

INDEPENDENT EVALUATION GROUP

Promoting Azerbaijan's Agricultural Productivity (1997—2010)

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Keith R. Oblitas



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Abbreviations

AAA	Analytical and advisory activities
ADCP	Agricultural Development & Credit Project
AZN	New Azerbaijan Manat
AZRIP	Rural Investment Project
CAS	Country Assistance Strategy
CDD	Community-driven development
CEM	Country Economic Memorandum
CIS	Commonwealth of Independent States
CPS	Country Partnership Strategy
DO	Development Objective
FPP	Farm Privatization Project
GDP	Gross domestic product
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IDSMIP	Irrigation Distribution System and Management Improvement Project
IEG	Independent Evaluation Group
IFC	International Finance Corporation
KfW/GTZ	German aid agencies
M&E	Monitoring and evaluation
NGO	Nongovernmental organization
MI	Monitorable indicator
PAD	Project Appraisal Document
RAC	Regional Advisory Center
RERP	Real Estate Registration Project
RIDIP	Rehabilitation and Completion of Irrigation and Drainage Infrastructure Project
WUA	Water users' association

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Preface

This is a country case study prepared as background for the Independent Evaluation Group's (IEG) recent review of the World Bank Group's effectiveness at promoting agricultural growth and productivity: *Growth and Productivity in Agriculture and Agribusiness – Evaluative Lessons from World Bank Group Experience* (2010). This case study reviews the Bank Group's performance over the entire agricultural portfolio in Azerbaijan, including projects, sector analysis and agricultural strategy, to provide a country-wide perspective for the overall study of the Bank's impact on agricultural productivity. (The overall study also includes other methodological sources such as portfolio analysis across all regions of projects and sector work, stakeholder interviews, and previous IEG evaluations of projects and country assistance strategies.)

Azerbaijan, one of the Commonwealth of Independent States, declared Independence in 1991, after which the highly subsidized and centrally managed agricultural support system of the Soviet period collapsed. By 1997 the already low productivity of Soviet agriculture had declined to about 60 percent of Soviet levels, seriously affecting the welfare of Azerbaijan's rural families, as well as the economy overall. In the mid 1990s, a new government decided to embark on a far-reaching agricultural reform program, centered on equitable distribution of collective lands for private ownership of the rural families. This would also be accompanied by efforts to establish critically needed support services such as agricultural extension and credit.

The World Bank Group has provided significant support to the reforms, starting at the beginning of the reform program by helping pilot field implementation of the land privatization program, and progressively building up a portfolio of projects to develop key support services such as agricultural extension and credit, training, research, irrigation, land registration, community managed village infrastructure and rural banking. The effectiveness of this project portfolio in supporting a difficult agricultural reform program, and the degree to which policy dialogue has helped the direction of reforms is thus of interest.

The paper is in sections corresponding to issues and questions covered by the overall report.

The case study is based on review of Bank and other documents, relevant literature and studies of Azerbaijan; interviews with Bank Group staff, government, donor agencies, farmers, and private and nongovernmental organization sectors; and the findings from field visits and discussions of an IEG mission to Azerbaijan in December 2008. Relevant findings from an IEG review mission in October 2007 of two of Azerbaijan's agricultural projects have also been used for the study. The study was updated in 2010 through review of more recent documents and discussions with Bank staff currently involved with Azerbaijan's agricultural sector.

This report was prepared by Keith Oblitas (Consultant) in association with Nalini Kumar (Task Manager) and Marie Charles (Administrative Support). Monika Huppi (Manager, Sector Evaluations, IEG) reviewed the draft report. The peer reviewer was Csaba Csaki. Comments on the draft report were also provided by the Europe and Central Asia Region and have been taken into account in the final report.

Summary

Study Objectives and Report Structure

The objective of this study is to evaluate the World Bank Group's (the International Bank for Reconstruction and Development [IBRD], the International Development Association [IDA], and the International Finance Corporation [IFC]) effectiveness in promoting growth in agricultural productivity in Azerbaijan, and to derive lessons that may be relevant for the Bank Group's future engagement. The study covers the Bank's agricultural lending and analytical portfolio from 1997 when the first agricultural project was launched, to 2010. The main questions that the study aims to answer are: what are the constraints to higher agricultural growth in Azerbaijan? What has the Bank done, in lending, analytical work and policy dialogue, to mitigate these constraints and to exploit growth opportunities? What has been the impact on agricultural productivity and how could impact be improved? And finally, what conclusions emerge from the study that may be relevant to the Bank's future engagement in Azerbaijan's agricultural sector.

The report begins (Section 1) with an overview of agriculture's role in Azerbaijan's economy, the strategic need for increased agricultural growth and the technical, economic and policy constraints impeding growth. The Bank's lending program and analytical work are reviewed in Section 2, and the impact on agricultural productivity is assessed in Section 3. Section 4 considers how enhancing environmental management, social welfare and agricultural growth can be mutually complementary. Sections 5 and 6 review cross-cutting aspects of the Bank's work in Azerbaijani agriculture, including the Bank's effectiveness as an innovator and as a partner with the government in agricultural reform; while Section 7 assesses the impact of the Bank's own institutional structure and practices on its operational effectiveness promoting agricultural growth. Concluding the report, Section 8 highlights the main areas where the Bank could have had greater impact on the country's agricultural productivity, and the lessons thereby emerging for the Bank's agricultural role in Azerbaijan in future years.

Study Findings

Although the "oil boom" that commenced in the 1990s still dominates Azerbaijan's gross domestic product and exports, agriculture is the base of the country's employment and non-oil economy. Some 40 percent of the nation's workforce is engaged in agriculture compared with only 2 percent of employment in the oil sector. Agriculture's contribution to gross domestic product and exports is also significant. In 2007, the combined agriculture and agro-industries sector contributed about 35 percent of the economy's non-oil value added, and about 30 percent of non-oil exports. Agriculture's size in the economy means that it will need to take a lead role in taking up the slack that will be left as the oil sector declines. Not least, agricultural growth will be important for poverty reduction. The welfare of the rural poor has improved over time due mainly to agricultural growth, but the incidence of rural poverty in the mid 2000s was still over 25 percent.

The potential for high agricultural growth is considerable. While yields have improved, they are still low (wheat at 2.6 tons/ha and potatoes 14 tons/ha) with good scope for increase. Diversification from cereals to higher value crops such as fruits and vegetables is ongoing but can advance still further. The country has a remarkably varied climate ranging from Mediterranean in the south to temperate in the north, and such features have given Azerbaijan a comparative advantage over neighboring countries in horticultural (fruits and vegetables) produce. The country has also privatized the former collective farms of the Soviet period by allocating the land to rural families thus providing the base for development of a commercialized farm sector and land market.

However, this potential is constrained. The land reforms brought in a completely different agricultural environment than that found under the collectives. Some 870,000 family farms had been established by the land reforms. These neophyte farmers had minimal agronomic knowledge, no sources of agricultural advice, no access to credit, and a collapsed centrally managed marketing system. All of these services had to be created. Further, investment in the agriculture sector was low—only 3.5 percent of the state budget and only one percent of foreign direct investment in 2006. The low investment has in turn affected rural infrastructure. Marketing and processing infrastructure is minimal, the irrigation systems are dilapidated, and investment in rural roads has been well short of the country's needs.

Inappropriate agricultural policy has added to these constraints. The most recent government policy (2008) has limited discussion on strategy and is mostly a largely directive and “supply side” set of proposed actions without prioritization and little connectivity between actions. Further, the policy sees subsidies on wheat production, fertilizer and other inputs as primary tools to stimulate productivity. In the early 2000s the cost of these subsidies was about 15 times the total agricultural foreign aid to Azerbaijan, possibly taking both attention and funding away from key needs such as building agricultural support services and rehabilitating irrigation, and reducing incentives for diversification of crops in favor of the low comparative advantage cereals. The overall level of agricultural subsidization—an aggregate measure of support of 15 percent—was also over the 10 percent limit allowed by the World Trade Organization, thwarting Azerbaijan's attempt to become a member.

The impediments to exporting at Azerbaijan's borders have been particularly critical. Complex government procedures and regulations have provided opportunities for rent seeking, to the extent that Azerbaijan is ranked in the World Bank's 2011 *Doing Business* report as the 177th country of 183 countries in the “trading across borders” category. The report also comments that exporting goods requires nine documents, 43 days and nearly \$3,000 per container, far greater than in other Europe and Central Asia countries. Agriculture is particularly vulnerable to such barriers because of the perishable nature of its produce. It is in horticulture where Azerbaijan has its highest comparative advantage. And agriculture, as the main non-oil exporter, will need to shoulder a large share of the forty-fold increase in non-oil exports that will be needed to make up for declining oil revenues. Agricultural growth and exports are, thus, one of Azerbaijan's most critical needs.

The Bank's involvement in Azerbaijan's agricultural sector has been dominated by a “projects orientation” with sector analysis, strategic considerations and policy dialogue in a distinctly

secondary role. Nevertheless, although because of these gaps the Bank has had less impact than it might have had, the portfolio has been responsive to a number of the constraints above. Lending commenced well with the Farm Privatization Project (FPP) approved in FY97 followed by the Agricultural Development and Credit Project (ADCP) in FY99. FPP piloted the equitable distribution of land on six collective farms to private ownership by collective members and other local families. Using experience from these pilots, Azerbaijan launched a nationwide land privatization program, which was 95 percent completed within the next four years. Azerbaijan's land reform program was one of the most successful amongst the former Soviet new nations due to a combination of features: (i) land was fully privatized as opposed to the often incomplete actions taken by other nations (such as distribution of land “shares” but without allocating specific land parcels, or renaming a collective as a cooperative or with other nomenclature without fundamental change); (ii) land distribution was equitable and transparent, involving the community and with land areas determined by family size; (iii) land rights were fully transferable; (iv) an effort was made under FPP and ADCP to provide a parallel package of support services such as agricultural extension and credit; and, (v) the land allocation process was rapid and without intermediate steps.

A second phase of agricultural lending—from 2000 to this day—marked a build-up of agricultural services. Five Bank and two IFC projects were approved. ADCP continued with a second phase project (agricultural extension, credit including a financing line for agribusinesses, and a competitive grants scheme to encourage innovations); two irrigation projects were approved, mostly supporting rehabilitation of lower-level distribution systems and the development of water user associations; a Rural Investment Project (AZRIP) supporting community-driven construction of small village infrastructure (such as an access road, potable water, small-scale irrigation) was initiated; a land registration project is underway taking over from the land administration activities of the ADCP program; and two IFC projects are financing, respectively, expansion of rural lending activities by a commercial bank, and development of a marketing chain for horticultural produce. Other than the FPP, first phase of ADCP, and the first two irrigation loans, all of these projects are ongoing. The 2011–14 Country Partnership Strategy proposes continuation of most of the support services by means of a third phase of the ADCP program, a second AZRIP project, and a third irrigation project.

The projects could have done more to integrate environmental management and social inclusion. Approaches to social and environmental matters are typically “neutral” —for instance, ensuring a “level playing field,” where women and poorer families have the same rights to credit, extension and training as men, or where “no harm” is considered enough in environmental management. However, there is evidence from Azerbaijan and other countries that this is not always enough. For instance, a common finding is that women and poorer persons may be culturally less comfortable participating in meetings or taking institutional credit. Two examples illustrate the existing scope for a more proactive approach. First, in Azerbaijan itself, ADCP was designed to include a microfinance scheme providing loans without collateral to small groups of poor farmers based only on their “moral commitment.” The loans (which had a 95 percent reimbursement rate, nearly as high as ADCP’s credit unions) enabled these poor farmers, of which a high proportion were women, to invest in

seasonal inputs and livestock thus both increasing agricultural productivity and improving their welfare. Also, faced with severe overgrazing, Azerbaijan could learn from other countries such as the Kyrgyz Republic where management of pastures by communities has both improved pasture quality and enabled higher stocking intensity. These examples illustrate the opportunities for Azerbaijan to adopt “win-win” development activities wherein improvement of the environment, social welfare and agricultural productivity are mutually supportive.

As there has been very little agricultural sector analysis and policy dialogue over the past decade, the Bank's influence on agricultural productivity will have been restricted to the lending program. Nevertheless, while data are limited, the impact of these projects is positive. For instance, in a survey of ADCP farmers, the farmers increased their wheat yields over a four-year period by 32 percent whereas the control group—non-ADCP farmers, increased yields by only 10 percent. Other crops also had significant yield increases: potatoes 47 percent for project farmers and 29 percent for non-project farmers, vegetables 31 percent project and 11 percent non-project, and milk 26 percent project compared with 13 percent non-project farmers. The influence of the irrigation projects seems to have been mainly in the dramatic change to higher value diversification crops that irrigated land can support. Thus, under the Irrigation Distribution System and Management Improvement Project, from 2006 to 2009 crop area under diversification crops increased from 51 percent to 86 percent. Under AZRIP, while there is no quantitative data on productivity impact, a survey found that 90 percent of villagers considered that their living standards had improved as a result of the project.

National level data are consistent with the project level findings. Most of the main agricultural commodities show yield increases, and diversification (to vegetables and fruits) is pronounced. Growth in national agricultural value added reflects these changes. Three periods can be considered. In the aftermath of Independence, from 1990 to 1996, there was, as with other Commonwealth of Independent States (CIS) countries, a freefall in agricultural output—a decrease in national agricultural value added of nine percent per annum in Azerbaijan's case. Then, in the 1997–00 period—the land privatization program that commenced with FPP—the decline was reversed and there was a growth spurt of 8.6 percent per annum. Finally, in the 2001–06 period, annual agricultural growth averaged 5 percent. Of interest is that Azerbaijan's agricultural growth since 1997 has outperformed average agricultural growth in the other CIS countries. Azerbaijan's privatization-period spurt in agricultural growth compares with only 1.4 percent per annum growth of the CIS countries in the same period, and the CIS countries' agricultural growth after 2001 of 3.7 percent per annum is outperformed by Azerbaijan's 5.1 percent annual growth.

In summary, project and national data indicate that the Bank projects have helped stimulate a robust revival of agricultural growth in Azerbaijan. Each project has been useful, addressing a priority for agricultural development, and the impacts from each project are likely to be more significant over time as each support activity scales-up. Nevertheless, the Bank's impact on agricultural productivity could have been larger. Periodic review of the agricultural sector's strategic issues and a continuous policy dialogue with the government has been and continues to be a key need. However, no agricultural review was conducted

throughout the 2000s and policy issues have tended to persist. The same gap is found in the Bank's general strategy documents. It was not until the 2009 Country Economic Memorandum and 2010 Country Partnership Strategy for FY2011–14 that agriculture received more than cursory attention.

At macro levels, more engagement with the government on agricultural sector policy might have had greater influence than appears to have been the case in, for instance, the government's new agricultural policy of 2008. Major issues are at stake—from public expenditure priorities, contrary incentives for agricultural diversification, and Azerbaijan's entry in the World Trade Organization. The strategic need for agricultural growth to promote agricultural marketing, agro-processing and exports and the policies and enabling investment to achieve this could have been more systematically addressed. Similarly, border trade issues are only beginning to receive significant attention. The persistent mismatch between credit terms and farmer needs (seasonal credit is over too short a period for farmers, and often arrives much too late) has not been resolved. Actions requiring coordination between government institutions or Bank units have often been insufficient—as examples, dialogue on rural roads between agriculture and transport sectors, or providing agricultural extension to new water user associations in the irrigation program. And issues such as the low levels of public and private investment in agriculture could also have been addressed.

The World Bank Azerbaijan agriculture program could also seek closer interaction with development partners. In part this would be to harmonize implementation modalities for the same activity across all agencies. But the most significant gain would be in coordinating complementary use of the different strengths of each entity. This would also be where closer linkage between the IFC and IBRD/IDA on policy matters, development of the lending program, and project implementation would be to mutual advantage. IFC's support to rural banking and agricultural marketing are clearly appropriate thrusts. But the ADCP, AZRIP and irrigation programs might, for example, be able to support a rapid expansion of horticultural production around an IFC supported processing plant.

Lending and sector work alike could benefit from a much sharpened focus on outcomes, the results chain to achieve such outcomes, and the monitorable indicators and M&E to take stock of progress towards the outcomes. This has been deficient across all of the projects. Common gaps have been to present an output as the outcome (land registrations achieved—but to what end?), lack of or inappropriate indicators, with little reference to project objectives, and monitoring and evaluation systems that have not focused on the objectives.

A stand-out quality of the Bank's work in Azerbaijan's agriculture sector, across all projects and Bank teams, has been its strong performance as an innovator and in the transfer of technical knowledge. This has been both in technical matters (for instance, digitized data systems in land administration) and in transfer of good practice from elsewhere. Practically all activities (whether agricultural extension, veterinary services, credit, water user associations, community-driven development or other innovations) were new to Azerbaijan. Introduction required the relevant specialist skills and experience, dialogue, piloting, and adaptation as experience was gained. In Independent Evaluation Group discussions in Azerbaijan, the Bank's role as an innovator and catalyst of change was frequently cited as its

most valuable contribution to agricultural development. Knowledge transfer will continue to be needed—all projects can benefit from enhanced technologies and adaptations as experience is gained. But this is far from enough. The injection of agricultural sector analysis, development of sound strategies and ramped-up policy dialogue with the government will likely make a yet larger impact on agricultural growth.

Conclusion

With its oil revenues and recent transition from IDA to IBRD lending terms, financial incentives to continue borrowing from the Bank appear marginal. Nevertheless, the government highly values the technical assistance that the Bank has provided—in effect, the Bank Group's role as a “knowledge bank.”

Although there have been some weak aspects, each of the Bank's agricultural projects has performed well or moderately well. Each project has occupied a relevant development niche, and overall, the lending portfolio has played an important role in introducing and scaling up new agricultural services and has helped increase agricultural productivity. But the agricultural projects, good as most have been, could have had greater impact on agricultural productivity, and the Bank could have done more to guide agricultural policies to achieve better growth. In short, the Bank's impact on agricultural productivity was good, but below potential. In part this was because, as projects have been designed and implemented with little connection to other projects, impact has been limited to the sum of the impacts of the individual projects. With more focus on strategy, priorities, interlinkages, synergies, coordination and monitoring, the combined impact of lending on agricultural productivity would have been greater than this. And most importantly, if agricultural sector analysis and policy dialogue had been at the forefront, the Bank would have had a more influential voice in the formulation and adjustment of government agricultural policies and development strategy.

The findings of this study suggest a number of areas where the Bank could have enhanced its impact on Azerbaijan's agricultural productivity in the 1997–2010 period. These lessons, which are expressed below as of the situation in the last year of the study (2010), can also provide pointers for the Bank's agricultural role in Azerbaijan in future years.

