⁶ There were also two instances (PROSAP and UR0141/UR-L1064) where IDB and the World Bank cofinanced programs but with different specifications. These examples point to the need to ensure close coordination within the Bank and with other development agencies.

FIGURE 4.1
Bank divisions with projects
providing direct support to
farmers

Source: OVE.
Note: Areas reflect proportion of
total number of loans



B. IMPLEMENTATION AND EFFECTIVENESS

Implementation of these projects is generally demanding and context-specific, but the Bank has made efforts to adapt the projects to local circumstances. Because the number of beneficiaries in each project can be very large, activities can take a substantial amount of the executing unit's time and resources—dissemination, verification of eligibility, verification of delivery of benefits, and so on. However, these factors varied greatly across reviewed projects. On the less demanding side, PROSAP's ANRs (AR0061, AR-L1030, and AR-L1120) have financed fewer than 300 business plans,³⁷ and the eligibility mechanism is based on the selection of business plan proposals submitted by potential beneficiaries. In contrast, CRIAR (BO-L1040) and APAGRO (NI-L1020) have benefited more than 19,600 and 11,500 producers, respectively, each requiring verification of (i) eligibility criteria (often on site), (ii) equipment or machinery purchases and delivery; and (iii) delivery of technical assistance.³⁸

The effectiveness and efficiency of these projects depend on nimble execution. Careful attention helps to ensure that no mistakes are made—that beneficiaries receive the purchases they made (e.g., agricultural machinery or equipment) and providers (sellers) get paid accordingly. But timeliness is also crucial. Rural populations in LAC are distrustful about promises to help them—especially when it requires them to pay some amount in advance. Hence, it is important that the project benefits arrive quickly to generate trust and increase participation. Also, verification and technical assistance should occur quickly after the machinery and equipment purchased have been delivered to fix potential mistakes (in the case of verification) and to put the equipment to its intended use before it gets damaged or misused.

Projects demonstrated that market-like mechanisms to deliver subsidies to the beneficiaries are feasible, though their implementation can be complex. Some projects (e.g., AR-L1063 and BO-L1040) gave beneficiaries coupons to purchase

machinery and equipment from a set of preauthorized providers who would be paid directly by the executing agency in exchange for the coupons. In CRIAR, markets for agricultural machinery and equipment had to be created temporarily through technological fairs to which beneficiaries (agricultural producers) and sellers were invited. In these cases, maximum prices were set at market levels to avoid distortions. This type of mechanism appears to have generated some competition among providers and allowed beneficiaries to choose among a relatively broad set of options.

Projects were generally successful in pursuing the technology adoption objective—sometimes with concomitant increases in production and income, though the degree of success seems to depend on the amount and quality of technical assistance provided. Technology adoption requires learning a specific way of doing something using specific objects. Therefore, it is not just a matter of acquiring tools and machines but, more importantly, learning how to use them adequately, hence the importance of technical assistance. Interviews conducted by OVE as well as direct field observations suggest that technology adoption was often incomplete in projects which had little technical assistance (e.g., BO-L1040) and whose beneficiary population had low levels of formal education and exposure to newer technologies.

OVE considers that the sustainability of results will likely be a challenge over the long run, because the projects do not address the root causes behind low technology adoption. The projects were designed to promote technology adoption by facilitating and subsidizing technical assistance and purchases of productive capital, which can temporarily reduce several barriers to adopting new technologies (Box 4.1). However, this temporary reduction occurs only once, and the root causes (the barriers) remain unaltered.³⁹ Even if the projects were fully effective and managed to bring all beneficiaries to the current technological frontier, that result would not be likely to be sustainable over the longer run since beneficiaries would still be facing the same barriers to adopt the next generation of technologies.

Projects were generally less successful in pursuing access to markets, partly because they required beneficiaries to establish producer associations, which is in itself a difficult achievement. Projects sought to increase producers' access to markets by financing the design and/or implementation of business plans that would link them to value chains. However, in most cases this financing was directed at producer associations rather than individual producers (as in UR0137, UR0141, and UR-L1064), which greatly reduced the eligible population. In addition, projects commonly required the associations to be legal entities, which filtered out another group of potential beneficiaries for an economically unimportant reason.⁴⁰

The objective of increasing access to markets was also less successful because it was often pursued through a separate component with a much smaller scope. Although projects gained relevance by jointly pursuing the objectives of increasing technology adoption and access to markets,⁴¹ that gain was often limited because only a small



The projects were designed to promote technology adoption by facilitating and subsidizing technical assistance and purchases of productive capital.
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number of those who benefitted from the technology adoption component also benefitted from the access to markets component (e.g., NI-L1020 and UR0141).⁴² In addition, because the amounts invested in these components were substantially smaller and the targets more modest, their potential impact and relevance were lower. Other projects, such as PROVIAR (AR-L1063) and PROSAP's ANRs (AR0061 and AR-L1030), where both objectives were pursued through the same intervention, may have been more successful in linking beneficiaries to markets.

C. SUMMARY

In sum, the projects reviewed present a mixed picture: they have been at least partially relevant and effective in many instances, but their sustainability over the long run is a concern. Some projects have provided substantial benefits to many farmers that faced various barriers to technology adoption, allowing them to incorporate new technologies to improve their production levels. In some cases, beneficiaries have also been linked to new markets. Yet the relevance of some projects is questionable because their diagnoses did not fully justify the intervention and their identification of target populations was poor. In a few instances the Bank's support appears to have

benefitted producers that did not need the support. In addition, in most cases the projects provided a one-time improvement and did not change the structural barriers faced by the beneficiaries, reducing the sustainability of benefits over time.