The main areas where the Bank could have had greater impact on agricultural productivity in Azerbaijan were by:

- (i) Boosting agricultural analysis and policy dialogue. Prioritizing and improving the quality of the project portfolio, tackling sector and policy issues affecting project performance, and engaging with the government to help resolve policy issues and to steer a sound agricultural strategy.
- (ii) Recognizing priorities, in particular—
 - Removing export barriers
 - Promoting agri-businesses, processing and market chains
 - Promoting innovations by additional knowledge transfer activities.
- (iii) Focusing and monitoring the lending program. Project objectives were seldom explicitly focused on agricultural productivity, even when project design indicated

- that this was the implicit objective. Monitorable indicators needed to reflect the project objectives, and monitoring and evaluation needed to assess achievements against these indicators.
- (iv) Coordinating complementary activities. Linkages could have been improved between sector units, between agricultural task teams and their respective projects, between IFC and IBRD/IDA, and between the Bank Group and other donors.
 - (v) Facilitating higher investment. The shares of agriculture investments and services in public expenditure, foreign investment and combined donor funding have been low relative to the agricultural sector's significance in the economy. Policy dialogue could have considered higher government and donor expenditures, and special measures to improve the entrepreneurial environment in aspects specific to agroprocessing, agricultural input supply and marketing of fresh produce.
 - (vi) Developing win-win environmental, gender and poverty alleviation approaches. Community pasture management, credit for borrower groups in poor communities, community mobilization approaches for village infrastructure, agricultural extension training in topics of particular interest to women, and measures to involve women in water users' association management are activities where social and environmental improvements can also improve agricultural productivity. There were good initiatives, but also scope for scaling-up and for further initiatives.
 - (vii) Adjusting staff incentives and operational budgets. Meeting the challenges above would have needed a greater emphasis by the Bank on the "software" (sector analysis, policy dialogue, development strategy, interlinking with other agencies and knowledge transfer) aspects of Azerbaijan's agricultural development. More recognition was needed (and related budgetary and staff resources) that proactive policy dialogue and sector analysis was as valuable as lending.

Introduction: Promoting Azerbaijan's Agricultural Productivity: 1997–2010

STUDY OBJECTIVES

The objective of this study is to evaluate the World Bank Group's (International Bank for Reconstruction and Development [IBRD], International Development Association [IDA], and International Finance Corporation [IFC]) effectiveness in promoting growth in agricultural productivity in Azerbaijan, and to derive lessons that may be relevant for the World Bank Group's future engagement in Azerbaijani agriculture. The study covers the World Bank's entire agricultural lending and analytical portfolio, and the full period of the Bank's involvement with Azerbaijan's rural sector, commencing in 1997 when the first agricultural project was launched, to 2010.

The main questions that the study aims to answer are the following: What are the constraints to higher agricultural growth in Azerbaijan? What has the Bank done, in lending, analytical work and policy dialogue, to mitigate these constraints or respond to opportunities? What has been the impact on agricultural productivity? What are the cross-cutting features in how the Bank has applied itself to enhancing agriculture sector growth, what worked or did not work, and how can impact be improved? And finally, what conclusions emerge from the study that may be relevant to the Bank's future engagement in Azerbaijan's agricultural sector.

The report begins (Section 1) with an overview of agriculture's role in Azerbaijan's economy, the strategic need for increased agricultural growth and the technical, economic and policy constraints impeding growth. Section 2 reviews the Bank's lending program and analytical work, and considers the appropriate balance between lending and analytical activities. Section 3 assesses the Bank's impact on agricultural productivity, and Section 4 considers how environmental management, social welfare and agricultural growth can be mutually complementary. Sections 5 and 6 review cross-cutting aspects of the Bank's work in Azerbaijan's agriculture sector, including the Bank's effectiveness as an innovator and as a partner with the government in agricultural reform. And Section 7 assesses the impact of the Bank's own institutional structure and practices on its operational effectiveness promoting agricultural productivity. Concluding the report, Section 8 highlights the main areas where the Bank could have had greater impact on the country's agricultural productivity, and the lessons thereby emerging for the Bank's agricultural role in Azerbaijan in future years.

1. Agricultural Production and Constraints

AGRICULTURE IN AZERBAIJAN'S ECONOMY

1.1 Economic significance. Although the “oil boom” that commenced in the 1990s dominates Azerbaijan’s GDP and exports, the agricultural sector is the base of the country’s workforce and non-oil economy. Particularly significant is the role of agriculture in employment. Some 40 percent of the workforce is engaged in agriculture compared with only 2 percent of employment in the oil sector. Agriculture’s contribution to GDP and exports is also significant. In 2007, the combined agriculture and agro-industries sector contributed about 35 percent of the economy’s non-oil value added, and about 30 percent of non-oil exports. Growth in agricultural GDP has been quite variable between years, but averaged 5.4 percent per annum in the 2000–08 period.¹ (The trends in agricultural growth are examined further in Section 3.)²

1.2 Importance for poverty reduction. With most of Azerbaijan’s oil resources expected to be used up in the next ten years, agriculture will need to remain a key contributor to employment and national income, and to be one of the sectors that can take up the slack left by the declining oil sector. Not least, agricultural growth will be important for poverty reduction. The welfare of the rural poor has improved over the last several years, partly due to increasing agricultural productivity and partly to an increase in transfer payments from urban to rural people. Progress has been good. The incidence of rural poverty dropped from 44 percent in 2002 to 27 percent in 2005.³ Nutrition can also be expected to be improving, due to rapid increase in livestock products and fruits and vegetables, nearly all of which are consumed within Azerbaijan. Nevertheless, to remain a key contributor to GDP, employment and poverty reduction, sustained and buoyant growth in agricultural productivity will be essential. Given the eventual limits of Azerbaijan’s domestic market, this will also necessitate high growth of agricultural and agribusiness exports.

1.3 Potential for increasing agricultural productivity. Potential for agricultural growth is substantial. Average yields are low (for instance, wheat 2.6 tons/ha, barley 2.3 tons/ha, potatoes 13 tons/ha), due to unsophisticated agronomic practices, low use of inputs, and a dilapidated irrigation network. There is, thus, ample scope to increase yields. There is also potential for diversifying from cereals to higher value commodities such as fruits and vegetables, and, if market irregularities in Azerbaijan can be resolved (Box 1), there are good export opportunities to Russia, other neighboring countries, and beyond. Azerbaijan is also blessed by a remarkably varied climate, from Mediterranean in the south of the country to temperate conditions further north. Hence, a range of crops can be grown. Further,

¹ Data for this section are primarily from the following World Bank reports: Azerbaijan Country Economic Memorandum, and related papers (2010a); World Development Indicators (2010b); and Azerbaijan Country Partnership Strategy (2006).

² In addition to the December 2008 mission to Azerbaijan, findings from an IEG mission in October 2007 are also used as material for this report (the mission was for the Project Performance Assessment Review of the Farm Privatization Project and the Agricultural Development and Credit Project – Phase I).

³ Nevertheless, rural poverty is declining more slowly than urban poverty. In Baku, poverty incidence in 2002 (42 percent) was about the same as for rural areas, but by 2005, Baku’s poverty levels had fallen to 15 percent.

Azerbaijan can be competitive in a number of horticultural (vegetables and fruits) products and in processed agricultural products (Tables 3 and 4). The main constraints on agricultural production are reviewed below.

1.4 Land and labor. Azerbaijan starts with one significant advantage, which provides a base for its agricultural potential and substantially determines how the constraints affecting agriculture can be tackled. This is the major achievement in the 1990s of privatizing the former Soviet collectives to fully private family farms (Box 2). Under the right circumstances this could unleash the incentives for investing to increase agricultural incomes, making both land and labor more productive. However, a well-functioning land market is needed for better market efficiency given the present small (average 2 ha) farms. There is no shortage of family labor.

1.5 The void after land reform. The land reforms provided the private incentives to increase productivity, but they also brought in a completely different agricultural environment. The collectives had their own technical specialists, investments and subsidies were provided by the state, input supply was assured, markets for the collectives' products were guaranteed, and roads and irrigation were somewhat maintained. All this fell apart after Independence in 1991. Subsequently, the land privatization program created some 870,000 neophyte family farms. The new farmers had minimal agronomic knowledge and no advisors, no access to credit, a collapsed centrally managed marketing system, and declining infrastructure. Most of the agricultural constraints facing Azerbaijan stem from these gaps.

1.6 Agricultural extension. Most farmers still have very limited knowledge of agricultural technology and marketing. Yields could substantially improve with better farming practices, and crop diversification would be facilitated with technical advice. The Agricultural Development and Credit Project (ADCP) is progressively establishing a national network of extension advisors, but the number of Azerbaijan's farmers directly exposed to extension agents is at present probably less than 40 percent.

1.7 Credit. There was virtually no rural finance of any kind available in the early 1990s. Institutional credit was first piloted by the Farm Privatization Project (FPP), and then by ADCP. Private banks are now beginning to come in. The medium and longer-term future of rural finance is likely to be from the private sector, already developing fast. In the 2005–07 period, agricultural credit from the banking sector rose by some 25 percent per annum. However, the private banks generally prefer to make larger loans to agribusinesses and the more commercial farms. Most farmers (likely over 75 percent), have no effective access to institutional or commercial rural finance. The 2009 Country Economic Memorandum (CEM) assessed that agriculture and food processing was the sector with the greatest difficulties in accessing finance.

1.8 Irrigation. About 1.45 million hectares of land were equipped for irrigation in Soviet times which would have represented about 90 percent of Azerbaijan's cropped area, although not all of the equipped area was actually irrigated. The irrigation network has progressively deteriorated since independence. Massive rehabilitation of the network is required, but rehabilitation activities are still modest relative to the size of the overall network. The FPP piloted some rehabilitation, and has been followed by two irrigation projects. The

Rehabilitation and Completion of Irrigation and Drainage Infrastructure Project (RIDIP) financed rehabilitation of main canals and drains on 86,000 hectares. The recently closed Irrigation Distribution System and Management Improvement Project (IDSMIP) was to improve 56,000 hectares. The projects still leave most of the country's irrigation network not rehabilitated. This is a key constraint as most of Azerbaijan gets less than 500 millimeters of rainfall; hence yields are substantially lower without irrigation.

1.9 Global warming. According to the Hadley Centre for Climate Prediction and Research, Azerbaijan lies in a latitude zone where annual average surface air temperatures may increase by between 3 to 5 percent over the next 60 to 90 years. Planet Action anticipates that temperature and weather extremes may also increase, and reduced precipitation may occur.⁴ What might be the agricultural implications of such changes? First the importance of irrigation could be expected to grow, and water saving irrigation technologies such as drip and sprinkler irrigation would likely be increasingly needed to cope with greater water scarcity. Second, Azerbaijan's agro-ecological zones might shift. The more temperate areas to the north might, at least partially, give way to the more Mediterranean climates of the country's southern regions. With such changes, cropping might change—possibly a reduction in field crops such as wheat, and an increase in irrigated horticulture, using available water more intensively.

1.10 Azerbaijan's agricultural sector has two features that may make adaptation to global warming somewhat easier. First, while irrigation infrastructure is currently dilapidated, the irrigation network is extensive and could be upgraded to more efficiently deliver whatever water is available. Second, an increasing number of farmers are getting used to warm-climate horticulture, which has higher comparative advantage than wheat, Azerbaijan's main crop.

1.11 Low agricultural investment. Investment in agriculture, both by the government and the private sector, has been low relative to other sectors. Agriculture's share in the state budget is reported in the 2009 Azerbaijan CEM to have been only 3.5 percent in 2006. And in the same year, only one percent of foreign investment went to the agriculture sector. Also, gross investment (public and private) in agriculture and food processing was at a plateau in the 2004–06 period.⁵

1.12 Physical marketing constraints (marketing, processing, storage, roads and other market-linked infrastructure and services). Yield increases and crop diversification are shifting agriculture to a more market-based activity, requiring market outlets beyond family subsistence and local sales. But marketing infrastructure is woefully limited. There are few wholesaler/retailers for horticultural produce resulting in weak market links with urban centers. Similarly, agro-processing, while growing rapidly, is still at small scale relative to agricultural production. Also, most of the country's rural roads are in poor condition. In the IEG mission's interviews with farmers, the need for a village access road was one of the commonest views expressed. The lack of crop storage facilities was also frequently mentioned. These interlinked factors are becoming increasingly evident as constraints to

⁴ Both the Hadley and Planet Action predictions are from Google, January 2009.

⁵ Gross investments in agriculture were as follows: 2004—110 AZN million; 2005—80 AZN million; and 2006—108 AZN million.

agricultural growth, but, as discussed below (paras. 1.15–1.19), the marketing constraint goes well beyond such physical facilities—into entrenched vested interests, monopolies, rent seeking, export barriers and weak governance generally.

1.13 Subsidies and price distortions. Overall subsidies to farmers have been high, with the following as the main financial support instruments: (i) 50 percent subsidies on fertilizer and fuel (although actual subsidies provided have usually been lower than this); (ii) exemption from taxes except for land taxes; (iii) seed production subsidies; (iv) discount leasing of agricultural equipment, and selling of inputs by a government enterprise—agroleasing—established in 2004; (v) heavy subsidies in irrigation, with farmers paying less than 10 percent of total costs of water supply; and (vi) a subsidized agricultural lending system – the State Entrepreneurship Support Fund—which has charged interest rates of only 7 percent compared with the 18 to 36 percent interest charged by commercial banks. Overall, the subsidies and tax breaks are estimated to have averaged about 200 AZN million in the 2001–03 period. The overall subsidization is estimated to result in an aggregate measure of support of 15.5 percent. This has thwarted Azerbaijan’s quest for membership in the World Trade Organization, which requires a measure of support of less than 10 percent.

1.14 Although such subsidies may have had some stimulating impact on agricultural production, there are significant disadvantages. First, the subsidy program and annual cost is major and may be taking both attention and funding away from more important activities such as agricultural extension and market and access road infrastructure. To put the cost in perspective, 200 AZN million is nearly 15 times the total foreign aid to agriculture of about US\$16 million per annum. Second, private sector development, for instance in input supply, is competing at a disadvantage relative to the state enterprise. And third, the subsidies risk distorting incentives away from commodities where Azerbaijan has comparative advantage. Thus, wheat is the primary recipient of fertilizer, yet has low comparative advantage relative to horticulture (Table 3).

1.15 Governance and the business environment. Not least of the constraints to agricultural growth discussed here is Azerbaijan’s convoluted and politically influenced governance and business environment which can be expected to have constrained, in particular, the growth of agribusinesses and exporting. This has been a problem through at least most of the 2000–10 period when Bank lending to agriculture has been most active. Various sources provide approximate estimates of a general pattern. The World Bank’s Country Policy and Institutional Assessment General Index, which provides an indicative overall assessment of a country’s governance, has an average score for Azerbaijan of 2.8 out of 6.0 from 1998 to 2007. The government’s institutional capacity over the same period was rated only slightly better—an average of 3.4 on the Bank’s Public Sector Management Index. Transparency International’s Corruption Perceptions Index, which assesses the degree of transparency and rent-seeking in a country, estimates Azerbaijan as one of the least transparent countries—a score of only 1.9 out of 10 in 2008, placing it as 158th out of the 180 countries for which a Corruption Perceptions Index was estimated. Moreover, the index shows little improvement in governance over time—in 2001 Azerbaijan’s Corruption Perceptions Index was 2.0 and the country was 84th out of 91 countries assessed, presumably indicating that other countries have been overtaking Azerbaijan in improving transparency.

1.16 There have been some improvements in the business environment recently. An important step in 2008 was the creation of a “one-stop-shop” system for registering a business, vastly simplifying the former process and contributing to a 40 percent increase in the country’s registered businesses. Proactive policy discussions between the Bank and government contributed to this breakthrough. These improvements were also reflected in a jump in Azerbaijan’s ranking in the World Bank’s “Ease of Doing Business” reports.⁶ While such indices are indicative rather than precise measures (IEG 2008)⁷ the broad picture conveyed is one of improvement. For the overall “ease of doing business” index (a composite of a group of evaluations for different aspects of the business environment), Azerbaijan has improved dramatically in the last three years. From a ranking of 96 of 178 countries in 2008 (meaning that 95 countries were assessed to have easier business environments than Azerbaijan), Azerbaijan improved to become the 54th country in 2011 (Table 1).⁸ These laudable achievements, however, were not matched by improvements in the exporting environment.

Table 1: Azerbaijan’s Rankings for Doing Businesses and Trading across Borders

YEAR	NUMBER OF COUNTRIES SURVEYED	EASE OF DOING BUSINESS RANKING	TRADING ACROSS BORDERS RANKING
2011	183	54 th	177 th
2010	183	38 th	177 th
2009	n.a.	33 rd	176 th
2008	178	96 th	173 rd

Sources: World Bank 2008–2011.

SEVERE IMPEDIMENTS FOR EXPORTING

1.17 In IEG mission interviews with the donor community, World Bank staff and several agribusinesses, a commonly found view was that complex government procedures and regulations, which also provided opportunities for rent seeking, resulted in significant delays

⁶ The Doing Business series assesses countries under nine criteria: (i) starting a business, (ii) dealing with construction permits, (iii) registering property, (iv) getting credit, (v) protecting investors, (vi) paying taxes, (vii) trading across borders, (viii) enforcing contracts, and (ix) closing a business. Each criterion is assessed and ranked and an overall ease of doing business ranking calculated based on all of the criteria.

⁷ IEG’s evaluation (2008) found that Doing Business indicators cannot capture all the nuances of a particular country and there were several methodological factors that can reduce the reliability of Doing Business results. These include that the informant base can be small, and that the findings leading to the indicators, especially when indices change significantly, need to be better explained. Other (non-Doing Business) indicators may also be subject to possible inaccuracies in measurement.

⁸ Partly as a result of this, the Azerbaijan index in the World Bank’s Doing Business 2009 report improved remarkably—from the 96th to the 33rd ranked country. (As the index registers annual improvement, the one-stop-shop achievement has been less prominent for the 2010 and 2011 reports as it is now part of the base rather than the incremental improvement.)

and extra costs for marketing and exporting agricultural produce.⁹ Agriculture is particularly vulnerable to such controls and barriers because of its perishable produce. Further, the mission was advised that some agricultural commodities were monopolized by a single family, with other families recognized as monopolists of their “own” commodities through informal understandings between such vested interests. Analyses by USAID and the World Bank corroborate these observations (Johnson 2006; Sutton and Giovannucci 2006). Box 1 illustrates some of the trading issues.¹⁰

Box 1: Unofficial Barriers to Trade of Agricultural Produce

“Difficulties at border crossings are one of the biggest sources of unofficial taxation.” Traders claimed that such “taxation” can add 30 percent or more to transportation costs.”

“A trader can readily pay off border guards to prevent other competitors from passing with the same goods. Such small scale payments are valid for at least a few days and serve to hinder competition.”

“Some firms are reportedly able to have an effective monopoly on their goods by unofficially setting up barriers to the importation of competitive products”

The business environment in general is “characterized by a poor investment climate, corruption, poor management of the import/export regime, inadequate contract law and enforcement and an undeveloped judicial system.”

“71 percent of Azerbaijani small and medium agribusiness entrepreneurs identified trading across borders as a serious problem. Eighty percent report that the legal and regulatory requirements in this area are becoming worse. At the root of this finding is the increase in rent collections for both imports and exports. Entrepreneurs are experiencing declining profits and growing costs.”

Sources: Sutton and Giovannucci 2006; Levine 2007.

1.18 *Doing Business* estimates are consistent with these observations (Table 2). In the 2011 *Doing Business* report, Azerbaijan was ranked as 177th of the 183 countries assessed (meaning that there were only six countries with a worse environment for exporting). Exporting from Azerbaijan required 9 documents, an average of 43 days and entailed an average cost of \$2,980 per container. Azerbaijan was assessed to be far more bureaucratic, lengthy and costly than the Europe and Central Asia Region and Organisation for Economic Co-operation and Development averages.¹¹ A promising step for exporting was taken by the government in 2009. This was to establish a “one-stop-shop” at borders intended to reduce

⁹ Issues such as agricultural exports, and a number of other issues in this and other sections of the report, may be difficult to address within the confines of an agriculture project alone. Such issues reinforce the findings in this report that overall agricultural sector analysis and policy dialogue need much greater attention.