Two other aspects of the Bank's work deserve mention. First, the Bank has made efforts to adapt the projects to local contexts while engaging in a learning process through experimentation with different design variations, all consistent with a market-like approach. Second, the Bank's lending has been complemented by knowledge work, notably a growing use of impact evaluations. Incorporating such evaluations and their initial data gathering in project design from the beginning will improve the likelihood of generating robust evaluation findings.



Government services that support animal and plant health and food safety are critical for minimizing losses in production, increasing access to international markets, and ensuring consumer health.

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5 Animal and Plant Health and Food Safety⁴³

Government services that support animal and plant health and food safety are critical for minimizing losses in production, increasing access to international markets, and ensuring consumer health. Plant and animal diseases can result in significant economic losses to farmers and can easily spread from farm to farm. Even more, many countries have strict standards that prevent agricultural products from entering their markets if they contain pests, diseases, foodborne pathogens, toxins, or high levels of agrochemical and veterinary residues. Also, foods laden with hazardous bacteria or agrochemicals can produce great harm to consumers.

In many countries in the region the Bank has supported institutional strengthening and has invested in infrastructure to enhance the agencies' capacities to offer services that protect animal and plant health, ensure food safety, and control and eradicate pests and diseases. The agencies in the region that protect the health and safety of their agricultural products must carry out many technical services: surveillance, quarantine, laboratory analyses, certification of products for exportation and importation, and campaigns to control and eradicate a pest or disease outbreak. Given the variety of services these agencies provide, they require very specific human and physical capital to ensure a standard of quality.

During 2002-2014 the Bank approved 17 loans totaling about \$358 million to strengthen animal and plant health and food safety systems. Ten of the loans supported projects specifically designed to strengthen agricultural health and food safety agencies (\$231.3 million), and seven supported projects with components that strengthened various agricultural services, including agricultural health and

food safety (\$126.5 million⁴⁴). In terms of volume, these loans represent about 10% of the total portfolio classified as agriculture, which is much higher than the historical average of 3% during 1961-1998 (IDB 1999: GN-2069-1).

The growing importance of this issue in the Bank's portfolio is related to the increased liberalization of trade in agricultural products. While tariffs on the region's agricultural products have declined, non-tariff barriers related to agricultural health⁴⁵ and food safety limit access to many markets. In fact, the main objective of the Bank's projects in this area is to increase the competitiveness of the agriculture sector; and in most cases the increase in competitiveness is explicitly linked to increasing exports. It is also important to note that more recently some of the projects also include the objective of contributing to the health of the population through greater food safety.

The Bank has consolidated the manner in which it intervenes on this thematic area. During the evaluation period, the Bank focused most of its support for this issue on strengthening the three main areas of services—animal health, plant health, and food safety—offered by the government agencies. A few of the projects also provided support to control and eradication campaigns; by contrast, in the 1990s, the majority of projects in this area included support for such campaigns. Also, since 2008 the Bank has mainly focused its support of this issue by designing projects related solely to agricultural health and food safety,⁴⁶ as opposed to also including support to other agricultural services in the same project. Finally, all of the projects OVE evaluated incorporate some elements to strengthen the interaction between the public agencies and producers. This is important for the success of services provided by the public agencies and ensuring their sustainability (see Annex A.3, paragraph 3.14).

In this thematic area the Bank has generally supported public goods but also provided some support to mixed and private goods. Most of the Bank's support during the evaluation period has been to strengthen the institutions that provide public services that benefit most farmers and consumers—for example, surveillance and quarantine services. At the same time, however, the Bank supports these institutions in providing services that have characteristics of mixed or purely private goods. An example of the mixed goods is traceability programs that make it easier to detect, control, and eradicate animal diseases but also help participating producers gain access to certain export markets. Examples of private goods are vaccines, agrochemicals, and tags for cattle identification (although these have positive externalities).

For the comparative evaluation OVE selected 6 of the 17 projects providing support to this thematic area to evaluate in detail. The projects OVE selected to visit for detailed evaluation were Argentina-Food and Agriculture Health and Quality Management Program (AR-L1032), Bolivia-Agriculture Health and Food Safety Program (BO-L1037), Nicaragua-Improvement of Plant, Animal and Forest Health Services (NI-0182), Peru-Project for Control and Eradication of Fruit Flies (PE-L1007), Peru-Agricultural Health and Agrifood Safety Development Program (PE-L1023), and

Uruguay-Support for Agricultural Public Management (UR-L1016) (see Table 5.1). The projects represent 35% of the loans approved in this area during the evaluation period and 45% of the approval value. The main findings are summarized below (see Annex A.3 for a full discussion).

TABLE 5.1 CHARACTERISTICS OF PROJECTS SELECTED FOR COMPARATIVE EVALUATION

	Amount (US\$ million)	Institutional strengthening	Animal health	Plant health	Food safety	Campaigns	Traceability
AR-L1032	100	x	x	x	x	x	x
BO-L1037	10	x	x	x	x		x
NI-0182	7.3	x	x	x	x	x	x
PE-L1007	15					x	
PE-L1023	25	x	x	x	x	x	x
UR-L1016	10.5	x	x	x	x		x

A. DESIGN

The projects benefited from detailed diagnostics in many areas. The diagnostics of the institutional capacity of the agricultural health and food safety agencies were solid and based on the analysis of expert consultants and international agencies such as the Inter-American Institute for Cooperation in Agriculture (IICA) and the World Organization for Animal Health (OIE), which, among other things, evaluate the weaknesses of national systems with respect to meeting international standards.

However, the diagnostics left out some important economic analyses. For example, almost none of the projects reviewed by OVE included calculations of rejections of agricultural exports by importing markets, their reasons for rejection, and the associated economic losses.⁴⁷ In other cases (AR-L1032 and NI-0182), the diagnostics did not provide a deep enough analysis of the demand for laboratory services as well as the associated fee structure, which is critical for sustainability. Further, diagnostics for eradication campaigns in most cases lacked economic analyses of the market failures or institutional weaknesses to be resolved or of the damage caused by the outbreak.

The Bank lacks a thorough, regional diagnostic of the weaknesses in the animal and plant health and food safety systems. Such a diagnostic could help to improve regional coordination of policies and eradication campaigns, and to take advantage of existing infrastructure (i.e., laboratories) in a regional manner.⁴⁸ A regional diagnostic could also help build a set of indicators on public and private expenditures to gain a better understanding of financing mechanisms that support the sustainability of the systems.



Many of the supported services included animal traceability, control and eradication of pests prohibited in importing countries, certification processes of exports and imports for quality and organic products, and laboratory services to guarantee the safety of agricultural products for export.
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With a few exceptions, the evaluability of the projects reviewed by OVE is low. The Bank's results frameworks include macroeconomic indicators that could not be influenced by individual projects. The results frameworks do not include more relevant outcome indicators such as rejection of exports (or imports) of agricultural products for sanitary reasons or the opening of new export markets as a result of meeting new sanitary standards. Also, the results indicators do not measure the improvement in efficiency of the services the agencies provide in terms of time and cost to producers. In some cases the projects include the scores from OIE or IICA evaluations as results indicators, which can help in the projects' design phase but are not reliable for assessing project outcomes.

The Bank's support to this thematic area has focused on the needs of exporters. OVE observed in the projects it evaluated that many of the prioritized actions were related to ensuring access to export markets. For example, many of the supported services included animal traceability, control and eradication of pests prohibited in importing countries, certification processes of exports and imports for quality and organic products, and laboratory services to guarantee the safety of agricultural products for export. This contrasts with the fact that few project activities focused on improving animal and plant health problems that heavily affect small farmers who have little potential of accessing external markets.

The Bank's interventions have been relevant to increasing the competitiveness of the agricultural sector, although the dispersal of effort among many small activities diminished the relevance of some projects. The Bank supported government services that required strengthening to meet international sanitary and phytosanitary measures, which were becoming more stringent and numerous, as producers in their countries were reaching or seeking to reach new export markets. Also, the Bank's operations were relevant for the specific needs of certain countries, such as operational decentralization and emergency preparedness. However, in some cases the Bank failed to prioritize the most important areas to address. AR-L1032, BO-L1037, NI-0182, and UR-L1016 contained a long list of small activities that reduced the relevance of the Bank's support and complicated implementation.

B. IMPLEMENTATION AND EFFECTIVENESS

Difficulties in project implementation have led to redirecting resources toward investments in infrastructure. Three of the six projects (AR-L1032, NI-0182, and UR-L1016) faced delays in implementation due to difficulties in procurement processes, lack of experience in executing IDB projects, and a very large number of small activities included in the projects. In the last phases of these projects the delays led to redirecting funds away from planned activities to infrastructure investments—typically laboratory construction—that use resources more quickly and therefore speed up disbursements. These changes moved the projects away from their original logic and design.

The effectiveness of the Bank's support for institutional strengthening of agricultural health and food safety agencies has varied across countries. All six projects contributed to a gradual modernization of certain aspects of agricultural health services agencies, in particular through improving their laboratories and offices. Nevertheless, many of the projects did not meet their output targets. Also, as noted above, the low evaluability prevents the assessment of key project results such as improvements in the efficiency of service provision. Among the projects reviewed, only in PE-L1023 is it possible to conclude that the Bank's support not only provided important and sustained support for the modernization of the agency but also was a part of a long-term action plan and strategy supported by the public and private sectors that resulted in a big impact on the national economy.

Despite the mixed results at the individual project level, it is important to note that the Bank's continued support to the agricultural health and food safety agencies has made it a key actor on this issue in these countries. During the last decade, the Bank has been the largest donor to the agencies in Argentina, Bolivia, and Peru, and the Bank's resources represented a significant share of the agencies' budgets,

particularly in Bolivia and Peru. Also, the long-term support has been an important factor for ensuring the creation, continuity, and gradual strengthening of the agency in Nicaragua.

In general, the control and eradication campaigns supported in four of the six projects have been successful. The campaign to control fruit flies supported by PE-L1007 and PE-L1023 achieved positive results that contributed to a large increase in exports of fruits and vegetables, which increased the incomes of producers and employment in the associated zones. In Argentina, preliminary data suggest that the campaigns to control fruit flies and codling moth supported by AR-L1032 have reduced the losses of the affected products and lowered the use of agrochemicals in favor of the organic methods encouraged in the project. In Nicaragua, NI-1082 made good progress in controlling and eradicating several pests and diseases, although it did not meet all of its targets for cattle diseases.

The projects have achieved few results for food safety. Five of the six projects supported such activities to improve food safety as strengthening laboratories that test for food safety and chemical residues and the management of inspections for the use of inputs such as agrochemicals and veterinary medicines. However, the projects did not achieve many of their targets associated with these activities. Also, the lack of results indicators related to rejections of food exports for food safety reasons and the registration and inspection of agricultural inputs made it difficult to evaluate the results for food safety. Nevertheless, PE-L1023 contains data on the evolution of rejections of contaminated food exports.