¹⁰ A USAID sponsored survey of small and medium agricultural enterprises in Azerbaijan found that 75 percent of interviewees considered corruption as the most serious constraint to doing business, and 85 percent considered that corruption at all levels is getting worse (Levine 2007).

¹¹ The actual export requirements may have been even more complex. A World Bank assessment in 2006 identified four steps needed to export agricultural produce. Each step had multiple requirements (17 actions for all steps combined) and the process involved 3 ministries and the local municipal government. (Sutton and Giovannucci 2006).

procedures, delays and costs, but impact is yet to be affirmed and is not reflected in the 2011 *Doing Business* report. There are still separate “inspections,” and still room for rent seeking at borders and for other procedures.

Table 2: Documentation, Time and Costs of Exporting for Azerbaijan, ECA, and OECD

ACTIVITY	AZERBAIJAN	ECA COUNTRIES (AVERAGE)	OECD COUNTRIES (AVERAGE)
Overall rank for “Trading Across Borders”	177	n.a.	n.a.
Number of documents	9	6	4
Time to export (days)	43	27	11
Costs to Export (US\$ per container)	2,980	1,652	1,059

Source: World Bank 2001 Doing Business Report.

Note: ECA = Europe and Central Asia Region; OECD = Organisation for Economic Co-operation and Development.

1.19 Ironically, the exporting constraints fall most severely on perishable agricultural produce. It is in fresh fruits, vegetables and processed agricultural products where Azerbaijan has particular comparative advantage, as attested by the low Domestic Resource Costs shown in Table 3. An unconstrained market would support the development of food processing, vertical integration to higher value added in the marketing and exporting chain, and diversification of agribusiness products. Moreover, Table 4 illustrates the further potential for improving Azerbaijan’s competitiveness if processing technologies are also improved.

Table 3: Comparisons of Domestic Resource Costs for Agricultural Production

COMMODITY	DOMESTIC RESOURCE COST
Wheat	1.24
Potatoes	0.96
Fresh vegetables, fruits and milk:	
Tomatoes	0.43
Apples	0.81
Cherries	0.30
Pomegranate	0.62
Milk	0.24
Processed foods:	
Apple juice	0.79

Sources: USAID 2008; Baku Local Economic Development Center 2006; and CEM background analysis.

Table 4: Domestic Resource Costs for Processed Agricultural Products under Current and Improved Technologies

COMMODITY	DOMESTIC RESOURCE COSTS	
	Current Technologies	Improved Technologies
Apple juice	0.79	0.12
Tomato paste	1.04	0.33
Meat cuts	1.38	0.25
Poultry meat	0.31	0.19
Butter and cheese	n.a.	0.30
Sunflower oil	n.a.	0.67

Sources: Baku Local Economic Development Center 2006 and CEM background analysis.

AZERBAIJAN’S AGRICULTURAL POLICIES

1.20 The agricultural reform program introduced through the 1996 Land Reform Law has been the basis of the government of Azerbaijan’s agricultural policy through the mid-2000s. Growth of agriculture and agribusinesses is seen as key to growth of the non-oil economy. The sector’s role as employer of 40 percent of Azerbaijan’s workforce, and as the driver for alleviating poverty in rural areas is also recognized, though usually with less emphasis than the economic growth objective. The primary goal of the agricultural strategy has been to transition to a market-based and more productive sector, by (i) privatizing and distributing to individual rural families the lands of the former collective farms and (ii) establishing and building the various agricultural services (for instance, agricultural extension, credit, irrigation) needed for the new farmers to restore agricultural productivity and enhance their incomes. Land privatization has been completed but achieving nationwide coverage for agricultural services remains a major challenge. Most support activities still require significant scaling-up. Maximizing the role of the private sector has been a policy objective from the mid 1990s. Decentralizing management of services has been another goal, and in the last five years, the agricultural marketing constraint has received increasing attention. The constraints on agricultural exporters and agribusinesses posed by the weak business environment are also being given more recognition. Community-driven development (CDD) approaches to agricultural development have grown in the last several years. A major change took place in 2008 as a result of the world cereals deficit. Food security became a dominant concern for the government and has been accompanied by large-scale provision of agricultural subsidies (para. 1.13) and the hasty preparation of a new agricultural policy with significant flaws (para. 2.32).¹² More recently, in discussions related to preparation of the 2011–14 Country Partnership Strategy (CPS), the development of agribusinesses and agricultural exports has become a key part of the government’s strategy, and some initiatives to that effect (such as the “one-stop-shop” for exports, para. 1.16) have been taken.

¹² Primary sources for this paragraph are the 2009 CEM, the 2011–14 Country Partnership Strategy, the 1996 CAS, the State Program on Poverty Reduction and Economic Development (Government/World Bank 2003), and the Country Partnership Strategy (2006). Government documents include the: Program on Food Security in Azerbaijan Republic (2001), State Program on Fighting Poverty and Economic Development (2003–05), and the State Program for Social-Economic Development of Regions for 2004–08 (2003).

2. The Scope and Efficiency of the World Bank's Agricultural Program

THE PROJECTS

2.1 The Bank's emphasis on operations. Assessing the World Bank's projects before examination of its analytical and advisory activities (AAA) is a logical starting point in the case of Azerbaijan as the Bank's engagement with the agricultural sector has been dominated by a project orientation. As discussed later in this section, until recently, sector analysis and policy dialogue was a secondary concern.¹³

2.2 The operational focus has not been without benefits. Table 5 summarizes the agriculture related lending program. All projects can be considered relevant to Azerbaijan's needs, and (with some exceptions, such as ADCP's weak credit program) in most respects, all Bank projects have done well.

2.3 The lending program. Seven agriculture-related IBRD/IDA projects have been approved for Azerbaijan of which four projects are still ongoing. The IFC has also been active in the agriculture sector with two projects—in rural microfinance and in agricultural produce marketing. There have been no policy-based loans with significant agricultural objectives, although the agriculture sector will have indirectly benefitted from some of the governance and financial sector reforms in the policy-based portfolio.¹⁴ The Global Environment Fund is not involved in the agriculture portfolio.¹⁵

2.4 The first phase of lending—initiating agrarian reform. Agricultural lending began with the Farm Privatization Project (FPP) approved in FY97. FPP was closely aligned with the government's strategic goals and important as it supported a major venture by the government in agrarian reform. It piloted a privatization program for six former collective farms (Box 2). It also piloted Azerbaijan's first water user associations, agricultural advisory service and agricultural credit. Based on the successful FPP model, land privatization was rapidly rolled out to national scale. FPP also provided some piloting for the second loan to agriculture—the ADCP FY99. FPP and ADCP made a pivotal contribution to the initial years of Azerbaijan's agrarian reform by piloting and commencing the build-up of a core of agricultural support services for scaling up under a second phase of additional projects broadening the range of services provided to the agriculture sector.

¹³ For convenience, the term "Bank" will include both IBRD/IDA and IFC, unless the context indicates that it means only IBRD/IDA, or where IBRD/IDA and IFC are specifically referred to.

¹⁴ There have been two policy based loans in Azerbaijan. The Structural Adjustment Credit Project (FY97) promoted trade liberalization, reducing the role of the state in the economy, and banking reforms. The Poverty Reduction Support Credit (FY05) promoted improved governance, the private sector, the regulatory environment and social inclusion programs. Both projects had Additional Financing. All of these projects have closed.

¹⁵ An FY05 Rural Environment Project, for biodiversity protection in two mountainous regions of Azerbaijan is co-financed with a US\$5 million GEF grant.

Table 5: Rural Sector Operations in Azerbaijan—Approved from FY1997–2010 and planned for FY11 and FY12

FY	PROJECT NAME	\$ MILLION	OUTCOME OR STATUS	COMMENTS
97	Farm Privatization Project	14.7 IDA	Closed FY04 The Bank's first agricultural loan to Azerbaijan. IEG rated Satisfactory.	Major development significance. FPP designed and piloted Azerbaijan's land and agricultural services reform agenda. All activities were new.
99	Agricultural Development and Credit Project – Phase I	30.0 IDA	Closed FY06 IEG rated Satisfactory overall, although credit component performed weakly.	The first of a three-phase APL. Continued the FPP initiated reform program with particular innovations in agricultural extension.
00	Rehabilitation and Completion of Irrigation and Drainage Infrastructure Project	47.0 IDA	Closed FY07 IEG rated Satisfactory	First significant irrigation rehabilitation program since Independence.
03	Irrigation Distribution System and Management Improvement Project	35.0 IDA	Closed. Latest ISR rated Satisfactory	Pioneering strengthening of water user associations and associated irrigation and drainage network.
04	Rural Investment Project	15.0 IDA	Ongoing. August 2010 ISR rated Satisfactory	Introducing community driven development approaches for small-scale village infrastructure.
06	Second Agricultural Development and Credit Project	29.2 IDA	Ongoing. Latest ISR rated Satisfactory.	Continuing the ADCP program. Has added support for private produce marketing and rural finance.
07	Real Estate Registration Project	30.0 IBRD	Ongoing. Latest ISR—Satisfactory for objectives) and Moderately Satisfactory for implementation progress.	Nation-wide roll-out of land administration services.
07	Agricultural produce marketing	18.0 IFC	Active	Establishing a retail chain for agricultural produce.
08	Rural banking	4.0 IFC	Active	Expansion of micro-finance banking
11	Water Users' Association Development Support Project (proposed FY 11)	tbd	Under preparation. Planned to Board in FY11	Follow-on to IDSMIP. Would continue to support development of WUAs and system rehabilitation.
12	ADCP III (forthcoming FY12)	tbd		
12	AZRIP II	tbd	Planned for Board presentation in FY12	Follow-on to AZRIP I for roll-out to all districts.

Source: IEG.

Note: ISR = Implementation Status and Results Report; tbd = to be determined.

Box 2: Partnering a Revolution—Azerbaijan’s Land Reform Program

The FPP and ADCP were close partners with the government in a particularly bold land privatization program distinguished from most CIS countries by its comprehensive nature, speed of implementation, and equity.

Particular features of Azerbaijan’s program that contributed to success were:

- “Privatization” meant privatization. Land was allocated to the full private ownership of rural families. In other countries, privatization was frequently more nominal than real: Collectives might become “corporations” or “cooperatives” or receive other titles, but in practice remain communally managed. And land ownership “shares” might be provided without identification of a specific land parcel.
- Equity and transparency. The land of each collective was allocated by public lottery in proportion to family size. In areas with poorer soils, larger allocations were made. Communities participated fully in land allocation, and overwhelmingly felt the process was fair.
- Transferable rights. Land could be freely sold or leased as desired by the owner.
- A package approach. FPP and ADCP initiated a package approach, combining land reform with provision of agricultural extension, credit and irrigation.
- A “leap”—not a “transition.” Privatization was executed swiftly. In 1997, while privatization was still being completed on the 6 pilot collectives covered by FPP, the government rolled out a nationwide program. By 2001 some 95 percent of the country’s agricultural land was owned by private family farmers. Each collective had been privatized in one step – from the commune straight to private family ownership. The frequently used reference to “transition” of land reform in the former-Soviet countries was, in Azerbaijan’s case, more of a “leap.”

Source: IEG mission findings.

2.5 ADCP is an Adaptable Program Loan of three phases. The first phase - ADCP I - is now closed and ADCP II (FY06) is ongoing and scaling up the ADCP program. It supports a nationwide expansion of agricultural extension, a competitive grants scheme to support technological innovations in agricultural production, marketing and processing, advisory and rural finance services to facilitate development of agribusinesses, and agricultural credit. The credit program has had uneven performance of the Credit Unions, and two gaps. First, credit terms were not made to fit seasonal production needs (Box 5), and second, the decision under ADCP II to phase out lending to borrower groups is questionable given that borrower groups have similar credit recovery as Credit Unions (about 95–97 percent) and predominantly serve poor communities (Box 8). Nevertheless, in other respects ADCP II is proceeding well.

2.6 The second phase of Bank lending-building the agricultural support services portfolio. Four product lines of projects were added during the 2000 to 2010 period to parallel ADCP’s agricultural extension and credit program: (i) irrigation development; (ii) community rural infrastructure; (iii) real estate registration; and (iv) two IFC agriculture-related projects.

2.7 Irrigation. Two projects—the RIDIP (FY00) and the IDSMIP (FY03)—have been important innovators for the nation’s crucially needed irrigation and drainage infrastructure. After 10 years of neglect since Independence in 1991, irrigation systems had deteriorated considerably, causing reduced yields and a reduction in irrigated area. RIDIP piloted rehabilitation of head-works and main distribution systems and staff training. IDSMIP is piloting management of the lower and on-farm systems, in particular, management of small channel works by water user associations, and rehabilitation of about 52,000 ha of on-farm works. A follow-on project to IDSMIP—the Water Users Association (WUA) Development

Support Project (FY11) will continue to support development of WUAs and rehabilitate a further 85,000 ha.

2.8 Community infrastructure. The Rural Investment Project (AZRIP, FY04) is pioneering CDD approaches for construction of village infrastructure. Small grants are provided for microprojects chosen by the community from a menu of options— “social infrastructure” such as village domestic water facilities, and “economic infrastructure” such as access roads and small irrigation schemes. The villagers contribute 10 percent to the investment (5 percent in cash), provide labor, and undertake social organization. Over 90 percent of such projects have been found to be operational two years after the investment. A follow-on project—AZRIP II—is under preparation and would scale-up the program to an eventual national coverage.

2.9 Land administration. Land administration was peeled off from ADCP II, and a separate project—the Real Estate Registration Project (RERP, FY07)—is rolling out the network of land administration offices to national coverage. RERP is also bringing in digitized and other sophisticated processing, measurement and storage technologies.

2.10 IFC projects. IFC has two active projects related to the agriculture sector: one supporting development of agricultural marketing chains and the other supporting the expansion of rural micro-finance. Both are highly relevant to growth in agricultural productivity. IFC is also financing a project to improve the business enabling environment which is relevant to all sectors.

2.11 Agriculture’s place in overall lending. In the first seven years of Bank lending (FY95–01) three of 24 projects (13 percent) were agricultural. In the next seven years (FY02–08) four of 41 IBRD/IDA projects (10 percent) and two IFC projects were agriculture related. There were no new agricultural projects in FY09 and FY10, but in the lending pipeline for FY11 and FY12 three agricultural projects are planned—AZRIP II, ADCP III, and a WUA/irrigation rehabilitation project—or about a third of the 10 project proposals for all sectors in the FY11–14 CPS.

2.12 Although implementation capacity constraints have set some limits on the rate of expansion of agricultural lending, at least as concerns the size of agricultural loans (refer below), the share of agriculture in the Bank’s overall project portfolio for Azerbaijan could be considered on the modest side relative to the sector’s strategic importance discussed in Section 1. The agriculture sector is (i) the second largest contributor to GDP in the non-oil sector economy and is (ii) the country’s largest employer accounting for some 40 percent of the national workforce. Further, (iii) Agricultural growth is important to addressing poverty; (iv) agricultural production provides the base for Azerbaijan’s food security; (v) the agricultural sector is the second largest exporter in the non-oil economy; and (vi) the sector has potential for much larger exports due to its comparative advantage in a large array of fruits, vegetables and processed foods. Given the size of the sector it will be crucial for agriculture to grow robustly if the non-oil economy is to make up for the decline over the coming 10–15 years of Azerbaijan’s oil reserves. The current up-turn in the share of lending to agriculture is, thus, in the right direction.

2.13 In the FY02–08 period, lending has covered 12 sectors additional to agriculture—oil, solid waste management, power transmission, water supply and sanitation, highways, rail trade, municipal infrastructure, education, health, environment, social protection/poverty reduction and governance (public sector accounting, financial services and judicial modernization).¹⁶ There appears to be greater focus in current lending plans. In the FY11–12 period the CPS for FY11–14 has projects, in addition to agricultural lending, covering five sectors.¹⁷ The FY11–14 CPS comments that the Bank will modify its approach to lending, focusing on “implementation of existing operations” (Executive Summary) with new operations only considered in selected areas.

2.14 The absorptive capacity of agricultural lending. While agriculture’s strategic importance might have in principle justified a larger share in Bank lending to Azerbaijan, there were also capacity constraints. Nearly all agricultural support activities were new—land privatization, extension, credit, private sector veterinary services, water user associations, and community involvement in rural infrastructure. All such activities needed to start with piloting or an initially modest program to gain experience.

2.15 The scope for faster scale-up. Some activities could now scale-up at a rate faster than planned under present projects. The head of ADCP’s extension and research service considers that the successful experience of the project’s Regional Advisory Centers (RACs) provides a base for faster roll-out of agricultural extension. The network of these advisory centers is now reaching nearly all districts, but density of coverage (percentage of farmers directly reached by extension services in each district) is still low. AZRIP is expanding the villages covered, and, appropriately, a follow-on project is planned. For irrigation, in the view of the Director of the State Irrigation Agency, based on the experience now gained through RIDIP and IDSMIP, irrigation investment and water user support could be significantly increased. IDSMIP is rehabilitating 52,000 hectares of the irrigation network; just 4 percent of Azerbaijan’s 1.4 million hectares equipped for irrigation. This is likely to be deteriorating at a rate faster than the project can rehabilitate. For roads, a sector of key importance to agricultural growth, the still small presence of rural roads in the highways development program could also have been addressed (Box 4). And key activities such as the market and agro-processing support commencing under ADCP-II could have been piloted earlier. On the other hand, some services have already reached national coverage. Land privatization, piloted under the FY97 FPP, was 90 percent completed by 2000, and the land administration offices being established under RERP are almost country-wide.

2.16 Bank lending compared with other donors. The International Fund for Agricultural Development, the US Agency for International Development, the Asian Development Bank, GTZ, KfW, and the Islamic Development Bank are among the more active other lenders for agricultural development. Comprehensive data on the lending amounts of these and other donors is not available, but proxy information indicates that the Bank is a relatively large

¹⁶ As concerns lending diversity in future plans: For the FY09 projects and the FY10 and FY11 pipeline, the 11 projects cover five sectors additional to agriculture—highways, wastewater disposal, urban transport, education and financial services.

¹⁷ The five non-agricultural projects are: capital markets development, judicial reform, higher education, internally displaced persons and the Hoysan Wastewater Outfall Project.

lender for Azerbaijan's agricultural sector. Average disbursements over a five-year period of ADCP II were estimated in the Project Appraisal Document (PAD) as about \$6 million, in itself about 37 percent of estimated lending from all sources. Disbursements from other Bank projects would have added to this percentage.

2.17 Agriculture's share of total development aid. The share of agriculture in Azerbaijan's Official Development Assistance was only 6 percent (2003–05 average) of total loans (all donors) according to the 2008 World Development Report. Such a small percentage is out of all proportion to the agriculture sector's position and key future role in Azerbaijan's development.

2.18 A greater role for agricultural lending. Summarizing this subsection, a greater presence of agriculture in the Bank's portfolio would have been appropriate given the sector's strategic importance. But absorptive capacity in Azerbaijan constrained the rate of expansion of the Bank's agricultural support activities. Nevertheless, there was some scope for faster scale-up and more investment in agriculture. Based on completed and largely successful piloting, the scope is now widening and prospects for significantly larger lending to agriculture, or for closely related services such as rural roads, are growing.

2.19 The agricultural lending program overall. As indicated above, each project has been useful in itself. In concept and in most aspects of design they have been relevant and have implemented well in most respects. Based on IEG reviews at completion or, for ongoing projects, the Region's assessments during supervision, all of the IBRD/IDA projects are rated satisfactory.¹⁸ Further, each project addresses one or more of the majority of needs for enhancing agricultural productivity identified in Section 1: land privatization and development of land administration services under FPP, ADCP-I and RERP; agricultural extension and research under FPP and ADCP I and II; rural finance through ADCP and the IFC program; irrigation through FPP, RIDIP and IDSMIP; village infrastructure under AZRIP; and agribusinesses and marketing through ADCP II. These are important niches although there are some key areas which were not considered—for instance, the poor rural roads network, inattention to agricultural marketing in the first 10 years of Bank lending, ADCP's credit program not aligned to farmer needs, and very limited attention to policy issues (paras. 2.28–2.32).

COULD THE QUALITY OF THE AGRICULTURAL LENDING PROGRAM HAVE BEEN BETTER?

2.20 The lending program could have been improved through (i) better linkages between Bank projects; (ii) recognizing and prioritizing particularly key project components; (iii) a sharper focus on project objectives; and (iv) better exploitation of synergies between IBRD/IDA and IFC projects. More coordination with other donors might also have improved project impacts.

2.21 Interlinkages between Bank projects need to be developed. In the near unanimous view of both Bank staff and government officials, and also observed during site visits, projects tend to operate in "silos." Azerbaijani project managers have minimal interaction

¹⁸ The ratings for ongoing projects have not been verified independently by IEG.

with managers of other projects, even projects closely related.¹⁹ Within the Bank, task-teams also need to interact more. This applies to teams from separate sector units (refer Box 4 on the limited links between highways and agriculture units), within the same sector unit (AZRIP and ADCP, Box 3), and between IBRD/IDA and IFC (para. 7.4). There is also room for closer interactions between specialists working on the same project (for instance, ADCP's credit arrangements which do not fit crop cycle requirements for seasonal credit, and the medium to longer term investment needs of poorer farmers, Box 5).²⁰ In each case, natural linkages and synergies could be better harnessed. This could benefit each of the projects concerned and, between them, have greater impact on agricultural productivity than if each project operates alone. The IDSMIP and ADCP task teams are taking initiatives to better involve ADCP's agricultural extension and credit services with the irrigation program. If this develops to become a standard part of the IDSMIP and ADCP supervision programs, this cooperation can be expected to have greater yield impact than if IDSMIP were implemented by itself. Such intentions, which were stated at appraisal, lapsed in the first four years of IDSMIP's implementation. The AZRIP and ADCP Bank teams have also expressed interest in developing closer linkages, but this is yet to be systematically applied.

Box 3: Linking AZRIP with Agricultural Support Services

A small irrigation scheme (Shammadi, Goranboy region) had been rehabilitated in 2007/2008 under an AZRIP village grant. The IEG mission of December 2008, which was accompanied by ADCP staff, found that farmers were pleased with the improvement. In previous seasons (without irrigation) they had got an average of 1.7 tons/ha of wheat. In 2008, the first season with irrigation, they had got 2.5 tons/ha of wheat. There had been no changes in the agricultural technologies and inputs used.

However, the improved yields (they could have been higher still with improved agricultural technologies) were at risk of returning to previous levels. The practice with AZRIP is to provide intensive help during implementation (investment) of a sub-project, after which AZRIP staff move to other areas. Follow-on engineering advice regarding maintaining physical assets continues to be provided through AZRIP engineering consultants. But beyond this, agricultural and institutional advice is evidently needed. The mission found that farmers were confused about what should be the structure and activities of a WUA, had not yet considered collection of fees for O&M, had not received any advice on crop husbandry, and didn't know the crop husbandry needs of diversification crops that they would like to introduce.

In the discussions, the visiting ADCP staff decided to provide the farmers with the technical advice needed. Farmers and AZRIP staff were very happy with this. The gap in follow-on technical services was thus resolved. But it was by chance that ADCP staff visited the irrigation scheme. It would have been better if AZRIP and ADCP had interlinked on all agriculture related AZRIP investments.

Source: IEG mission 2008.

¹⁹ For instance, when questioned, the project managers of ADCP II, AZRIP and the IFAD financed ADCP project, agreed that, while social relations were good, their teams had little planning and operational contact with each other. The three PIUs are in the same building and under the same institution—the State Agency for Agricultural Credits.

²⁰ In this report's discussions on credit and rural finance, the primary sources of information have been field visits to borrower groups and a credit union, and interviews with the Credit Implementing Agency, the Azerbaijan Credit Unions Association, directors of agriculture and extension in ADCP, two commercial banks, government officials and World Bank staff.

Box 4: Improving Coordination between the Transport and Agricultural Sectors

The Bank's roads portfolio is assisting Azerbaijan in a major, long-term investment program to upgrade the country's highways. The ongoing Highways II project (FY 2006 IBRD loan plus additional financing in FYs 2008 and 2009) is providing \$675 million. The emphasis is investment in major highways, although about three percent of funds go to rural roads.

The agricultural sector would be a beneficiary of such highway projects through reduced costs of transporting inputs and agricultural produce. Yet agricultural development does not appear to have been systematically considered in the planning and implementation of the road rehabilitation program. No sector work was done to assess the roads program in an economy-wide strategy or to identify road priorities in rural areas. While the government has a list of medium-size and access roads for upgrading, there is no evidence of rigorous analysis to determine how road segments should be prioritized.

Finally, while the Highway Project Unit mentioned "consultation" with ADCP Project Unit, such interactions are informal and not a structural part of decision making. And the Bank's Azerbaijan highways and rural teams did not have systematic interactions, though they were in the same department.

Source: IEG interviews with government and Bank project staff and review of project documents

Note: A recent development in the appraisal report (May 2009) for the Second Additional Financing of the Highways II Project notes that the project would select connecting roads for rehabilitation based on the combination of cost-effectiveness and consumer surplus approaches. While this is a promising step, it is still too early to tell how it is being implemented.

2.22 Prioritization of key activities is needed. Priorities for funding and attention are not always recognized. For instance, a key need for reaching higher agricultural technology levels and diversification is agricultural extension. Yet, despite the government's priority to boost agricultural productivity under its new policy (para. 1.20), funding for extension activities was being short-changed at the time of the 2008 IEG mission. ADCP II was facing financial constraints due to higher than anticipated inflation and inadequate counterpart funds. The IEG mission was advised by the Director of Extension Services that, unless funding was increased, the ADCP extension program would have to be reduced. The total base costs of agricultural support services under ADCP-II are about US\$14 million. This compares with the annual costs of Azerbaijan's agricultural subsidies of AZN 200 million (US\$230 million), and begs the question: "Where are agriculture sector public funds best spent?" A broader sector dialogue by the Bank could help prioritize government funding, but such policy dialogue has been notably deficient (paras. 2.28–2.32).

Box 5: The Need to Align Credit with Farmer Needs

In the IEG mission's village discussions with borrower groups, farmers wanted ADCP's credit program to continue but were vociferous in commenting that the credit program should better fit agricultural realities. The commonest draw-backs cited by the farmers were: (i) periods for seasonal credit are too short; and (ii) seasonal credit often arrives too late for purchasing inputs. There were also comments that: (iii) they did not have access to medium-term and long-term credit, hampering crop diversification and on-farm investment; and (iv) individual credit amount limits were too small. (The latter two comments refer primarily to the borrower groups as credit unions and agribusinesses can get larger and longer-term loans.)

ADCP's agricultural extension management considers that if these constraints are resolved the means for higher productivity would be significantly improved. However, Azerbaijan's Credit Implementing Agency had not made adjustment of credit terms a priority. It would appear that the Credit Implementing Agency and ADCP's extension staff need to interrelate much more closely.

This would also seem to have been the case with the Bank team. The credit terms issue would have been evident in the early years of ADCP-I, but had persisted. The April 2008 supervision mission's Aide Memoire had a six-page discussion of credit, without any reference to the farmers' problems above, and these problems are also not covered in the agricultural extension part of the Aide Memoire.

Source: IEG mission 2008.

Note: In this respect, the ECA Region has commented that farmers in credit unions can take out loans of AZN 5,000 (about \$6,000) and that agribusinesses can borrow up to \$300,000 for up to seven years (compared with the \$1,200 ceiling for farmers in borrower groups). The region has also commented that loan maturities and repayment schedules are based on the business plans of the client, in most cases prepared with assistance of the extension agents. (This may apply more to agribusinesses and larger farmers than to medium and smaller farmers, as farmers in a credit union visited by IEG commented that they also needed longer-term loans for investment in perennial crops.) The region has also commented that while – "it is true that seasonal credit for purchasing inputs sometimes arrives with delays and credit disbursement schedules should take into account the seasonal nature of agricultural activities..." credit is still in demand and impact surveys had found that farmers, notwithstanding their interest in improving credit lending conditions, had overall positive views of the ADCP credit program.

2.23 Projects require more focused objectives and monitoring. The degree to which each project has been designed and monitored with agricultural productivity in mind is illustrated in Appendix Table A.1.

- Development Objectives. Only the ADCP program and (indirectly) AZRIP have the enhancement of agricultural productivity in their Development Objectives (DOs).²¹
- Project components. Nearly all projects have components that would increase agricultural productivity (indirectly implying that agricultural productivity was a design intention, even if not specifically stated as an objective). Thus, all components of FPP and ADCP address agricultural production, irrigation enhances yields, and AZRIP's "economic" micro-projects (such as small-scale irrigation, access roads) also support increased agricultural value added.
- Monitorable indicators and monitoring and evaluation (M&E). Only ADCP II has an agricultural productivity monitorable indicator (MI) (20 percent increases in yields) and a clear and quantified M&E results framework. The indicators²² and M&E for the

²¹ ADCP-I's DO is to "return farming to former levels of productivity." ADCP-II's DO starts with: to "Increase rural incomes and productivity by" IDSMIP's DO is to "improve the effectiveness and financial viability of irrigation water distribution and management..." which could be construed to imply increased productivity. AZRIP's DO refers to "improving living standards."

²² Although these indicators cannot accurately be said to be "monitorable indicators" to measure a productivity objective when such an objective was not stated in the first place.

other projects vary considerably in their relevance to agricultural productivity. FPP, ADCP and IDSMIP have impact (yield) indicators. RIDIP had no stated impact indicators, but, on the other hand, the M&E program had quantified production targets. The M&E programs for IDSMIP and AZRIP are not spelled out in the appraisal documents. Then there is the question of how well the projects' M&E programs were implemented, which has usually been weak. For instance, in the Project Performance Assessment Review of FPP and ADCP-I (IEG 2008), due to lack of or poor quality data, it was not possible to reliably estimate yields, precluding calculation of the projects' economic rates of return (though it should be noted that a more structured M&E program is now being put in place under ADCP-II, and AZRIP and IDSMIP are introducing more impact evaluation surveys).

- Distinguishing M&E from management information systems. RERP has developed a good MIS system which provides quarterly updates with relevant operational information. In the October 2010 report there are useful indicators for project outputs (for instance, speed of property registrations) but productivity indicators are limited to proxies related to market development such as the numbers of sales and mortgages (a customer satisfaction survey is also planned in 2011). Nevertheless, this is a considerable advance compared with the handling of outcomes and MIs at appraisal. In the PAD, agricultural production was not mentioned in the project's DO or MIs, and even when discussing project economic benefits, while urban sector benefits were cited, agriculture was not discussed (Box 6).^{23, 24}
- An uneven focus on outcomes. Even strategy statements have had limited focus on outcomes. The Completion Report (October 2010) for the FY07–10 CPS commented that it had been focused on outputs rather than outcomes mirroring the weaknesses in this respect of the operational program.

2.24 In short, there is much to be desired in the quality of the portfolio's DOs, MIs, results frameworks, and M&E and the degree to which indicators have been measured. This raises a concern. If a project: (i) does not articulate agricultural productivity as its purpose, or part of its purpose (the DO); (ii) has no criteria (MIs) to assess progress towards achieving the purpose; and (iii) no way of measuring the degree to which it is reaching these indicators (M&E), it is probable that the project will be less sharply focused on agricultural productivity, and that productivity impact will be less than potential.

2.25 Quantitative assessment of how impacts may be affected by unfocused DOs and MIs is beyond the scope of this review, but some examples could be cited: (i) If the implicit objective of AZRIP to improve productivity and incomes had been clearly stated in AZRIP's MIs and M&E system, there might have been closer attention to the factors affecting

²³ Experience from a number of Bank land administration projects in other countries is that a land registration service, through improved security of tenure, may help develop a land market, and stimulate greater rural investment and higher agricultural productivity.

²⁴ RERP provides services to all types of land users, both rural and urban. Urban land transactions are in fact the larger number of transactions, but agricultural clients are still a significant share and land administration services can, under the right circumstances, provide incentives for higher agricultural productivity. Given this, it would have been better if RERP had explicitly featured agriculture in its DO, MIs, monitoring and economic analysis (Box 6). (More attention to the specific benefits for urban beneficiaries would also be helpful).

agricultural production. For instance, a systematized link between AZRIP's small irrigation schemes and ADCP would have brought in the extra impact from agricultural extension (Box 3). (the task teams have advised that steps to achieve this are underway); (ii) ADCP's agricultural credit could have been better aligned to farmer needs if the credit agency had productivity and rural incomes at the center of its mandate (Box 5); and (iii) for agricultural clients the real estate program may be missing opportunities to make services more in tune with farmers' economic and social needs (Box 6).²⁵

ANALYTICAL AND ADVISORY SERVICES

2.26 As indicated in Appendix Table A.2, there have been regular country strategy documents over the last 15 years. This started with a CEM in FY94 shortly after Azerbaijan became a member of the World Bank. There followed two Country Assistance Strategies in FY97 and FY00, a Poverty Reduction Strategy Paper in FY03,²⁶ a CPS in FY07, a CPS progress report in FY08, the CEM in 2009, and the FY11–14 CPS in 2010. The degree of focus on agricultural strategy of these reports can broadly be divided into the period FY94–99 when there was a fairly strong strategic focus, and FY00–07, when focus on strategic issues was relatively weak. There are also encouraging signs that a more proactive third phase is developing, as the FY09 CEM contains substantial discussion of agriculture and the FY10 CPS has more discussion of agriculture and trade issues than its predecessor in FY07.

²⁵ The region has commented that the development objectives of RERP were deliberately focused on the land registration function to make project implementation more straightforward, but does acknowledge that social protection and gender now need further consideration. The region also comments on the role that registration of property can provide in facilitating the development of the land market and access to credit, but that registration offices should focus on land registration. IEG concurs, but a clarification is in order. This is that other actions, beyond the registration function itself, can help facilitate expansion of land-based credit; for instance, by tackling bottlenecks in the mortgage market as successfully done under the Slovenia Real Estate Registration Modernization Project (Box 6). In Slovenia's case, IEG's Project Performance Assessment Report (2010) concluded that the additional (non-registration) project activity supported by the project had significant benefits exceeding the potential risks of complicating the project with an activity going beyond land registration itself. For RERP, there is no empirical base to assess whether opportunities such as found in Slovenia are available and viable. The impacts of legislative changes to mortgage regulations made in 2007-2009, and possibilities for further improvement are also not known. Consideration of any such options would be desirable, as they might be able to lever greater impact than from land registration improvements alone.

²⁶ The Bank PRSP was accompanied by the government's "State Program on Poverty Reduction and Economic Development (SPPRED, 2003-2005)."

Box 6: Possible Gains from Considering the Impact of Land Registration on Agricultural Productivity

The Real Estate Registration Project is building a national unified land administration system covering both rural and urban lands. This includes decentralized “one-stop-shop” field offices, hence a service much more accessible and user friendly. Specifically as concerns agriculture, international experience is that land registration services can increase tenure security, enhance social welfare, provide incentives for investing on the farm, and facilitate development of a land market and land consolidation. However, these impacts vary in extent and are not automatic, and might be significantly affected by how land registration services are managed and how the land registration service and other agricultural support services are harmonized. RERP could take greater cognizance of this. Might rural impacts need to be adapted for rather than simply be presumed? For instance:

- RERP is not registering commons land, and there is no analysis of social and economic benefits on which to base a decision on whether they should be included. Commons land can have substantial economic and social value, especially for less landed (generally poorer) households. In some countries (for instance, Thailand) there have been cases where commons land has been encroached or taken over by more powerful farmers or other vested interests. Is this, or might this be an issue in Azerbaijan, and if so what can be done? Clear ownership by the community may be one way of reducing such risks.
- Are there ways through which access to long-term credit or mortgages based on land collateral can be facilitated? (The Slovenia Real Estate Registration Modernization Project included a study with bankers and other stakeholders of how greater access to mortgage financing could be facilitated. Resultant changes in mortgage laws are credited with a significant boost to mortgage based investment.)
- Are there other land transaction and rent seeking activities (formal or informal) that constrain the gains from improved land registration processes? (In Bulgaria, the registration office can generally handle its work in less than three days. But other government departments and a notary typically add a further 10 days.)
- Are there adequate social protections during land transactions (For instance, Thailand’s experience where transaction records sometimes “legitimized” land grabs)?
- Are women’s rights as protected as assumed? (On the basis of survey findings, a gender inclusion program had to be retrofitted into the Laos land titling project).

Source: IEG, based on observations in Azerbaijan and other countries.

2.27 The first phase—A good policy dialogue. In the first six years (FY94–99) of Bank involvement in Azerbaijan’s rural sector, agriculture was a strategic focus. While no major stand-alone analysis of Azerbaijan’s agriculture sector was conducted in this period, there was a strong rural focus in the FY93 CEM and FY96 Country Assistance Strategy (CAS). The objectives of the FPP and ADCP—agricultural productivity—were closely allied with the strategy priorities discussed in these papers. There was also a close rapport on agricultural policies between the Bank and government (Box 10). The agricultural emphasis of the Bank was emphasized in the FY96 CAS—“For the CAS period, the focus of the Bank group will be largely on agriculture which offers many opportunities for expanding output and incomes of Azerbaijan’s poor.”

2.28 The second phase—Projects but little sector analysis and dialogue. In the FY00–07 period, the Bank’s attention to agricultural analysis diminished. Although in the FY99 CAS three of the 12 planned projects were agricultural (ADCP II, RERP, and IDSMIP), none of

the proposed 11 AAA activities was in the agriculture sector. The FY03 CAS and Poverty Reduction Strategy Paper also did not propose an agricultural analysis.²⁷ Likewise in the 2003 CPS, three agricultural projects were proposed but, again, no AAA. An exception was a study of agribusiness and marketing in 2006.

2.29 The reason for the lack of AAA in the FY00–07 period is not clear—there was plenty of AAA work in other sectors so the proclivity to do analytical work was there. Why not agriculture? One influence may have been a sense that agricultural strategy was already satisfactory because the lending program was going reasonably well. The overlapping FPP and ADCP-I spanned the entire period with mostly successful performance. And the other projects were appraised and partly implemented in the same period with few major implementation issues. It was a rich agenda and the FPP success story in particular was a matter of pride for the Bank. Thus, from a “projects” perspective, agricultural AAA might have seemed unnecessary for maintaining a good quality project portfolio.