The overall results of the Bank's support for the development of traceability systems are not yet well-defined. AR-L1032, BO-L1037, NI-0182, PE-L1023, and UR-L1016 provide support for animal (particularly cattle) traceability systems—an important requirement for gaining access to the most stringent export markets that pay higher prices for traceable meats. In most of the cases the outputs achieved have been limited because the programs were pilots (BO-L1037 and NI-0182) or were in relatively narrow zones in the countries (AR-L1032 and PE-L1023). There is anecdotal evidence that the traceability systems supported by the Bank have helped agricultural health agencies better address risks to animal health. With UR-L1016, the Bank's support appears to have helped Uruguay become the only country in the world that individually traces all cattle.

Various factors threaten the sustainability of the successful provision of some services, such as control and eradication campaigns, laboratory services, and traceability. The Bank's support for these types of services has not been accompanied by adequate analysis of the demand for them and of the associated financing schemes, which could include a combination of the national budget and fees paid by the private sector. In many cases inadequate fee structures for the services offered to private

producers leads to risks in sustaining the programs (AR-L1032, BO-L1037, NI-0182, and UR-L1016). For example, in Nicaragua the sustainability of the cattle traceability program initiated as a pilot program in NI-0182 depends on defining and formalizing a system of co-financing with the private sector.

C. SUMMARY

In sum, the results of Bank projects supporting agricultural health and food safety have been mixed. In various countries, the Bank has provided support to the agricultural health and food safety agency for decades, thus becoming a key actor on this issue in the region. Although the Bank has regularly incorporated lessons from its previous operations, weaknesses in the diagnostics of some issues have hindered project design and effectiveness. Implementation difficulties have led to redirecting funds to large investments in infrastructure that disburse quickly. Campaigns to control and eradicate pests and diseases have been largely successful, while results for institutional strengthening vary widely across the projects. It is too early to determine the effectiveness of traceability programs. The fiscal sustainability of some services provided by the agencies has been a challenge, hindered in part by insufficient economic analyses to support the development of financing schemes for the services that have characteristics of both public and private goods.



Enhanced land tenure security can yield a number of economic benefits, such as increased investment, credit, and productivity. It can also raise the number of land market transactions, increase property values, and reduce land conflict, among other benefits.

6 Land Administration and Regularization⁴⁹

Enhanced land tenure security can yield a number of economic benefits, such as increased investment, credit, and productivity. It can also raise the number of land market transactions, increase property values, and reduce land conflict, among other benefits. The economic literature has identified four reasons why a lack of secure property rights may have a negative impact on economic activity: (i) the risk of expropriation may act as a disincentive to investment in the property; (ii) people may channel resources into defending their property instead of productive activities; (iii) land exchanges are inhibited, preventing the land from being cultivated by those who are most productive; and (iv) land cannot be used as collateral in financial operations.

Regularization⁵⁰ of tenure can increase the level of security with respect to a piece of land. However, it does not necessarily do so, and it may even have deleterious effects. Land tenure security should be understood as the degree to which persons feel certain that no one will deprive them of their rights or benefits in relation to a land parcel that they own or control. Wherever the rule of law applies, the increased legal security stemming from regularization should lead to increased security of land tenure. However, where informal land tenure systems predominate and operate in a satisfactory manner, regularization may be irrelevant and may leave land tenure security unaltered. If done incorrectly, regularization could legitimize spurious property claims or encourage land grabs—with the consequence that people may lose their lands without appropriating the increase in value resulting from the regularization. Another potential negative effect is that a change in land use could have adverse environmental consequences, such as deforestation.

Regularization also provides an information input to the land administration system (LAS). A LAS may be understood as “the processes of recording and disseminating information about the ownership, value, and use of land and its associated resources.”

Accordingly, the land management paradigm of modern land administration theory⁵¹ sets out four essential functions of LASs (land tenure, valuation, use, and development), all of which may benefit from the information obtained during the regularization process—especially, of course, the land tenure administration function.

The Bank has consistently promoted the consolidation of a modern and integrated land administration system. In all four country-experiences reviewed, the Bank sought to establish a complete multipurpose cadaster and a complete territorial registry that would work closely together using integrated information systems. The extent to which this was achieved varied greatly and depended mostly on the countries' institutional frameworks. In the countries where the projects were able to support permanent institutions (Belize and Colombia), progress toward establishing modern LASs was greater and seems more likely to be sustainable.

The Bank's work on land regularization and administration has provided both public and private goods. Countries' LASs are public goods. Hence, the Bank's work to modernize them also represents a public good. This includes many of the outputs of land regularization, such as the updated information on land use and tenure as well as the demarcation of state lands. At the same time, the main outputs of regularization—the updated cadastral survey and registration of individual parcels of land—constitute private goods. For this reason, a few projects (in Colombia and Peru) tried charging beneficiaries some fee to at least partially cover costs. However, the experience showed that charging such a fee could jeopardize the completeness of the regularization, partly reflecting the fact that the majority of beneficiaries had low incomes.

An OVE evaluation in 2013 compared four countries' experiences with Bank-financed projects that focused on supporting land regularization and the modernization of the countries' LASs. Since its creation, the Bank had financed projects with colonization, settlement, or agrarian reform objectives, but since the 1980s land projects started concentrating on strengthening property rights. The evaluation selected the experiences of four countries that had received Bank financing for various projects involving both regularization and strengthening of the LAS. Belize, Colombia, Panama, and Peru were selected as country case studies because they were the countries where the Bank had financed the largest number of land projects (directly linked as different phases of a program), and where projects were mostly concluded. The selection included 9 projects from a total of 25 eligible projects.⁵²

A. DESIGN

Bank projects worked on all types of activities related to building a modern LAS. A modern LAS requires an adequate legal framework, an institutional organization with clearly delimited functions, and close collaboration—or even integration—among the institutions involved. These institutions need to be efficient and effective at performing four main administrative functions: land tenure, valuation, use, and development. To try to

build LASs with those characteristics, projects worked on various fronts: legal framework, institutional organization, land-use planning, institutional strengthening, regularization, and fiscal framework. All these areas of work are highly relevant, and the Bank did well to work on them regardless of their complexity—as in institutional organization, for which major political support is necessary to produce important changes.