2.30 There are two weaknesses in such logic. First, clear indications have emerged from this review that the agricultural portfolio could have been improved if handled within a broader and more analytically based perspective. For instance, by tackling issues such as the persisting problem of credit periods unsuitable for farmer needs, gaps in coordination between projects and sectors, and border barriers to trade adding to transport costs even as major investments are made in roads to try to reduce transport costs. Second, and more fundamental, are the economic benefits possible from engaging the government in a wider policy dialogue—as examples, on stimulating private agricultural finance markets, on an appropriate agricultural subsidy policy, commodity comparative advantage and a diversification strategy, an efficiency -based agriculture sector investment strategy, and a food security strategy taking account of comparative advantage as well as domestic grain production options—but where there is little such dialogue, the potential benefits from improved policies are foregone.

2.31 The business environment dialogue. Notwithstanding the gaps in AAA noted above, the sector can be expected to benefit from the Bank’s increasingly proactive dialogue with the government to improve Azerbaijan’s overall business environment. The introduction in 2008 of a “one-stop-shop” for registering new businesses has been one output from this dialogue and should help all enterprises, including agribusinesses.²⁸ There are, however, additional constraints for agricultural produce resulting from its perishable nature which require specific attention. As discussed in paras. 1.15–1.19, the high level of vested interests, monopolistic markets and other rent seeking activities in the agricultural sector is one of the largest current constraints to agricultural growth.

2.32 Government’s new agricultural policy. Following the international grain market disruptions in 2008, food security became the government’s primary concern in the agricultural sector. A new strategy was announced—the State Program on Reliable Provision

²⁷ An “Azerbaijan Rural Sector and Infrastructure Analysis” was carried out by the Bank in FY01. However, this had only marginal relevance to agriculture as the study reviewed general rural infrastructure and the performance of rural based municipalities.

²⁸ Interview with Gregory Jedrzejczak, Country Manager, Azerbaijan, World Bank (ACC 2008).

of Population with Food Products in the Republic of Azerbaijan (May 2008). The document has only limited discussion on strategy, and the government's former agricultural policy thrusts (para. 1.20) do not come through as core elements. The document is more an array of largely directive and "supply-side" proposed actions (over 150 actions), no costs and little connectivity between actions. Also, food security is seen largely in terms of domestic self-sufficiency in wheat, a crop with low comparative advantage in Azerbaijan. And increases in agricultural subsidies (paras. 1.13 and 1.14) put Azerbaijan beyond the maximum levels permitted to enable Azerbaijan's aspirations to join the World Trade Organization. The new policy would be a significant departure from the more focused agricultural programs of the past. A greater presence of the Bank in policy dialogue might have resulted in a better government strategy. But it was only during preparation of the 2009 CEM that such dialogue picked up.

2.33 The third phase-developing a stronger strategic focus. Recent initiatives may have prospects to create a turnabout in the Bank's emphasis on agricultural strategy. First, the Bank and USAID are developing a collaborative analysis and dialogue with government on agricultural policies. Second, the 2009 CEM contains, for the first time in the Bank's involvement in Azerbaijan, a substantial discussion on agriculture, including impacts from the business environment. And third, a planned AAA activity for the agriculture sector in the FY11–14 country strategy could provide the opportunity for a deeper analysis of agricultural issues, and a more comprehensive policy dialogue with the government. It will be important that the study is focused on core policy issues such as those discussed in Section 1, and not be a general review with limited strategic content.

3. The Effectiveness of Bank Interventions on Agricultural Productivity

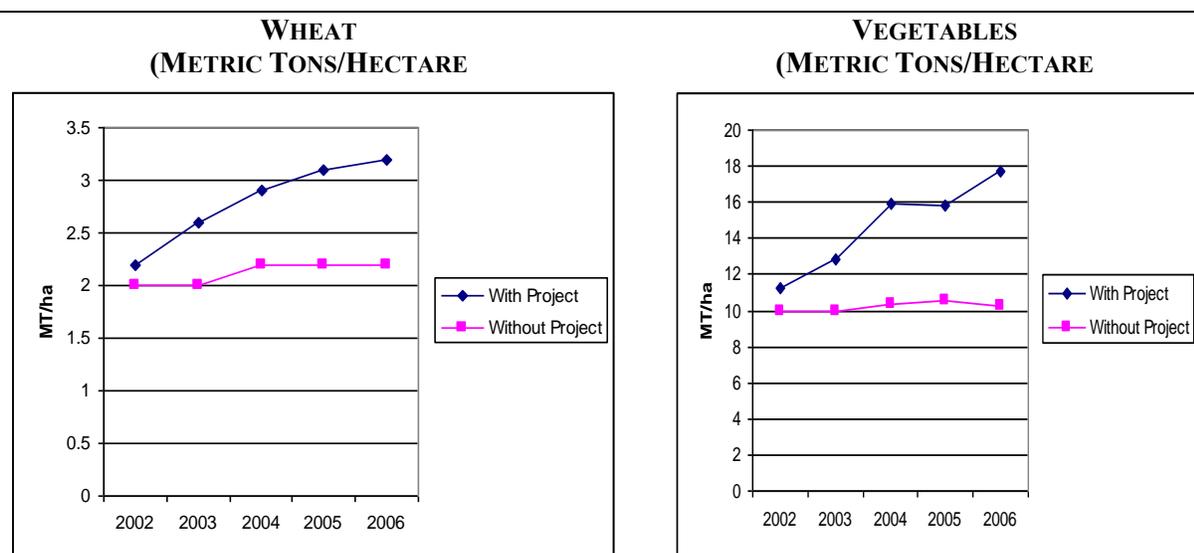
3.1 The strong initial agriculture sector dialogue between the Bank and the government, with agricultural productivity a central theme, was fully integrated in the designs of FPP and ADCP-I. In essence, there was an opportune meeting of the minds—the government's reformism supported by the Bank, which also provided its international experience. Thereafter, the much reduced policy dialogue that followed this early period (paras. 2.28–2.31) means that AAA activities will have had little impact on agricultural productivity, the primary Bank influences being from the lending program.

PROJECT-LEVEL IMPACTS

3.2 Quantitative data on agricultural productivity is sparse given the minor emphasis in the lending portfolio of M&E and special studies on project outcomes. Assessment of productivity impact from the lending program will, thus, supplement the available direct information on productivity with proxy indicators where available, and information from interviews with farmers and government officials.

3.3 ADCP. Figure 1 compares the progression of yields of wheat and vegetables for a sample of ADCP-I project and non-project farmers in Beylagan region. Over a four year period, ADCP farmers increased their wheat yields by 32 percent whereas the increase for non-project farmers was only 10 percent. Similar differences in yields occur for other crops: potatoes 47 percent for project farmers and 29 percent for non-project farmers, vegetables 31 percent project and 11 percent non-project, and milk 26 percent project compared with 13 percent non-project farmers.²⁹ Some information is also available from an Impact Assessment Survey conducted by ADCP in 2009. Net agricultural incomes of ADCP farmers were found to have increased by 15 percent over the baseline value in 2007, and the proportion of production marketed for cash had increased from 60 to 75 percent (ADCP ISR September 2010).

Figure 1: Wheat and Vegetable Yields for ADCP Project and Non-Project Farmers—Beylagan Region 2002–06



Source: ADCP II Beneficiary Survey.

3.4 Irrigation. Cereal yields of RIDIP farmers are recorded in a project survey as having increased but by only 2 percent per annum (Table 6).³⁰ However, farmers interviewed by the IEG mission advised that they had got larger yield increases than this.³¹ For the other crops the survey found substantial yield increases (over 6 percent per annum). But RIDIP’s main benefit may have been through a significant shift towards higher value diversification crops.

²⁹ These figures should be considered indicative only, as sample size was small—five ADCP villages per region compared with five agro-ecologically similar non-ADCP villages in proximity to the ADCP villages.

³⁰ Interviews with farmers indicated that the irrigation improvements rather than changes in crop husbandry or input use were the only significant technological changes.

³¹ A further survey to verify or adjust the present yield estimates would be desirable as, from IEG mission discussions, yield differences between irrigated and non-irrigated cereals appear to be typically more than the RIDIP survey results.

In only four years the cereal area fell from 80 to 49 percent of total crop area, being replaced by fruits, vegetables and fodder (RIDIP ICR). Yield increases and diversification to higher value crops has also occurred under IDSMIP. Table 7 shows yield increases in the Northern Region of between 7 and 30 percent in only three years.³² Particularly telling is the change in cropping pattern. In the same period, unused land fell from 25 percent to virtually zero, and wheat, with low returns, fell from 24 to 14 percent. Higher value crops (mainly fruits and vegetables) became much more predominant—from 51 to 86 percent of the arable area under the WUAs.

Table 6: Yield Changes for RIDIP Irrigated Farmers

CROP	YIELD (TONS/HA)		ANNUAL YIELD GROWTH
	2002	2006	Percent per annum
Cereals	2.2	2.3	1.6
Vegetables	12.0	16.3	8.0
Fodder crops	3.8	4.9	6.6
Apples	3.5	6.3	15.8

Source: RIDIP M&E data.

Table 7: Yield Changes for IDSMIP Northern Region Irrigated Farmers after System Rehabilitation

Crop	YIELDS (TONS/HA)			CROPPING PATTERN (% OF TOTAL CROPPED AREA)	
	Yield 2006 (before rehabilitation) (tons/ha)	Yield 2009 (after rehabilitation) (tons/ha)	Percentage yield increase from 2006 to 2009 (tons/ha)	2006 (without rehabilitation)	2009 (after rehabilitation)
Wheat	2.2	2.6	17	24	14
Lucerne (fodder)	12.8	15.2	19	n.a.	n.a.
Fruits	8.3	10.8	30	n.a.	n.a.
Vegetables	15.5	16.7	7	n.a.	n.a.
Other crops				51	86
Unused land	n.a.	n.a.	n.a.	25	0

Source: IDSMIP ICR, 2010.

³² It should be noted that, although the trends in the northern region are broadly representative of the rest of the country, yields and cropping mixes are quite variable between regions, especially as concerns cropping mix.

3.5 Other projects. For FPP, Appendix Table A.3 provides proxy figures regarding access to services which could be expected to have positive impact on yields. Some 80 percent of FPP farmers were using fertilizer, compared with only 38 percent in adjacent non-FPP villages. Nearly all FPP farmers had access to agricultural extension services, whereas only five percent of non-FPP farmers had such access. And 81 percent of FPP farmers said they received irrigation according to their needs, compared with 23 percent of non-FPP farmers. AZRIP's economic micro-projects (such as irrigation, village roads, crop storage facilities) could be expected to have positive productivity impact, and this appeared to be the case for an irrigation scheme visited (refer below), but there is limited direct data as yet on productivity. Nevertheless, the positive views of villagers expressed in Table 8 suggests a likely impact on productivity. RERP's impact on agricultural productivity is not known (Box 6).

Table 8: Villagers' Views on their AZRIP Community Projects

SURVEY QUESTION	PERCENTAGE OF SURVEYED HOUSEHOLDS RESPONDING AFFIRMATIVELY
Are you satisfied with the type of infrastructure chosen by the community? (i.e. irrigation scheme, feeder road, etc.)	95
Are you satisfied with the quality of the infrastructure the community created?	88
Has your living standard improved as a result of the community project?	90
Question to women: Do you feel you have had influence in community decision making for the infrastructure project	97

Source: AZRIP baseline survey.

3.6 Field findings. Although limited in number, the IEG mission's interviews with farmers are consistent with the indicative yield differences above. For example, a group of technologically advanced ADCP farmers in Ganja region were getting wheat yields of 5 tons/ha, whereas before ADCP their yields were averaging about 3 tons/ha. The irrigation system had not been improved. A group of AZRIP farmers in Goranboy region who had benefitted from rehabilitation of their minor irrigation scheme, got 2.5 tons/ha of wheat in 2008 (the first year with improved irrigation), while in previous years their wheat yields averaged 1.6 tons/hectare. Farmers from one of FPP's WUAs advised they were currently getting 3 tons per ha of wheat, whereas before irrigation improvement their yields were 1.8 to 2.0 tons per hectare. The head of ADCP's agricultural extension group considers that irrigation could double yields, and that the agronomic potential for crop diversification was considerable. In mission discussions with villagers, an increasing number were diversifying their farm products. Finally, discussions on yields, crop diversification and other agricultural changes with agricultural and irrigation officials are also broadly consistent with the above assessments.

SCALING UP THE PROJECTS

3.7 Piloting change. All of the projects have served a piloting role, providing the experience to go forwards. This has been a particularly important Bank contribution (paras.

5.6–5.8). Hence the extent of the Bank’s influence on agricultural productivity will have been significantly greater than the dimensions of the projects themselves.

3.8 Thus, from a small beginning in 1997 (the six pilots under FPP), nationwide land privatization is already virtually complete. RERP will soon have a national land registration service. ADCP I provided agricultural advisory services to about 270,000 rural households (about 1/3rd of the estimated 870,000 farming families in Azerbaijan), and ADCP II is rolling out the extension service with the objective of eventual countrywide coverage.³³ Irrigation rehabilitation and strengthening of WUAs is a long-term task. RIDIP and IDSMIP respectively rehabilitated about 122,000 and 52,000 hectares, and their combined achievement is about 20 percent of Azerbaijan’s total irrigated area.

3.9 National-level impacts. It is too soon for most project impacts to significantly show in national productivity data.³⁴ There are also the standard difficulties of attributing impacts from a project as opposed to other influences. However, some inferences can be made. National data trends show significant changes in agricultural production since 1997 (the start-up of FPP and commencement of the nationwide land privatization program). Table 9 and Appendix Table A.4 show yield, area and production growth for selected major crops. Most commodities show yield increases, and diversification to vegetables and fruit is pronounced (Appendix Table A.4).

Table 9: Changes in National Average Yields, Area and Production for Selected Major Agricultural Products—1994–96 to 2003–05

CROP	YIELD (% CHANGE PER ANNUM)	AREA (% CHANGE PER ANNUM)	TOTAL PRODUCTION (% CHANGE PER ANNUM)
Wheat	5.6	3.5	9.4
Barley	4.8	–0.3	4.0
Cotton	2.3	–9.4	–6.8
Potato	3.6	11.2	16.5
Meat	n.a.	n.a.	6.0
Milk	n.a.	n.a.	4.3

Source: FAO data.

³³ In contrast, ADCP I’s credit program, which reached about 31,000 farmers, has been quite small relative to the total number of farmers in Azerbaijan (about 870,000).

³⁴ Moreover, there is the causal attribution problem, especially difficult at national levels—what is due to the projects, and what might have happened anyway?

Table 10: Annual Percentage Growth in Agricultural Value Added for Azerbaijan and CIS Countries

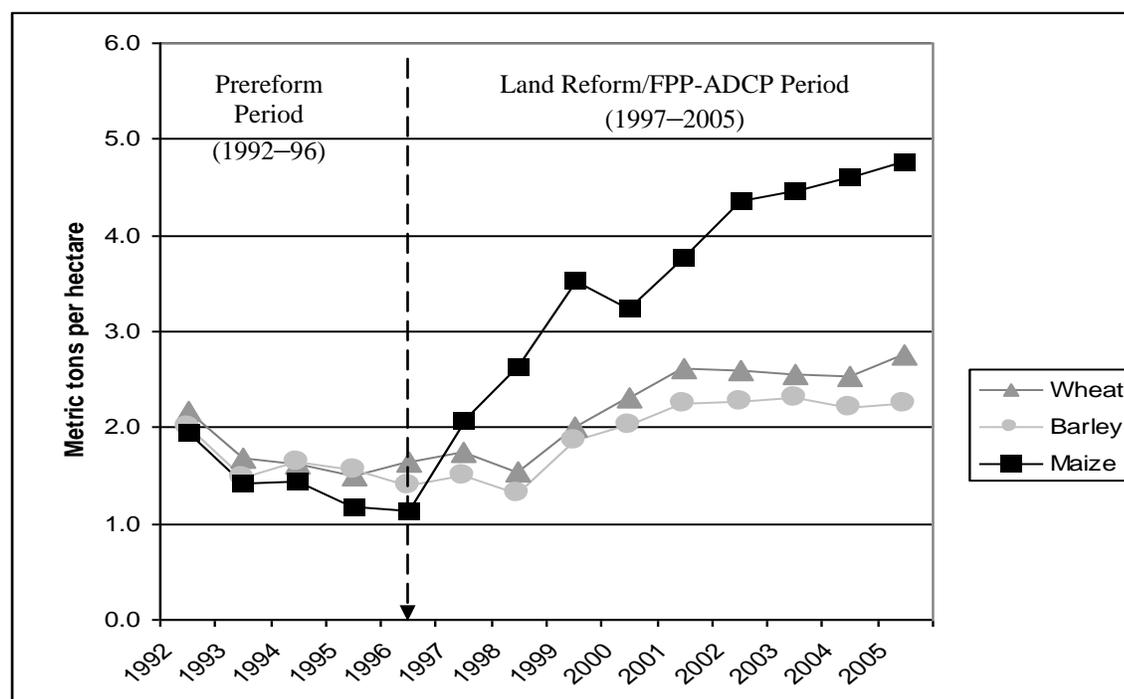
COUNTRY/COUNTRY GROUPING	1990–96 (%)	1997–2000 (%)	2001–06 (%)
Azerbaijan	-9.1	8.6	5.1
CIS Countries Average	-6.7	1.4	3.7

Source: World Development Indicators, World Bank 2010b.

Note: For CIS average, Turkmenistan and Tajikistan have not been included due to incomplete data for Turkmenistan and data discrepancies for Tajikistan. CIS = Commonwealth of Independent States.

3.10 Figure 2 illustrates how cereal yields have increased since FPP. The project alone would have had no impact on national figures but it served as the pilot for the country-wide roll-out of land privatization.

Figure 2: Azerbaijan Cereal Yields (1992–2005)

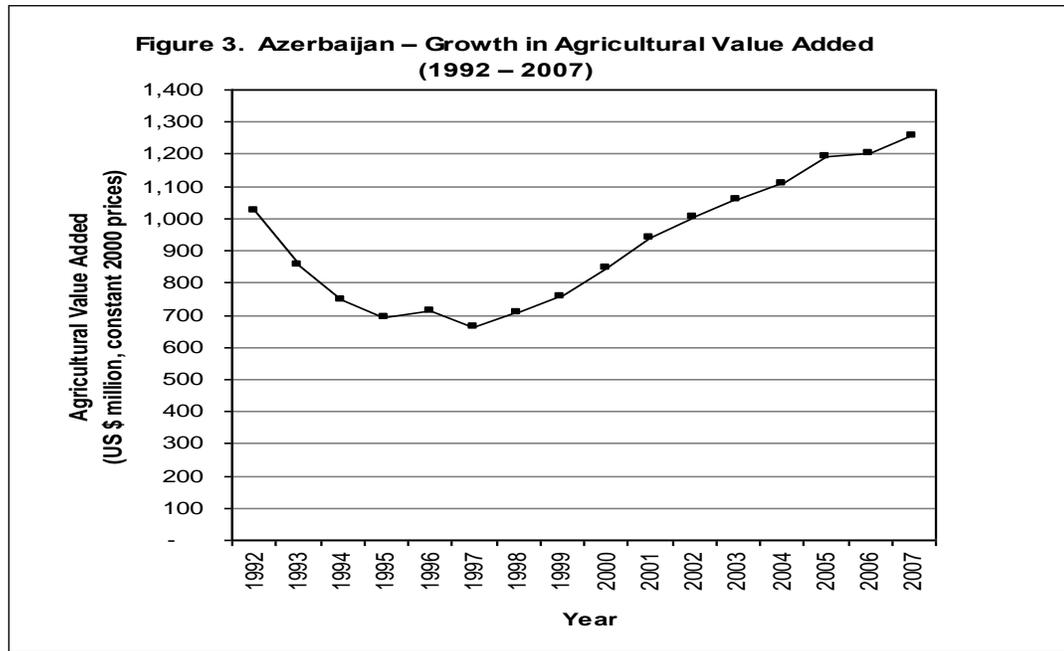


3.11 Figure 3 and Appendix Table A.5 show the changes in national agricultural valued added and annual growth rates from 1992 to 2007. After Independence in 1991, agricultural value added declined until 1998. Value added then increased, with particularly high growth (averaging 10 percent per annum) between 1998 and 2001. This high growth period coincides with the land privatization boom. Several sources³⁵ consider that land privatization

³⁵ Remarks from some of the government policy makers interviewed, IEG mission field interviews, the Bank FPP TTL (at appraisal) and other Bank staff.