The reviewed projects did not include important diagnostics, such as on the extent to which the legal framework allowed regularization. It is important to ensure that the legal framework permits planned regularization activities. To this end, a diagnostic assessment of local legislation should always be carried out, and any necessary reforms implemented before regularization begins. Although the projects reviewed did not include a diagnostic of the legal framework, the problems posed by the framework were resolved through presidential decrees (in Peru) or through specific activities in the second phase of the program (in Panama). It should be noted that in Belize and Panama the first operation approached regularization as a pilot program through which potential problems (including legal ones) could be identified. Furthermore, the first operations in the four countries were among the first of this kind that the Bank had prepared; this suggests that lack of experience could have been the reason that none of them included work related to the legal framework.

Insufficient diagnostics created difficulties during implementation, affecting efficiency and effectiveness. All projects lacked sufficiently detailed diagnostics of land tenure conditions in the areas to be regularized. As a result, regularization works were typically faced with more difficult conditions than originally anticipated, thus making the projects more expensive and longer, and ultimately covering smaller areas (in Belize, Panama, and Peru). In turn, this reduced the efficiency and effectiveness of the projects.

Another common area of design weakness was that of the technologies employed. In other words, the specific features of the originally proposed solutions did not prove to be the most suitable for resolving the problems to be addressed. This happened with the information systems (in Belize), the regularization techniques (in Colombia and Peru), and even the legal contracts with which private firms were hired to do various tasks of the regularization (in Belize and Panama). In all these cases, changes had to be made during project implementation.

At the same time, the Bank consistently implemented participatory regularization methodologies and innovated various cadastral technologies. The participation of landowners is extremely important in mass regularization. Without it, the work can take much longer and be incomplete; more importantly, it may lead to errors that generate land disputes or formalize spurious land claims. The Bank anticipated these possibilities and included in all its projects regularization methodologies that involved the participation and validation of the affected communities at various steps of the process. The Bank also sought to improve cadastral surveying by reducing its costs, speeding it up, and increasing its accuracy through the introduction of new techniques such as GPS.

All projects reviewed had poor monitoring and evaluation provisions. At design, the projects based their monitoring on the information systems that would be designed and created as part of the LAS modernization activities. Since those systems are complex, they were never ready soon enough to allow proper monitoring of regularization activities. This created bottlenecks during execution, compromised the quality of the work, and contributed to the inability to exactly determine the number (and location) of regularized properties. Also, the projects did not have good evaluation provisions, even though the nature of the regularization work lends itself to making rigorous impact evaluations. Improving this aspect is crucial not only to assess the economic gains of the projects but also to check whether they are having negative consequences.

B. IMPLEMENTATION AND EFFECTIVENESS

Mass regularization and land administration projects take much longer than the typical Bank financing instruments allow, and their main activities should be staggered to avoid execution difficulties. The projects analyzed represent efforts of large magnitude. They imply substantial, time-consuming field work, difficult fiduciary and legal processes, and slow institutional change. As a result, the majority of them faced important delays. Part of the reason, however, has to do with the order in which the activities were undertaken (e.g., in Belize, Panama, and Peru the information systems that would process and control the regularization process were being developed at the same time as regularization took place and therefore were not ready to perform these functions). These projects' main activities need to be logically sequenced—that is, the successful realization of one depends on the completion of another—which calls for a long and sequenced, or at least staggered, approach.

There were also a number of weaknesses related to the implementation arrangements for regularization activities. In Panama, to proceed rapidly, several firms were hired to carry out cadastral surveys simultaneously in different areas, which complicated supervision and ultimately led to delays and low-quality outputs. In Peru, regularization works were assigned first to small local companies, then to teams of students and faculty from local universities, and ultimately to many small teams of private contractors. These teams made rapid progress and helped the projects surpass their regularization targets, yet the quality of their cadastral work is questioned by several Peruvian experts interviewed.

Most projects have regularized a large number of plots, and some positive economic impacts have been observed. In all countries but Colombia, the number of plots regularized was substantial for the country's size. In Belize, almost the entire northern half of the country was regularized. In Panama, all provinces had large areas regularized, although the work was not continuous and left many "holes" that were not regularized, and the targets were far from being reached. In Peru, regularization took place only in the Coast and Sierra regions, covering almost two million plots (Table 7.1). Impact evaluations of the projects implemented in Peru show positive effects on investment, land values, and hours worked by beneficiaries, while a less robust evaluation in Panama also finds increases in property investments.

In terms of institutional development, the results are mixed. In Belize, an efficient, robust, and comprehensive information system was established to support all the functions of the LAS. Colombia's cadaster was greatly strengthened through technical capacity building and a new information system that has begun to integrate with the Registry. In Panama, a new institution—Autoridad Nacional de Tierras—that concentrates all cadastral functions in the country was founded as a result of the Bank's collaboration. In Peru, no institutional work was done other than strengthening of the temporary institution that was in charge of executing the program but has now been absorbed by another permanent institution.