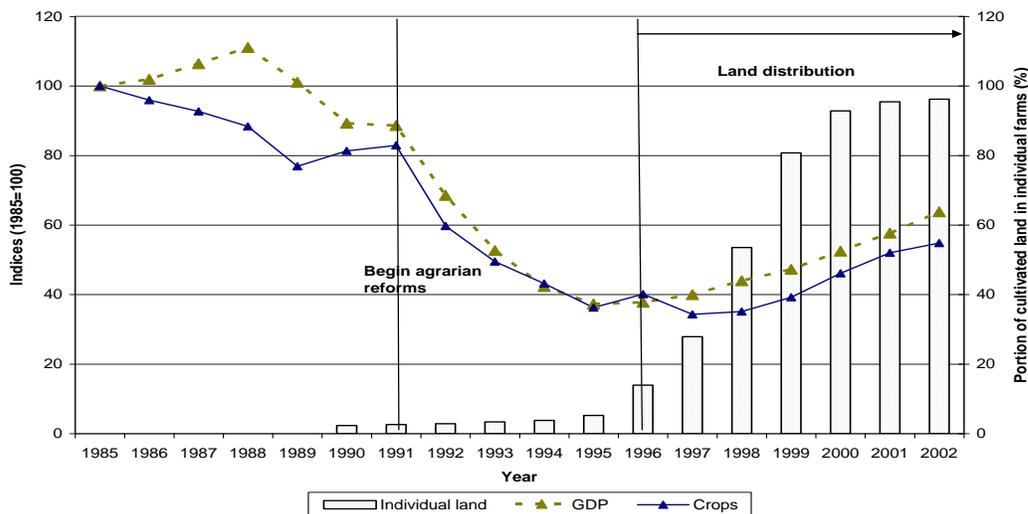
by itself stimulated greater efforts and higher production from the new farmers, which is consistent with the trends in value added shown here.

Figure 3: Azerbaijan—Growth in Agricultural Value Added (1992–2007)



Source: World Bank Development Indicators.

Figure 4: Land Privatized, Crop Production, and GDP in Azerbaijan, 1985–2002



Source: Dudwick, Fock, and Sedik 2007b.

Note: "Crop production" is gross agricultural output of crops in value terms, with data from CISSTAT and Azerbaijan statistical yearbooks. GDP = gross domestic product.

SUMMARY ASSESSMENT OF PRODUCTIVITY IMPACT

3.12 The available data indicates a positive impact of the Bank's projects on agricultural productivity. Further, the piloting role of each project has had influence on productivity beyond their specific project areas and client populations. The massive land privatization program succeeding the FPP pilots may have caused a short period of particularly high agricultural growth in the late 1990s to early 2000s. From 2001, growth in productivity averaged about 5 percent per annum, possibly because the stimulus from land privatization is over. In both periods productivity changes have been primarily from the combination of yield increases and diversification to higher value agricultural activities.

3.13 Providing that the agricultural services (extension, credit, irrigation, land administration) promoted under the Bank lending program continue to develop without loss of quality, a second boost in Azerbaijan's agricultural productivity might be possible, influenced by the roll-out to national coverage of such support activities. If private sector rural finance and marketing develop well, this would further stimulate agricultural growth, but governance problems need to be resolved. In particular, market interference from vested interests and the difficulties and costs at borders of exporting will, if not tackled, remain a significant constraint on the pace of agricultural development. Finally, but not least, there is the policy environment, where improvements might have considerable influence on agricultural incentives and production.

4. Environmental and Social Impacts

ENVIRONMENTAL IMPACTS

4.1 Pollution from agricultural chemicals. The present low level of fertilizer use in Azerbaijan³⁶—averaging 12 kg/ha in 2003–05—is a lower environmental threat³⁷ than in high usage countries. However, fertilizer imports tripled between 2002–03 and 2006–07. As agricultural development proceeds, fertilizer use and resultant groundwater and run-off contamination can be expected to further increase. ADCP and the irrigation program will have had the most impact on fertilizer applications, but until now, the relatively small scale of these projects will have had only minor impact on national fertilizer use. Nevertheless, this situation is changing, and environmental monitoring and planning will be necessary (see below).

³⁶ Low use of fertilizer is typical for the CIS countries. The World Development Report 2008 shows that for 2003–05, of the 7 CIS countries for which data were available, no country had fertilizer usage greater than 25 kg/ha and 4 countries had broadly similar or lower fertilizer use than Azerbaijan.

³⁷ It should be noted, however, that pollution in Azerbaijan is a far greater problem when all sources are considered. The Caspian sea has been contaminated by the dumping of petroleum waste, discharge of untreated sewage and high use of fertilizer and pesticides in the Soviet period, particularly on cotton, which in turn appear to have had health impacts—for instance, MSN Encarta (September 25, 2008) reports that chemicals used on cotton in the 1980s were linked to high infant mortality and infectious diseases.

4.2 Deforestation and denudation. While the indicators in the World Development Indicators 2010 report show no changes in forest area and zero deforestation in the 2000 to 2007 period, from IEG mission field observations and discussions with government and Bank staff, the field reality is that deforestation is taking place and un-forested hill lands are under increasing pressure from overgrazing.³⁸ Overgrazing would be a natural consequence of the sustained growth in livestock numbers over the past 15 years. During the period 1991–2007 cattle and sheep numbers increased by 40 percent, and the number of goats tripled. Overall meat production is estimated to have increased by some 6 percent per annum between 1994–96 and 2003–05.³⁹ Cattle, goats and sheep are almost entirely reared outdoors, and growth in livestock numbers would almost directly translate to similar growth in grazing intensity. Also, in ADCP villages visited by the IEG mission, the most commonly cited use by farmers of institutional credit was for purchasing livestock. All these indicators point to progressively greater pressure on the land. The ADCP, through the credit program and promotion of improved animal husbandry and veterinary services, will have contributed to the growth in livestock numbers. Without resolution, such impacts can be expected to increase as the program scales up. Degraded pastureland would likely also lead to significantly lower agricultural incomes and agricultural growth.

4.3 Pasture management. This bleak scenario need not be the case, as found in the Kyrgyz Republic under a pilot program to test community management of pastures (Box 7). Using a structured process of community organization, planning and management of the local pasture, it was found that there is potential for both improving the environmental quality of pastures and for increasing pasture productivity and family incomes.

4.4 Water-logging, salinization, and water withdrawals. The appraisal report for IDSMIP comments that improved irrigation and drainage would have positive environmental impact through reducing waterlogged areas and lowering the groundwater table where it is close to the surface. As a consequence, the conditions for salinization would also be reduced. If the irrigation and drainage program builds up under IDSMIP and successor projects, land area affected by such positive environmental impacts would grow, as would the productivity of the affected lands.

4.5 Monitoring and mitigating the Bank program's environmental impacts. The programs with particularly large potential impacts—good or bad—are ADCP and the irrigation program. There is little in ADCP's PAD on environmental management, other than a comment that the extension services would provide advice on environmental protection. Yet there are clearly a range of environmental impacts from agricultural development. As discussed above, increased use of agricultural chemicals and overgrazing would have negative consequences, but opportunities for positive environmental (and productivity) impact are plentiful and could be encouraged—for instance, soil conservation techniques, fodder crops and stall feeding for cattle, and organic farming for the high-end produce marketing niches. More systematic monitoring of environmental impacts would enable

³⁸ Deforestation refers here to loss of tree or shrub cover. This is distinct from a change in land use (rather than land cover) as defined in FAO's Global Forest Resources Assessment.

³⁹ Sources: State Statistical Committee, government of Azerbaijan, and FAO.

greater attention to such environmental practices, both as concerns mitigating actions for potential negative impacts and promotion as possible of agricultural practices that combine more viable farming with environmental improvements.

Box 7: Community Pasture Management in the Kyrgyz Republic

Orgochor pasture was a pilot pasture under the Bank assisted Agricultural Support Services Project in the Kyrgyz Republic. A community pasture committee was formed which (after assessments of Ogorchor’s pasture resources, the current usage of the pasture, and the reasons behind overgrazing) developed a pasture use and management plan, determined fees to be paid by users and determined infrastructure needs (primarily a bridge for easier access to summer pastures). The pasture management plan was then implemented by the community. All processes were highly participatory. After only two years there were encouraging early results. Both pasture yields and pasture quality improved and the community was able to increase stocking intensity and their family incomes. Based on this success, a nationwide pasture management program is now underway (under the Agricultural Investments and Services Project).

Yields	2007	2009	Percent increase
Summer pasture—Yield in tons/ha	1.90	2.67	41
Winter pasture—Yield in tons/ha	0.61	0.76	25
Botanical composition of summer pasture (percentage of edible grasses)	39	41	5
Milk yield (liters/cow)	1475	1595	8
Wool shearing (kg per sheep)	2.80	2.95	5
Animal numbers (whole pasture)			
Cattle	1,944	2,365	22
Sheep	9,224	10,366	12

Source: Agricultural Projects Implementation Unit, Agricultural Investment and Support Project; and Pasture Department, government of the Kyrgyz Republic.

4.6 IDSMIP has the better environmental management arrangements. The project’s environmental assessment done by FAO confirmed the positive impact from reduction of waterlogging, water losses and salinization, and also recommended preventive and mitigating measures as needed for other effects. The PAD’s environmental management plan included preparation of environmental management guidelines, monitoring of water quality, technical assistance for water and soil management, more intensive monitoring of sensitive areas, and environmental screening. Supervision is maintaining attention to environmental management.

4.7 AZRIP’s micro-projects would have localized and typically minor environmental impacts. However, some micro-projects could be environmentally deleterious—for instance, an access road with inadequate cross drainage, or a village water supply scheme with poor effluent drainage. Appropriately, AZRIP includes “environmental screening” when evaluating each micro-project, and has developed an environmental guideline to help communities identify and handle environmental issues.

4.8 The lesson from the above is that proactive environmental management plans (IDSMIP) or screening processes for localized developments (AZRIP), or at least monitoring plans where environmental impact is expected to be minor, are desirable. Further, better

environmental management need not necessarily constrain agricultural growth, and could enhance growth. Higher productivity from improved drainage is one such case. But other potential actions such as grazing management to improve both growth in biomass and vegetative land coverage, or integrated production management for better control of pests are also possible.

POVERTY AND GENDER IMPACTS

4.9 Equity in land privatization. Azerbaijan’s agricultural reforms began in an equitable fashion through the land privatization program. As shown in Table 11, some 98 percent of rural households received land and 92 percent consider that the land allocation process was fair. Azerbaijan’s land allocation also appears much more equitable than in comparator countries.

Table 11: Equity in Land Distribution—Country Comparisons

	AZERBAIJAN	BULGARIA	KAZAKHSTAN	MOLDOVA
“Received land during land reform” (% of households)	98	60	37	95
“Land allocation was fair” (% of households)	92	56	60	53

Source: Dudwick, Fock, and Sedik 2007b.

Note: The results are based on a survey in 2003.

4.10 Social inclusion of agricultural services. Access to agricultural credit and extension under the ADCP program appears fairly equitable, but less so than under the land reforms. In principle, women and poorer households in Azerbaijan have the same access rights to land services, credit, agricultural training and irrigation as wealthier and male-headed households. Most government officials met by the IEG mission felt that these rights translated fairly effectively into equal access on the ground. This appears to be substantially the case, but not entirely. Thus, in mission interviews with villagers, while cases of significantly unequal treatment of women and poorer groups were not noticed, some cultural influences were apparent. An agricultural extension worker and a Credit Union President told the mission that special efforts had to be made to get women to come forward to access training and larger loans. Also, committee membership in a Credit Union visited was dominated by men.

4.11 From field visits and discussions with ADCP staff, agricultural extension appears to involve women more than for credit. Women’s participation in agricultural meetings, in presence and in participation in discussion, was usually good, though less so in one more traditional community visited by the mission. The extent of participation of poorer households could not be ascertained.

4.12 AZRIP has been more successful than ADCP in the extent of participation of women. This is not surprising given the community participation nature of AZRIP. As indicated in Table 8, some 97 percent of women considered they had influence in community decision making for the new infrastructure. The inclusive community engagement methods used by AZRIP are likely to have been an important influence on this high degree of participation and

can be expected to have benefitted poorer households as well as women.⁴⁰ Further proactive steps may emerge from AZRIP's FY11 consultant study on livelihoods.

4.13 Gender participation under IDSMIP. A more explicitly designed approach to gender participation is planned for irrigation water user associations under IDSMIP's follow on project. At mid-term-review in 2009, greater gender participation was considered a need, and a consultant study was commissioned to assess how gender participation might be improved. The study (Merkle, 2010) found that women had a much lower participation in WUA decision making, had more limited knowledge, and had received minimal WUA related training compared with men, although women were fairly knowledgeable about the irrigation plan and water scheduling (Table 12). Nevertheless, only 37 percent of women considered that the follow-on project to IDSMIP should aim to increase women's participation. This answer was partly influenced by the cultural roles of men and women in village society, but also because women feared that more involvement would mean more work for them in irrigation maintenance. More specific investigation, however, revealed a strong interest of women in ensuring that their household plots, where they traditionally cultivate vegetables, should receive, or continue to receive, irrigation. Men tended to focus more on the household's fields.⁴¹ Amongst the study recommendations were more education and involvement of women in WUA management, institutional arrangements to ensure a higher participation of women in WUA committees and assemblies, greater orientation in water management to water supply for household plots, and training to be in short modules and at convenient times during the day. Time will tell whether such findings are successfully integrated into IDSMIP's successor project. However, this is a strong start, and has a chance to motivate greater pro-activism on social issues in other projects in Azerbaijan.

THE NEED FOR PROACTIVE APPROACHES

4.14 As concluded by studies in a number of countries, protecting the welfare of vulnerable groups is not simply a matter of creating (apparently) "level-playing field" conditions (for women, also referred to as "gender neutral") for these groups relative to other groups. Yet a frequent view found by the IEG mission, amongst both agricultural agencies and Bank staff, was that there were no particular gender or other social inclusion issues and thus a neutral approach to social inclusion would suffice. However, Azerbaijan's experience, and experience elsewhere, indicates the social value of a more proactive approach. A World Bank survey of four countries including Azerbaijan (Dudwick, Fock and Sedik, 2007a) found that *"Focus group discussions found women less likely than men to attend public meetings or to consult with authorities, and they are less knowledgeable about the legal and*

⁴⁰ As noted by the AZRIP task team, participatory processes include the engagement methods used in social mobilization, collective action functions, social accountability measures, participatory monitoring of achievements and participatory appraisal of investment proposals.

⁴¹ It would be desirable for IDSMIP's proposed follow-on project to investigate the typical value added from irrigating household plots compared with typical value added from other fields on the farm. If the household plots give returns per unit area that approach (or exceed) returns from the rest of the farm, this would provide opportunity for tailoring on-farm distribution systems for greatest impact—and conceivably for both higher productivity and gender/family welfare.

administrative aspects of the reform, as well as its implications for their own households.”⁴²

⁴³ Azerbaijan can learn from its own successes with proactive social inclusion. For instance, the promotion of informal borrower groups in poor communities which were provided with credit without collateral requirements, effectively reached the poor and women and achieved a 95 percent reimbursement rate (Box 8).⁴⁴

Table 12: Indicators of Gender Participation in Management of Irrigation Water User Associations

INDICATOR	PROPORTION RESPONDING BY GENDER (%)	
	Men	Women
Proportion of men and women actively participating in management of the WUA	60	15
Proportion of men and women with some or a lot of knowledge about WUAs (e.g. purpose, administration, decision making processes)	60	20
Proportion who have attended training in WUAs	32	3
Should follow-on project aim to increase women’s participation? Proportion of affirmative responses	42	37
Proportion who consider they are knowledgeable about :		
the daily schedule of water distribution	87	70
the annual water plan	20	60

Source: IDSMIP survey.

4.15 In conclusion, greater access for women to technical knowledge, finance and participation in water user associations would likely have the double benefit of stimulating both agricultural growth and social equity. The Bank program has been largely “neutral,” with project components neither promoting nor discouraging the participation of women and the poor. But neutrality is not enough when propensity to participate is lower for these groups. Exceptions such as the land allocation processes, ADCP’s and Parabank’s Borrower Groups, and IDSMIP’s planned measures for gender participation in its WUA program, illustrate successful social inclusion, and AZRIP’s community participation processes are likely the most inclusive of all the agriculture projects in Azerbaijan. These initiatives also demonstrate that “win-win” actions may be possible between equity measures and agricultural growth—*both* can gain. The Bank would have done well to promote more of such proactive social inclusion measures in all of its agriculture related projects.

⁴² Such social constraints are not unusual. For instance, in a farm survey in Tajikistan it was found that, compared to women, “Men are 3 times more likely to attend training, and significantly more likely to see publications, listen to radio, watch TV, read newspapers and engage in interpersonal discussions.” (USAID, government of Tajikistan, and World Bank 2008).

⁴³ Parabank’s Beilagan branch (2007 IEG visit).

⁴⁴ Establishment of new borrower groups has been dropped under ADCP-II and the existing ones are planned to be absorbed into the credit unions. This is puzzling given the success of the borrower groups, both commercially and socially. A plurality of rural finance instruments may be better, with both borrower groups and credit unions, and an increasing role for commercial banks.

Box 8: Social Inclusion of Borrower Groups

Borrower groups are small informal groups of farmers who get together to apply for credit. Because of their small size and because participants come from the same community, borrower groups tend to integrate poorer and female headed households better than credit unions. As example, the IEG mission in a meeting with 9 borrower groups found that 35 percent of members were women, and in a meeting with 3 borrower groups female membership averaged 78 percent. Nearly all members had small holdings.

Borrower groups take loans using their “moral collateral” (their honor and community pride). The average repayment rate under ADCP-I was 95 percent, nearly as high as the repayment rate of ADCP-I’s credit unions (97 percent). A branch manager of a commercial bank (Parabank) interviewed by the mission, had made lending to borrower groups his main portfolio because he assessed them as reliable borrowers (repayments were virtually 100 percent).

Two credit unions met by the mission acknowledged the better capacity of borrower groups to serve women and the poor. One credit union member commented that the membership fee for a credit union may be unaffordable for a poor farmer. There was also the question of whether the poor and women sufficiently propose themselves for membership of a credit union. In the words of one credit union chairman, “*You can invite [the poor and women to be credit union members] but that doesn’t mean they come.*”

Source: IEG mission interviews with Borrower Groups, Credit Unions and Parabank’s Beilagan office.

5. The Strategic Quality of the Bank’s Program

THE RESPECTIVE ROLES OF THE PUBLIC AND PRIVATE SECTORS

5.1 A long-standing general policy goal for both the government and the Bank has been to make Azerbaijan a market-based and primarily private-sector economy. For the agriculture sector, the main privatization initiatives facilitated through IBRD/IDA projects were:

- **Land privatization.** Azerbaijan has had one of the most far-reaching land reforms in the CIS—transformation in one step from the collective farms of the Soviet era, to the fully private family farms of today (Box 2). The Bank’s role in the privatization program—as a key promoter and technical advisor—was frequently cited to the IEG mission by government staff (Section 6 and Box 10).
- **Agricultural extension.** After piloting under ADCP-I and scaling up under ADCP-II, all RACs are now managed by contracted nongovernmental organizations (NGOs) or private consulting teams, selected through competitive bidding. Field extension staff (“private advisors”) are recruited and supervised by these centers. Private veterinary services are also being promoted. The IEG mission found that both the private RACs and their extension staff, and the private veterinary clinics visited have performed well and that their services are highly appreciated by farmers.
- **Agricultural research.** ADCP’s Competitive Grant Scheme finances specific research or demonstration activities on the basis of open competition. From the sites visited by the IEG mission and discussions with farmers and government officials the grants appear to be widely appreciated, being seen as funding activities that are relevant and adaptive to the needs of both traditional crops and unfamiliar diversification crops.

The range of activities funded by the competitive grants has broadened over the last several years, with, in particular, more grants going to processing.

- Produce marketing and processing. Development of private marketing chains and agribusinesses, is being promoted under ADCP-II and an IFC marketing chain project.
- Financing institutions. Private sources of rural finance can be expected to progressively become the dominant source of institutional credit. A series of IFC projects have promoted the banking sector but the banks tend to be more interested in larger businesses (an important niche for larger agribusinesses) than small loans for farmers. Micro-finance is, thus, now also being promoted by IFC. Also important will be the expected growth of the agricultural mortgage market as a result of the RERP. Based on typical experience with land administration in other ECA countries,⁴⁵ once land ownership is officially registered, farmers can be expected to have better access to private sources of credit using their land as collateral.

TACKLING THE MULTIFACETED NATURE OF THE AGRICULTURE SECTOR

5.2 With a lending program that covers land reform, agricultural extension, credit, irrigation, land administration and community infrastructure, the Bank's program is already multifaceted and covers most of the key constraints to agricultural growth discussed in Section 1. However, some constraints could have received greater attention:

- Marketing and processing. The recent expansion of rural finance to include agribusiness and marketing (ADCP II) is appropriate, but, given its importance, the marketing focus might have started earlier in the lending program.
- Rural roads: An inadequate and dilapidated rural road network is an important part of the market access problem. Indeed, a functioning access road was one of the commonest needs cited in villages visited by IEG. But the highways projects are almost entirely for the major roads (Box 4). The most common rural investment chosen by the AZRIP communities are feeder roads. But rehabilitated secondary roads connecting to the main highways are also needed. The project implementation unit of highways-II felt that there was implementation capacity to have a larger secondary roads program for rural areas.
- Governance and the business environment. While less tangible than physical or financial constraints, Azerbaijan's governance problems, in particular the border crossing procedures for perishable agricultural produce, have been a significant drag on agricultural growth. The dialogue that the Bank has had on governance reforms has tended to be general rather than agriculture specific. Given the vulnerability of agricultural produce to trading or processing hold-ups, the governance dialogue could have placed more emphasis on the specifically

⁴⁵ In Azerbaijan, trends in mortgage based financing are not yet discernible for RERP as market impacts from the registration program have yet to develop significantly and the financial crisis has disrupted the financial sector. However, IEG Project Performance Reviews in 2010 of land administration projects in Slovenia, Bulgaria and the Kyrgyz Republic (all with registration programs started earlier than RERP) found that growth of the land-based mortgage market was closely associated with development of land registration. Other facilitating measures were also helpful, for instance mortgage market reforms in Slovenia.

- agricultural constraints, especially the exporting constraints. This appears to be changing. For the first time in the series of CPS' and economic reports produced for Azerbaijan (Appendix Table A.2) the 2009 CEM emphasizes the exporting issues, which are also entering into current Bank-government policy dialogue.
- Rural finance and credit. A diversity of financing windows are needed for the different actors in the rural sector, ranging from seasonal and medium-term micro-credit for very small farms, larger loans for bigger farms and small enterprises, and commercial bank outlets for larger farming businesses and marketing/processing enterprises. Until recently, the Bank confined itself to promoting institutional credit through a central credit agency, providing funds under ADCP-1 to credit unions and informal borrower groups. Both types of farmer organization have had good reimbursement rates (97 percent for credit unions and 95 percent for borrower groups). The borrower group financing channel, by effectively reaching poorer farmers found a special niche in the rural finance menu, but is being discontinued, a questionable decision from both equity and efficiency perspectives (Box 8).

5.3 Bank support to development of private sector rural finance did not come in until IFC's FY08 microfinance project and the line of credit through commercial banks to agro-industries under ADCP-II. Perhaps more might have been done earlier to encourage private rural finance, but at the beginning of ADCP-I there were few private financing enterprises interested in rural banking, and those that were interested had no or only a small number of rural outlets. Progressively, however, the banking sector has grown in diversity, and mission discussions with several banks indicate potential for the private sector to become a primary source of rural finance. The greatest interest is lending to agribusinesses rather than small loans to farmers, but potential for farmer credit, even to small farmers appears to exist. Parabank's lending to borrower groups (Box 8) is a case in point. The volume of credit financing from the private banking sector is now increasing rapidly. These developments suggest that private banking may be able to replace institutional credit—quite soon for agribusinesses, but eventually also for the smaller loan requirements of farmers.

5.4 Sequencing of interventions over time. All rural support systems had collapsed after the Soviet period, and Azerbaijan's rural sector needs were thus multiple, and all were important. Nevertheless, addressing all issues simultaneously would have overstretched government capacity at that time, and probably the Bank's staff resources as well. Further, nearly all activities needed piloting. A largely sensible sequencing was employed, albeit with some gaps. The small pilots under FPP were a good starting point. Continuing with the failed collectives was not a viable option so land privatization had to be at the forefront of any agricultural reform program (FPP and ADCP). Bringing in extension and credit services (FPP and ADCP) were two other early priorities. The two irrigation projects came in shortly thereafter.

5.5 Progressive project specialization. The progressive “peeling off” of ADCP activities to specialized projects also makes sense. Irrigation after FPP became handled by the specialized irrigation projects. And RERP has taken over ADCP's land administration responsibilities. Both irrigation and land administration are highly specialized activities best handled in separate projects. This leaves ADCP-II able to focus primarily on extension, rural

finance and agribusinesses. Both the extension system and, in particular, agricultural credit still cover only a modest proportion of the nation's farms.⁴⁶ At a later date there might be a case for extension and rural finance to be handled by separate but closely integrated projects, but existing coordination problems, even within the same project, would need to be resolved first (Box 5).

THE BANK AS AN INNOVATOR

5.6 Nearly all government and project officials met by the IEG mission had strongly positive views on the Bank's effectiveness as an innovator, knowledge source, and catalyst of change. This role was considered to be the most important contribution that the Bank had made to Azerbaijan's agriculture sector. The Bank's financing role was a distinctly secondary consideration. Farmers were also enthusiastic. In particular, farmers appreciated the new technologies and knowledge they were gaining through the extension system. A number of government officials and Bank staff also stressed the cultural and organizational, as well as technical newness of the innovations. For instance, in Soviet times grants and not credit were provided—returning money was a new concept. And the experience of the collectives made farmers initially distrust any form of group organization (WUAs, AZRIP's community groups).

5.7 The main innovation areas are indicated in Table 13. Of note is that, without exception, every activity—whether introducing agricultural extension, water user associations, research through competitive grants and other innovations listed in the table—was entirely new to Azerbaijan. The innovations were, thus, mainly the import and adaptation to Azerbaijan circumstances of activities already practiced elsewhere. The challenge was that most innovations had to be packages of actions, all experiments for Azerbaijan, and all to be learned and piloted. Most innovations were both introduced and expanded within the same project. Designing for scale-up when an innovation had not been piloted was risky, but worked in most instances.

5.8 Innovations in Azerbaijan were in fact more than simply a matter of adapting from experience elsewhere. In particular, Azerbaijan's land privatization program was in many respects unique and is a "best practice" example for land reform in other countries, not only in its features (Box 2) but also in the leadership and energy with which this was driven forward (Box 10). There were also technical innovations in agronomic and animal husbandry practices, the introduction of new crops and varieties for diversification, and in post-harvest technologies. The technical innovations are, nevertheless, where Azerbaijan can perhaps do more. The competitive grants scheme, which has been at the forefront in experimenting and demonstrating the new technologies, merits further expansion and proactive invitation to potential grant recipients to bring diverse proposals with particular emphasis on innovation. Innovation in processing, packaging and marketing would be a particular area to emphasize (more of this is developing under ADCP's agricultural business services component, and the 2010 competitive grant awards show that produce processing is getting more attention).

⁴⁶ ADCP-II targets reaching 50 percent of the project regions' farmers by the extension system and providing about 10,000 families access to credit through credit unions (compared with the approximately 870,000 farmers in Azerbaijan).

Table 13: The Bank’s Role in Innovating and Scaling Up New Agriculture Sector Approaches

INNOVATIONS	PROJECTS CONCERNED AND REMARKS
Land privatization	FPP: piloted land privatization and was the learning and demonstration base for nationwide scale-up.
Agricultural extension and private sector delivery	FPP and ADCP: piloting and scaling-up Azerbaijan’s first post-Soviet extension service. Extension through private extension centers and their field staff.
Credit	FPP and ADCP-I introduced institutional credit, but performance has been uneven.
Water user associations	FPP and IDSMIP: Piloted under FPP. Scaling-up under IDSMIP.
Private veterinary services	ADCP-I and II: Piloting and scaling up.
Competitive grants for research	ADCP-I and II: Piloting and scaling up. Strong farmer interest and activities financed are predominantly to agricultural diversification, processing and agribusiness.
Irrigation rehabilitation	RIDIP: Started irrigation rehabilitation program. Provided learning vehicle for irrigation agency.
CDD approaches	AZRIP: Azerbaijan’s first community driven rural development program. Introduced an effective blend of quality engineering support with strong community outreach.
Modern land administration	RERP: Introducing a modern and digitized real estate administration system, and scaling up to national coverage.
Produce marketing and processing	ADCP-II: establishing a credit line for small businesses.

Sources: Project documents, interviews with government and Bank staff and IEG field visit observations.

5.9 Experience with scaling up. Features that have helped scale-ups to succeed include: (i) a good initial model (for example, the FPP pilot for land privatization); (ii) enough experience during piloting to learn from mistakes and go for what works (for example, ADCP’s RACs—the private RACs were more successful than the government RACs, so the government model was dropped during project implementation); and (iii) continuous adaptation as experience is gained.

5.10 Follow-on operations. The Bank has consistently stayed with the core thrusts it is supporting (extension, credit, land administration, irrigation, community investments, and so forth). This was appropriate. The activities are both important and, for most of them, require support over time if they are to succeed. Progressively adding thrust areas such as agribusiness promotion under ADCP II also makes sense. Future intentions appear to be a continuation of this strategy, with three follow-on projects planned in FY11–12: a follow-on project to IDSMIP; and ADCP III and AZRIP II. A project specifically focused on facilitating agricultural marketing, processing and exporting may also have merit.

6. Adaptation to Country Circumstances

6.1 In most respects external project experience has been well adapted to Azerbaijani conditions and to changing needs, both geographically and over time – for instance, in agricultural extension the RACs were privatized and their extension systems adjusted as experience was gained, and each provides training and advice specifically relevant to its region (Box 9).

Box 9: Adapting Agricultural Extension to Local Needs

The agricultural extension system's design allows flexibility and responsiveness to local agricultural conditions and changing needs over time. Each RAC has substantial autonomy and is encouraged to produce its own technical guidelines. Extension agents are trained for the relevant crops, livestock and agro-climatic conditions of the area. This can be quite specific—the IEG mission met agents with particular specializations in green house horticulture, bee keeping, and onion production and storage. The RACs are also adjusting to increasing demands of farmers for advice on diversification crops and on business management.

Source: IEG field visits.

GAUGING POLITICAL WILL AND IMPLEMENTATION CAPACITY

6.2 Strong Bank performance initiating reforms. In the first years of Bank involvement—from FPP's conceptualization in 1995/96 through the early 2000s—the Bank performed well in understanding Azerbaijan's political and administrative environment and in supporting reform within these realities. The Bank's actions supporting land privatization were particularly effective. The qualities that the Bank brought included (i) timely recognition and support when the country's leaders wanted major reforms; (ii) experienced task team leadership combining technical knowledge with advocacy; (iii) effective support of the task team from Bank management; (iv) frequent visits to Azerbaijan by the task team, including extensive field visits; and (v) a strategic and forward looking orientation (Box 10).

6.3 Building a reformist constituency. Azerbaijan's agricultural reform program was led by the government, with a committed President blazing the trail. Initially, there were virtually no supporters of land privatization—only doubters or vested interests against reform. Progressively, a core of reformist government and non-government supporters developed, receiving a further boost as the FPP land privatization pilots started yielding results. The pilots were successful and enthusiastically appreciated by the concerned communities. This provided a demonstration to politicians, officials and farmers that the reform program was beneficial, and gave them the confidence to go forwards.

6.4 The government-Bank partnership. Bank staff were seen by the government as partners in reform, informally participating in strategy development, and contributing international perspectives. The task team also played a promotional role at field levels, discussing the reforms in small forums and with field officials and local governments. The decision to make FPP a pilot operation was sound. Supervision could be intensive, facilitating project implementation.

Box 10: Successful Partnering of Agricultural Reform

An experienced Bank task team, with extensive knowledge of Soviet and CIS agriculture, began visiting Azerbaijan at the time when the country's new President started to define an agricultural reform program. A staff member joined a partnership of what initially was a small nucleus—the President, Deputy Prime-Minister and newly appointed Minister of Agriculture. The Country Director was also dialoguing with the President on agricultural reform issues. Resulting from the government-Bank partnership, FPP was conceptualized to test the reform concept for practical application. In addition to technical advice, the Bank put energy into advocacy and training, helping to arrange study tours to countries with relevant agricultural reform experience, and through informal interactions with officials during FPP preparation. The intensive advocacy was because there was minimal understanding of agricultural approaches other than the Soviet system, and there were also strong entrenched vested interests. According to the former Minister of Agriculture, the outline ideas for the agricultural reform program were first presented in a large meeting of senior government officials. In the Minister's own words, after the presentation: "Out of about 150 persons, only three persons in the room agreed with me—the President, one other, and myself!"

Once the pilots were demonstrating success, the government requested technical help from the task team for immediate nationwide roll out of the privatization program. This was risky given the limited experience, but the Bank correctly assessed that it was possible, recognized the risk was worth taking, and provided the help to achieve it.

Source: IEG mission interview with former Minister of Agriculture and ADCP officials.

6.5 Reduced attention to political and capacity constraints. In the last five years the Bank has been only moderately effective in dealing with political and capacity constraints. Whereas during the 1990s there was a continuous and senior level dialogue on both policy and implementation issues, discussions with current task teams indicate a less intensive involvement with agricultural policy.⁴⁷ The typical engagement with government is at project level, through wrap-up meetings during twice-yearly supervision missions. Meetings at the President's or cabinet's level are infrequent.

COORDINATING WITH AZERBAIJAN'S OWN AGRICULTURAL PROGRAMS

6.6 The Bank's lending program fits well with the core thrusts of Azerbaijan's agricultural strategy. The early projects (FPP and ADCP) were, in effect, direct translations of the strategy into actual implementation and served also as piloting vehicles to adjust strategy as experience was gained. The other projects, whether irrigation, real estate or community development, provide further support, with the ADCP program as the fulcrum. However, as discussed in Section 2, the sparse analytical work and policy dialogue in recent years has limited a more fundamental involvement with Azerbaijan's strategic choices.

COORDINATING WITH OTHER PARTNERS

6.7 Development agencies. Key development agencies engaged in Azerbaijan's agricultural sector advised the IEG mission that they had good rapport with the World Bank, though relations were mostly of an informal and interpersonal nature rather than in more

⁴⁷ As examples: the persisting mismatch between credit terms and farmer needs; the limited degree to which the Bank addressed marketing channel constraints; the government's adherence to charging value added tax (22 percent) to credit unions contrary to international credit union norms; and the preparation, without Bank involvement, of the government's unsuitable new agricultural strategy.

structured interlinkages. All donors interviewed stated they would like closer links with the Bank.⁴⁸ First, they would welcome the World Bank leading an intensified agricultural policy dialogue with the government—the view was that only the Bank had the influence to engage effectively at senior government levels. Second, opportunities for collaboration in lending to benefit from synergies and mutually complementary activities would be welcome. And third, although the Bank does invite development partners to some key meetings, the donors felt that regular meetings for coordination and planning between agencies would be helpful.

6.8 Discussions with Bank staff and donor agencies revealed a number of potential benefits from closer collaboration. Among them are—

- Harmonizing implementation modalities. Bank and government staff commented that in one region RACs have been established by both IFAD and the Bank under their separate projects. One extension service is preferable. For WUAs, IFAD subsidizes the staff of WUAs, while the Bank requires that WUA members should finance such staff from their user fees. The latter approach lays a better base for long term sustainability, but is more difficult to apply when farmers are aware of the subsidies provided to the WUAs supported by IFAD.
- Harnessing complementary strengths. As example, in agricultural marketing and processing, IFC, European Bank for Reconstruction and Development, IBRD, KfW/GTZ and USAID all provide support to agribusinesses, but from different vantages. KfW and GTZ have niche roles in their ability to provide smaller loans to finance smaller enterprises. Such enterprises could over time become big enough to be candidates for the larger sized loans provided by IFC or the European Bank for Reconstruction and Development.
- Complementary sector analysis and dialogue. The recent initiative by the Bank and USAID to work collaboratively in analysis of the agricultural sector, can reduce duplication, enhance overall effectiveness and use the comparative advantages of each institution's approach to get a better combined output.⁴⁹
- Involving NGOs. The NGO network is small in Azerbaijan and there is no extensive involvement of an NGO in Bank agricultural projects. However, small NGOs have been successfully contracted to manage some of the regional advisory services and have also won some of the competitive grants for agricultural research.

⁴⁸ Development agencies interviewed were the: European Bank for Reconstruction and Development, Food and Agriculture Organization, International Fund for Agricultural Development, GTZ and KfW (German development agencies), and USAID. The International Monetary Fund was also consulted.

⁴⁹ USAID is doing more in-depth analysis of domestic resource costs and other issues, while the Bank is providing a broader macro-perspective.

7. Impact of the Bank’s Own Institutional Arrangements and Practices

COORDINATION AMONG SECTOR UNITS AND BETWEEN SECTOR AND COUNTRY UNITS

7.1 Operations. Coordination between the country unit and sector units is satisfactory for the lending program. Sector Manager and Country Manager comments in internal documents are proactive. The arrangement whereby the Country Manager signs supervision letters helps form a natural bridge between country and sector managers. The task teams follow up on matters raised by both managements.