The sustainability of these results depends critically on the institutions of the LAS. In Belize, there is low human resource capacity to operate and feed the new information system with high-quality data. In Panama, the new Autoridad Nacional de Tierras still has very little institutional capacity, and the LAS maintains the characteristics that gave rise to land tenure informality. The same happens in Peru, where the projects made big strides in regularization but did not change the incentives for informality or strengthen the institutions that make up the LAS. In Colombia, nothing can be said regarding the sustainability of the few plots that were regularized. However, its cadaster seems to have achieved financial autonomy, which gives sustainability to the progress made in the institution.

C. SUMMARY

In sum, the Bank has invested important resources in land regularization and administration, an area of work that is highly relevant in the region. The Bank's work was comprehensive, addressing the foundations of the LASs and all of their functions, and embarking on mass regularization. Other positive aspects of this work have been the use of participatory regularization methodologies to minimize potential problems and increase beneficiaries' satisfaction. Also, the Bank innovated with different cadastral technologies to reduce costs, save time, and increase the quality of the work. With regard to results, large numbers of plots were regularized in three countries, and in the fourth an important institutional development was achieved.

Need for continued improvements was noted in several areas. First, because diagnostics of the countries' legal frameworks and land tenure conditions were poor, regularization was slow and incomplete. Second, monitoring and evaluation provisions were poor, with the former relying on information systems that began to be developed at the same time as the regularization took place, which also created execution bottlenecks and even jeopardized the integrity of the information collected. Third, the sustainability of most achievements is at stake because the incentives that gave rise to informality are still present.



Projects providing direct support to producers have been at least partially relevant and effective in many instances, though their long-run sustainability is questionable.

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Conclusions and Recommendations

The Bank's support to agriculture in LAC during 2002-2014 continued the declining trend from previous periods. Between 1990 and 2001, 103 loans worth about \$6.2 billion were approved, whereas between 2002 and 2014, 83 loans worth about \$3.9 billion were approved. The share of loans classified as "AG" in the Bank's total portfolio declined from 5.3% to 2.8% between the two periods, and TCs displayed a similar trend.

However, the Bank's support to agriculture is larger than what is formally classified by the Bank. In addition to the 83 "AG" loans, OVE identified another 167 loans, classified in other sectors, that likely made some contribution to agriculture—the "Other" sectors portfolio. It is difficult to determine the precise share of these loans that benefit the agriculture sector specifically, but they are likely to have made an important contribution.

A large part of the "AG" portfolio focused at least in part on the provision of private or mixed goods, whereas the "Other" sectors portfolio provided mostly public goods. Together, their main objectives were increasing productivity and access to markets. A majority of the operations in the "AG" sector portfolio provided some type of direct support to producers that face various barriers to technology adoption and access to markets. Much of this support has been technical assistance, but it has also included subsidies for the purchase of private goods, such as agricultural machinery and equipment. A smaller number of projects supported investment in agricultural services, such as agricultural health and food safety, technological R&D, land administration, and statistics and information. These services are primarily public goods, though some include private goods. The "Other" sectors portfolio has been primarily concentrated on the provision of public infrastructure, a key public good.

In general, the portfolio has been aligned with the Bank's strategic documents, though going forward the substantial amount of Bank support for the provision of private goods may need some adjustment in light of the emphasis that the 2013 SFD on Agriculture and Natural Resources Management places on public goods. IDB's financing of private

or mixed goods has generally sought to achieve greater sector productivity. Still, going forward, the SFD's emphasis on public goods and the portfolio's substantial work on private goods imply that the Bank will need to strengthen the rationale for investments it makes in private and mixed goods.

The "AG" sector portfolio is only one of several sectors with relevance for food security, even though the IDB9 Agreement focused the Bank's efforts to increase food security on agricultural productivity. Food availability---an issue than mainly concerns the agriculture sector---is not generally the major challenge for food security in LAC. The central challenge is rather access to food, which is closely related to poverty. OVE found that most of the Bank's "AG" loans approved between 2002 and 2012 were not explicitly poverty-targeted, and the practice in the Bank since 2012 of automatically classifying all agricultural projects as poverty-oriented overstates the degree of poverty focus.

The specific projects reviewed by OVE have achieved mixed results. Projects providing direct support to producers have been at least partially relevant and effective in many instances, though their long-run sustainability is questionable. Some projects supporting agricultural health and food safety have had positive results, though the fiscal sustainability of some services provided by the agencies has been a challenge. Projects supporting land regularization and administration have been comprehensive, addressing the foundations and functions of the land administration systems and embarking on mass regularization. Sustainability is likely to be an issue, however, to the extent incentives for informality still exist.

The Bank's work could be enhanced by deeper diagnosis of problems and their root causes. Some diagnoses are systematically done with sufficient care and rigor—for example, the determination of production technologies that would be most useful to agricultural producers. However, for some projects OVE found that other important diagnostic work was insufficient. The projects OVE reviewed that provide direct support to producers could be enhanced by better addressing the root causes of problems facing producers, which would increase the likelihood of project sustainability over the long run. The projects only temporarily reduce or eliminate the factors that inhibit technology adoption and access to markets. Once the projects end, producers face the same structural conditions that used to prevent them from adopting technologies. The effects of these projects, therefore, are unlikely to be sustainable over the long run—that is, further adoption of new technologies are unlikely to occur except in exceptional cases when the intervention is large enough to place the beneficiaries on a positive, self-reinforcing path.

Bank projects have increasingly included provisions for impact evaluations but could benefit from continued efforts to strengthen monitoring and evaluation. It must be acknowledged that the Bank has increased its use of impact evaluations, most notably for projects providing direct support to agricultural producers. Planning those evaluations and collecting data from the start of a project – not always done in the past -- will help to ensure robust evaluations. In addition, better indicators with specific targets for all expected types of benefits would strengthen results matrices.

In light of the findings of this evaluation, OVE has the following recommendations for management going forward:

1. In the 2016 update of the SFD on Agriculture and Natural Resources Management, delineate clear criteria to guide any Bank financing of private goods. The relevance and development effectiveness of the Bank's operations would benefit from clearer guidance regarding the definition of public and private goods and the circumstances under which the financing of private goods or services is justified. Such guidance should also promote coordination among the various divisions whose projects provide private goods to avoid unproductive overlaps and take advantage of potential synergies. This evaluation highlighted two specific areas in which such issues could usefully be addressed:
 - a. For direct support to producers, which economic conditions—for example, market failures—justify the financing of individual subsidies for goods and services, and what are the appropriate relative and absolute magnitudes of such subsidies;
 - b. For agricultural health and food safety services, what cost recovery mechanisms should be established for private or mixed goods and services provided by the agricultural health and food safety institutions, and what economic conditions would warrant subsidizing these goods and services.
2. Promote a comprehensive and coordinated multi-sector approach to food security through the upcoming SFD on Food Security. Such approach would allow the Bank to continue to support agricultural productivity and food availability while also addressing access, utilization, and sustainability issues.
3. Adjust the project classification system in the Bank to more accurately reflect the contributions of the agriculture portfolio to poverty reduction. Automatic classification of all “AG” operations to “Poverty Reduction and Equity Enhancement” is not accurate and should end. Even if the Bank follows the IDB9 Agreement that classifies all support to small farmers as poverty-oriented (which is itself not entirely accurate), it is still the case that many but not all the Bank's agriculture projects support small farmers.
4. Ensure adequate upstream diagnostic work to fine-tune project identification and design. Alternatively, begin with a pilot project that acts as a diagnosis phase. Thorough upstream analysis can help Bank staff and counterparts fully understand the nature and root causes of structural problems, and in turn steer the Bank's support toward a more sustainable focus on such root causes. If information is unavailable for such analysis, it may be worthwhile to conduct a pilot phase and evaluate it before engaging in a full-scale project.
5. Continue enhancing monitoring and evaluation to promote learning and long-term effectiveness. The Bank has made significant efforts to improve project evaluability and conduct impact evaluations in recent years, and further efforts to define indicators, gather baseline data, and build evaluation designs in projects from the beginning will continue to add value.



Bank projects have increasingly included provisions for impact evaluations but could benefit from continued efforts to strengthen monitoring and evaluation.

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- ¹ The G-8 pledged \$20 billion to support sustainable agriculture development in its 2009 summit in L'Aquila, Italy. The G-20 has also prioritized support for sustainable agriculture development.
- ² See pp. 6-9 and Table 2.1 in RE-647.
- ³ Countries with four or more projects classified as agriculture approved during the evaluation period.
- ⁴ See Table 2.3 in RE-647. The thematic area of land administration and regularization was evaluated in 2013 (RE-410-1); its main results are summarized herein this report.
- ⁵ Among them, Argentina's INTA, Brazil's EMBRAPA, Colombia's CIAT, and Mexico's CIMMYT.
- ⁶ Moderate: Colombia, Dominican Republic, Ecuador, El Salvador, Guyana, Honduras, Nicaragua, Panama, Peru, and Suriname. Serious: Bolivia, Guatemala, and Paraguay.
- ⁷ It must be noted that these health problems may also result from high prevalence of diseases.
- ⁸ Sanitary and phytosanitary measures are based on the need to prevent pests and diseases from entering importing countries and to protect consumers from unsafe food imports, as well as on hidden protectionist motives (Caswell and Bach, 2007; World Bank 2005; Iacovone 2005).
- ⁹ In this chapter, all US\$ amounts are expressed in real terms (2014 dollars). Unless otherwise stated, the figures correspond to operations classified in the agriculture sector under the "AG" code, including SCF and OMJ operations but excluding MIF and IIC operations.
- ¹⁰ The same general phenomenon can be observed for reimbursable and non-reimbursable operations.
- ¹¹ In addition, the MIF approved 25 loan operations for \$26 million, and the IIC another 93 loans for a total of \$394 million.
- ¹² The three PBP's approved in Peru even included the design of a program providing direct support to farmers, and a PBP in Haiti included the design of subsidies to agricultural inputs to support the development of a competitive supply of inputs.
- ¹³ The PROSAP operations in Argentina are an exception.
- ¹⁴ See Annexes IV, V, VI, and VII.
- ¹⁵ And Peru, although it was not among the four countries selected for a case study.
- ¹⁶ According to SPD/SDV data, as of 2011 47% of "AG" sector loans included evaluations with randomized assignment of beneficiary and control groups, whereas the comparable figure for the Bank as a whole was 15%. OVE plans to conduct an evaluation of the Bank's impact evaluation work in 2016.
- ¹⁷ 11 projects (8 in the "AG" portfolio and 3 in the "Other" portfolio) from the Structured and Corporate Finance (SCF) Department are classified here, as the loan represents a direct support to one (corporate) producer.
- ¹⁸ Some irrigation infrastructure works are "club goods," meaning that they are public only to a limited number of people, whereas the rest of the population cannot benefit from them.
- ¹⁹ The analysis was carried out in early 2013, so it only included operations approved between 2002 and 2012.
- ²⁰ The recently approved Sector Framework Document on Support to SMEs and Financial Access (May 2014) includes a brief mention of agricultural insurance among its lines of action: "global credit programs with a particular focus on SMEs, startups, and young companies, and companies run or owned by women, including, for example, refinancing credit insurance, agricultural insurance, guarantee funds, support for seed capital and angel investors, and capital financed in general" (GN-2768, p. 41).
- ²¹ See Annex I for a detailed discussion.
- ²² OVE reviewed the following strategic documents: (i) IDB-9 (AB-2764), (ii) Agriculture and Natural Resources Management Sector Framework Document (GN-2709-2) y (iii) Social Protection and Poverty Sector Framework Document (GN-2784-3); (iv) Opportunities for the Majority Initiative (OMJ). Additionally, OVE reviewed the guidelines of the Food Security Fund and AgroLAC 2025.

- ²³ Emphasis added.
- ²⁴ Initially called the Food Price Crisis Response Fund, the FOD was created in 2008 in response to the food price spike to “provide rapid and effective assistance to Bank borrowing member countries most negatively affected by the increase in the price of foodstuffs, by financing non-reimbursable [technical cooperation] operations that directly assist the poorest and most vulnerable populations, increase the production of foodstuffs or address food crisis trade-related issues” (IDB 2008: GN-2486-4). In 2011 the FOD was renewed for another three years and dropped as an area of activity support for operations that directly assist the poorest and most vulnerable populations (IDB 2011: GN-2486-6). OVE recently evaluated this fund as part of the Bank’s Special Programs evaluation.
- ²⁵ The stability dimension was excluded from the classification exercise for two reasons: (i) this dimension is directly related to the other three dimensions and therefore projects that support sustainability are necessarily supporting one of the other three; and (ii) the majority of projects supporting the other dimensions have the intention to achieve sustainable results in the medium to long term and therefore contribute to the stability dimension.
- ²⁶ The 20 projects that do not have a potential direct impact on any of the dimensions correspond to policy-based loans, land regularization, and strengthening of information systems.
- ²⁷ See Annex II for a detailed discussion.
- ²⁸ *Mixed goods* refers to goods that have elements of both public and private goods.
- ²⁹ Anderson and Feder, 2004, p. 43.
- ³⁰ Altogether, there are 77 operations providing some direct support to producers. In many cases, it is only a brief technical assistance in the context of a project with objectives different from technological adoption or access to markets. Eleven are SCF projects financing large agricultural firms.
- ³¹ A fifth project, Agricultural Export Diversification Program (GY-L1007), was included in the sample, but the team could not visit the project because of unexpected events in the country.
- ³² See Annex A.2 for a detailed discussion.
- ³³ UCAR, 2012.
- ³⁴ Two impact evaluations of the project find positive impacts on productivity and production, among other outcomes. These results may be in many cases due to a partial adoption of technologies—for instance, some producers improved their crops by using water pumps to flood-irrigate their plots but did not use the sprinklers for more efficient irrigation; others used the machines without giving them basic maintenance, jeopardizing their durability. Acknowledging this weakness, a second phase of the operation (BO-L1096, in pipeline) plans to make much larger efforts in technical assistance.
- ³⁵ Operations DR-L1031 and UR-L1064, approved in 2010 and 2011, do include impact evaluation provisions.
- ³⁶ In this case, the benefits from both projects seem to have had a positive complementary effect (Gibbons, Maffioli, and Rossi, 2015).
- ³⁷ In terms of gauging implementation costs, the number of business plans seems a more adequate unit of analysis. However, it is important to mention that the business plans financed by PROSAP’s ANRs are for producer associations, and thus each has several individual beneficiaries (a total of 2,227 as of May 2015, according to the program’s webpage: http://www.prosap.gov.ar/ap_ResultadosAlcanzados.aspx).
- ³⁸ In APAGRO (NI-L1020) and PROVIAR (AR-L1063), technical assistance was provided to individual producers on several visits to their farms over the course of two or even three years.

- ³⁹ A few exceptions may exist. For instance, if technology adoption is mainly hindered by individual or social aspects, the experience induced by the project may be positive enough to motivate the adoption of other technologies in the future. Another possibility is that, in a situation where lack of financing is the main barrier, the financial gains derived from the technology adoption induced by the project are large enough to allow producers to self-finance future investments in new technologies.
- ⁴⁰ There may be fiduciary reasons why the Bank has required producers associations to be legally constituted; however, there are alternative mechanisms to reach these beneficiaries that do not require this legal hurdle.
- ⁴¹ The gain in relevance comes from the fact that lack of access to markets may be a barrier to technology adoption (Box 4.1).
- ⁴² In principle, projects should ensure that the beneficiaries from the technology adoption component are able to access markets in which to sell their recently increased production. However, this is not a pressing concern as the gains from the technology adoption component seem to be rather modest.
- ⁴³ See Annex III for a detailed discussion.
- ⁴⁴ Represents the value of the components supporting agricultural health and food safety.
- ⁴⁵ These barriers are referred to as sanitary and phytosanitary (SPS) measures.
- ⁴⁶ Seven of the 11 projects supporting agricultural health and food safety approved after the Bank's Realignment in 2007 focus solely on this issue, compared to one of the six approved prior to the Realignment.
- ⁴⁷ The Agrifood Health and Safety Program in the Dominican Republic (DR-L1048), evaluated in the most recent CPE, is an example that includes analysis of rejections of exports and their reasons.
- ⁴⁸ An exception is a study published in 2012 by RUTA financed through the technical cooperation RG-T1753, whose objective was to improve the management of animal health in the agricultural health institutions in Central America and the Dominican Republic and facilitate sub-regional harmonization.
- ⁴⁹ See RE-410-1 for a detailed discussion.
- ⁵⁰ Since there is no agreed definition of the term regularization, for the purposes of this evaluation it include all activities related to cadastral surveys, adjudication, titling, and registration with the purpose of making land tenure in a given territory comply with the law.
- ⁵¹ See Williamson, et al., 2010.
- ⁵² See RE-410-1, chapter 3, for more details.