7.2 AAA. Integration of agriculture within the Bank’s key policy papers has been less successful. From the FY00 CAS to the FY07 CPS there was little attention to rural sector issues in Bank economic and strategy documents (Section 2 and Appendix Table A.2). This suggests either limited advocacy by the agriculture sector staff or limited responsiveness by the country unit.

7.3 Coordination between sector units. The roads sector is one case where closer linkage would have been desirable between the agriculture and transportation units regarding locations and prioritization of rural roads (Box 4).

7.4 Coordination between IFC and IBRD/IDA. Coordination between IBRD/IDA and IFC could also be strengthened. Current inter-linkages are collegiate but informal, and lack specific forums for exchanging ideas and coordinating activities. In the view of the IFC representative in Azerbaijan, interviewed in 2008, there were good relations between the two institutions, and information was shared, but IBRD/IDA and IFC “could do more.” Since then there are indications that coordination may improve. The 2009 CEM and the FY11-14 CPS (2010) both advocate closer interrelations between IBRD/IDA and IFC, and there are pointers on what each can do. However, the CPS does not articulate detailed action areas where cooperation would be sought. Such opportunities won’t happen without proactive identification by the two parties working together. It might be, for instance, that the agribusiness financing window under ADCP-II could finance expansion and upgraded skills of promising agribusinesses to prepare them as possible candidates for IFC’s consideration. Or, the ADCP could provide concentrated training, agricultural extension and credit services in the area around an agro-processing plant supported by IFC – in order that the plant is provided with quality and timely produce for processing. All parties—farmers, the agribusiness, IFC and IBRD/IDA—can gain from exploiting such potential synergistic actions. This was also a finding in IEG’s global evaluation of Growth and Productivity in Agriculture and Agribusiness (2010).⁵⁰

7.5 Coordination between project task teams. Linkages between task teams within the agriculture sector unit also need improvement. As discussed in para. 2.21 and Boxes 3–6, ADCP, AZRIP, and the irrigation projects could have benefitted through more mutual

⁵⁰ “When IFC has combined an agribusiness investment and an extension advisory service project, the intervention has produced superior outcomes” (IEG 2010b, p. 40).

cooperation.⁵¹ Further, for ADCP, improved linkages between its own activities are desirable. Credit terms may be convenient to the government financing agency, but are not adapted to the needs of the farmer (Box 5), indicating the need for more concerted interaction between the credit and agricultural extension specialists. A more integrated approach may now be developing. The task teams of ADCP, IDSMIP and AZRIP intend to develop a closer collaboration, which if carried forward, would be a very positive step.

SETTING PROJECT OBJECTIVES WITH APPROPRIATE PERFORMANCE INDICATORS AND MONITORING PROCESSES

7.6 This is a particularly weak area. None of the projects are strong overall in establishing a close link between development objectives, monitorable indicators and M&E more broadly (para. 2.23). Only ADCP and IDSMIP have DOs specific to agricultural growth. Only FPP, ADCP and IDSMIP have productivity targets as part of their monitorable indicators. Only ADCP II and RIDIP have M&E measures to quantify productivity impacts.⁵² The reasons for the weaknesses in performance monitoring are not clear, though workshops to increase staff awareness and skills might be useful.

COMPLEMENTARITIES AT GLOBAL, REGIONAL, AND COUNTRY LEVELS

7.7 Regional complementarities.⁵³ There is potential for significant benefits if regional trade discussions are held between Azerbaijan and other adjacent countries. Azerbaijan could benefit from its comparative advantage in agricultural produce, but its agricultural trade prospects could be jeopardized if the sector's current high subsidy levels are not reduced. As discussed in para. 1.13, the "Aggregate Measure of Support" for agriculture of about 15 percent, exceeds the maximum of 10 percent allowed its members by the World Trade Organization, and Azerbaijan has had to withhold its application for World Trade Organization membership.

7.8 Country level complementarities. An evident grouping of potential complementarities would be the roads sector, trade barriers and exportable agricultural products. The Bank has financed a series of large highways projects (\$300 million of additional financing was provided to the highways program in 2008) providing the important service of building road corridors linking trade routes and main population centers. Few would argue that the roads program is not, in itself, beneficial. But a logical accompaniment would be to tackle the border constraints. These are a large part of transport costs. Removal of the rent associated with taking agricultural produce or other goods across Azerbaijan's borders would reduce overall transport costs of an exporter by about 30 percent. This puts

⁵¹ A positive development however, is the initiative now being taken by the IDSMIP and ADCP task teams to link irrigation with agricultural services (para. 2.21).

⁵² Productivity targets were measured under RIDIP, were realistic, and were achieved (RIDIP ICR). ADCP-II targets a 20 percent increase in farmer incomes which is realistic, ADCP II's PAD could have provided more MIs on productivity (for example, yields of key crops, measures of crop diversification) than the broad income target alone. However, ADCP's M&E unit intends to measure a greater array of field impacts.

⁵³ The Bank supported Avian Flu Project, Azerbaijan's part of the multinational program, is the only significant agriculture related global activity.

road infrastructure in a more modest perspective. For the agriculture sector, it could well be that the most cost-effective “road improvements” that the Bank could support in Azerbaijan would be the transport cost reductions that a more transparent cross-border trading system could provide.

LINKAGE AMONG POLICY DIALOGUE, ANALYSIS, AND LENDING

7.9 The paucity of analytical work and policy dialogue since 2000 means that there has been little sector analysis to interact with lending (Section 2). This has had two consequences. First the project portfolio itself has been less effective than it could have been if based on analysis of operationally linked issues—for instance, opportunities for commercial rather than institutional rural finance, market constraints, the need for more rural roads, and the mismatch between credit reimbursement periods and the reimbursement periods actually needed by farmers. Second, and more fundamental, is the opportunity foregone to have a wider strategic dialogue with the government on policy issues that can significantly affect agricultural growth—for instance, appropriate agricultural subsidies, a comparative advantage based diversification program, or a prioritized and efficiency-based agricultural development strategy, rather than the government’s unfocused agricultural policy issued in 2008 (para. 2.32). Would a policy of this nature have been issued if the Bank had been a more involved partner with the government, as was the case at the beginning of Azerbaijan’s agricultural reform program? It is noteworthy that nearly all donors and government officials met by the IEG mission wanted greater Bank leadership and influence in sector policy and coordination.

7.10 Providing agricultural strategy expertise. The technical knowledge and experience of staff working on the sector has been good. The same can be said on the macro-economic front and in general economic strategy, as particularly evident in the 2009 CEM and 2010 CPS and in the stepped up management dialogue with government of recent years. There is one gap however—the absence, from the beginning of lending in FY97 through 2010, of an agriculture sector economist operating uniquely or substantially on analysis, policy and strategy formulation for Azerbaijan’s agriculture sector including substantial dialogue with the government and other agencies and within the Bank across sector units. This gap has been at the heart of many of the issues reviewed in this report and was also mentioned to the IEG mission by a number of Bank staff in Washington and Baku and by several development agencies and government officials.

7.11 Promising new initiatives. A very positive recent development is a greater attention to agricultural strategy in recent Bank policy reports on Azerbaijan. There was a greater focus on agricultural analysis in preparation of the FY09 CEM. There was also a collegiate dialogue and series of workshops with the government during drafting of the report. In the 2010 CPS for FY11–14, the intention to have closer linkages between IBRD/IDA and IFC, as well as to step up analytical and advisory work was explicitly highlighted.⁵⁴ The results in

⁵⁴ As stated in the 2010 CPS, “IDA/IBRD will support further development of the agriculture sector through a new agriculture development and credit project (ADCP-III), as well as an agriculture review and analytic work on trade issues related to agriculture such as quality standards. IFC will complement this by considering financing agribusinesses both directly and through financial institutions. It may also consider launching advisory services to improve competitiveness, including on issues such as food safety and agro-finance.”

terms of actually achieved complementarities between agencies, projects and Bank/IFC; in development of a more influential agricultural policy dialogue; and in positive progression on the issues discussed in this review have yet to be seen. But these intentions are in the right direction, and provide the opportunity for a more strategically oriented and coordinated Bank group presence in Azerbaijan's agriculture sector in the future.

8. Conclusions

8.1 With its oil revenues and recent transition from IDA to IBRD lending terms, Azerbaijan's financial incentives to continue borrowing from the Bank appear marginal. Nevertheless, the government values the technical assistance that IBRD/IDA and IFC staff have provided during preparation and supervision of the agricultural portfolio. This case study also assesses that the Bank's agricultural knowledge transfer achievements have been exceptional. Indeed, access to technical assistance is likely the primary factor influencing Azerbaijan's continued interest in associating with the Bank.⁵⁵

8.2 Although there have been some weak aspects, each of the Bank's agricultural projects has performed well or moderately well. Each project has occupied a relevant development niche, and overall, the lending portfolio has played an important role in introducing and scaling up new agricultural services. The limited data available also indicates that the projects have had positive impact on agricultural productivity.

8.3 However, the agricultural projects could have had greater impact on agricultural productivity, and the Bank could have done more to guide agricultural policies to achieve better growth. The overall impact of the lending portfolio has been limited to the sum of the impacts of the individual projects. With more focus on strategy, priorities, inter-linkages, synergies, coordination and monitoring, the combined impact on productivity of the projects would have been greater than this. Further, if sector analysis and policy dialogue had been undertaken, the Bank would have had a more influential voice in the formulation and adjustment of government policies and strategy.

LESSONS FOR ENHANCING AGRICULTURAL PRODUCTIVITY

8.4 The findings of this study suggest a number of areas where the Bank could have enhanced its impact on Azerbaijan's agricultural productivity in the 1997–2010 period. These lessons, which are expressed below as of the situation in the last year of the study (2010) will also provide pointers for the Bank's agricultural role in Azerbaijan in future years.

⁵⁵ Bank management has a similar assessment as stated by the Country Manager, Azerbaijan: "Azerbaijan doesn't need money, but still they borrow from the World Bank, not for the sake of borrowing, but for the well prepared and managed projects" (ACC 2008).

8.5 The main areas where the Bank could have had greater impact on agricultural productivity in Azerbaijan were by:

- (i) Boosting Agricultural analysis and policy dialogue. Prioritizing and improving the quality of the project portfolio, tackling sector and policy issues affecting project performance, and engaging with the government to help resolve policy issues and to steer a sound agricultural strategy.
- (ii) Recognizing priorities, in particular:
 - Removing export barriers
 - Promoting agribusinesses, processing and market chains
 - Promoting innovations by additional knowledge transfer activities.
- (iii) Focusing and monitoring the lending program. Project objectives were seldom explicitly focused on agricultural productivity, even when project design indicated that this was the implicit objective. Monitorable indicators needed to reflect the project objectives, and M&E needed to assess achievements against these indicators.
- (iv) Coordinating complementary activities. Linkages could have been improved between sector units, between agricultural task teams and their respective projects, between IFC and IBRD/IDA, and between the Bank Group and other donors.
- (v) Facilitating higher investment: The shares of agriculture investments and services in public expenditure, foreign investment and combined donor funding have been low relative to the agricultural sector's significance in the economy. Policy dialogue could have considered higher government and donor expenditures, and special measures to improve the entrepreneurial environment in aspects specific to agro-processing, agricultural input supply and marketing of fresh produce.
- (vi) Developing win-win environmental, gender, and poverty-alleviation approaches. Community pasture management, credit for borrower groups in poor communities, community mobilization approaches for village infrastructure, agricultural extension training in topics of particular interest to women, and measures to involve women in WUA management, are all activities where social and environmental improvements can also improve agricultural productivity. There were good initiatives, but also scope for scaling-up and further initiatives.
- (vii) Adjusting staff incentives and operational budgets. Meeting the challenges above would have needed a greater emphasis by the Bank on the "software" (sector analysis, policy dialogue, development strategy, interlinking with other agencies and knowledge transfer) aspects of Azerbaijan's agricultural development. More recognition was needed (and related budgetary and staff resources) that proactive policy dialogue and sector analysis was as valuable as lending.

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Appendix A: Data Tables

Table A.1: Agricultural Productivity as Featured in Project Objectives, Design and Monitorable Indicators

Project and FY	Development Objectives	Components	Monitorable Indicators, M&E and Comments
FPP (FY97)	Land privatization and farm restructuring” (piloting).	(i) Farm privatization; (ii) agricultural extension; (iii) credit; (iv) irrigation rehabilitation/WUAs.	- MIs generally good, covering both <u>output</u> (e.g. irrigation area rehabilitated) and <u>impact</u> targets (e.g. yields). - But M&E weak, with minimal impact data.
ADCP (FY99)	Return Azerbaijan’s farming areas to former levels of productivity.	(i) decentralized land registration services; (ii) agricultural extension; (iii) credit.	- Good Output MIs. Limited MIs of Impacts. - Weak M&E of productivity impact.
RIDIP (FY00)	Prevent decline Baku water supply and irrigation ... improve irrigation and reduce salinization.	Rehabilitation works for Baku water supply, and irrigation (86,000 ha) and drainage (36,000 ha).	- No reference to productivity in DO. All on Outputs. - But M&E methodically designed and measured yields.
IDSMP (FY03)	Improve effectiveness and financial viability of ... irrigation ... and WUAs, and upgrade capacity of irrigation agency.	(i) Develop and strengthen WUA capacity, (ii) rehabilitation of tertiary (on and off farm) irrigation systems (56,000 ha).	- Good selection of both outcome and output indicators. - Limited details on M&E . - Only limited references to yields in PAD text.
AZRIP (FY04)	Rural communities completing micro-projects investments, using demand driven processes, to improve living standards.	(i) Grants for social (e.g. village water supply, school) and economic (e.g. small-scale irrigation, village access roads) micro-projects through CDD processes, (ii) Training for communities, NGOs and government.	- No specific mention of productivity in DO (although “economic infrastructure” implies agricultural growth). - PAD has limited details on the M&E system. - Log-frame has no productivity targets.
ADCP II (FY06)	Increase rural productivity and incomes by enhancing access of farmers and small and medium agribusinesses to advisory services and rural finance, and stimulate market oriented investments.	(i) Agricultural business services (credit and other financial services for farmers and rural businesses) for developing market linkages and agricultural processing); (ii) further roll-out, following ADCP I, of extension and research services.	- DO specifically targets increased agric. productivity. - M&E framework targets a 20 percent increase in yields. - PAD states intention to coordinate with other projects for synergies enhancing economic development.
RERP (FY07)	Develop a reliable, transparent and efficient real estate registration system supporting real property markets, and suitable systems for management of state-owned property.	(i) Improvement and expansion of real estate registration, including (ii) management systems for state property, (iii) base mapping and land cadastre, and (iv) training and policy development.	- No specific reference to agricultural productivity in DOs. - Logframe MIs have no reference to agriculture. - PAD (page 12) cites six economic and fiscal benefits from the project, but not one of them refers to agriculture.

Source: IEG.

Table A.2: How Agricultural Productivity Featured in Bank Economic and Sector Work (FY1994–2010)

FY	AAA Document	Agricultural Growth Content
94	Country Economic Memorandum (July 1993)	First economic/strategy report for Azerbaijan, issued 9 months after the country became a member of the World Bank (September 1992). A comprehensive analysis of country issues and needs, including cross-cutting themes (banking, privatization, etc.) and sectoral issues such as agriculture. Recognizes importance of agricultural growth, and discusses issues within a broad economic framework. A good first attempt at diagnosing agricultural issues, including those subsequently tackled under the first Bank agricultural project (FPP) approved in FY97.
97	Country Assistance Strategy (Aug 1996)	Relevant CAS for beginning of agricultural operations (FPP went to Board in January 97). CAS has strong focus on agriculture – in text discussion of priorities, in proposed lending (FPP, Irrigation and ADCP proposed for the CAS period, representing 3 of 7 proposed projects. The CAS directly targets the <i>“Enhancement of competitiveness in critical economic sectors.”</i> <i>“For the CAS period, the focus of the Bank group will be largely on agriculture which offers many opportunities for expanding output and incomes of Azerbaijan’s poor.”</i>
00	Country Assistance Strategy (August 1999)	Issued shortly after approval of ADCP. Eleven AAA activities proposed in FY00-02 period but none directly agriculture related. Action Matrix contains good listing of key intervention areas, corresponding with activities of FPP and ADCP. Despite limited AAA on agriculture, CAS period contains three agricultural operations (the first two irrigation projects and ADCP II) of 12 proposed operations.
03	Poverty Reduction Strategy Paper (April 2003)	First PRSP for Azerbaijan. Agricultural sector is discussed, though not as a key theme. References to agricultural productivity are limited.
06	Agricultural Marketing Study (May 2006)	<i>“Realizing Azerbaijan’s Comparative Advantages in Agriculture”</i> A detailed and highly relevant marketing and agro-processing study.
07	Country Partnership Strategy, FY07-10 and CAS Completion Report for FY03-05 CAS	References importance of agriculture, but there is no specifically agricultural AAA proposed. Three projects proposed – ADCP II, Real Estate and Irrigation. (Notable comments: (i) <i>“the Bank and IFC will work jointly on supporting sustainable and balanced growth of the non-oil economy”</i> (ii) <i>“Shift to a “programmatically approach to both lending and AAA”</i> (iii) <i>Shifting from longer studies to shorter, programmatic policy notes and workshops;</i> (iv) <i>aims for a “close integration of policy and investment lending”</i> and intends to (v) <i>“Stay consistently and constantly engaged in the policy reform agenda”</i>
08	Progress Report on the FY07-10 CPS (April 2008)	Limited discussion of rural sector, but not directly of agricultural growth. Agricultural actions not presented in a holistic strategy Planned AAA in 09-10 period contains 18 activities, but none on agriculture.
09	Country Economic Memorandum, 2009 (A New Silk Road: Export-Led Diversification)	A major redirection in focus. <i>“Export-led diversification”</i> in title conveys core theme, along with emphasis on diversification of the economy to non-oil sectors. Major emphasis on business environment. Sees border constraints as critical. Commercialization as source of agricultural growth. Significantly more discussion of agricultural sector than previous economic and strategy reports.
10	Country Partnership Strategy – FY11-14	Strategy would continue existing operations, enrich <i>“knowledge services,”</i> and improve business environment. Agriculture considered as important to taking up growth and export slack from eventual decline of oil sector. For FY11-FY12 proposes 3 agricultural projects: ADCP III, AZRIP II and a follow-on irrigation project to IDSMIP.

Source: IEG.

Table A.3: Indicators of Usage of Extension Services for FPP Farmers (2003)

INDICATOR	PROPORTION OF FARMERS RESPONDING AFFIRMATIVELY	
	<i>From Pilot Villages (%)</i>	<i>From Non-Pilot Villages (%)</i>
Accessing brochures, agricultural extension advice, and/or mass media	97	5
Using fertilizer	79	38
Using a new cropping pattern	79	48
Irrigation water “supplied according to needs”?	81	23
“Credit is not too difficult to obtain”	64	18
“Used land as collateral for credit”?	78	12
“Following market price information”?	65	25

Source: Elat 2003.

Table A.4: Azerbaijan: Changes in National Crop and Livestock Production

Crop	1994–96 (3 YEAR AVERAGES)			2003–05 (3 YEAR AVERAGES)					
	Yield (MT /ha)	Area (’000 ha)	Produc- tion (’000 MT)	Yield in MT /ha	Yield Change 03/05 as % of 94/96	Area (’000 ha)	Area change 03/05 as % of 94/96	Produc- tion. In ’000 MT	Production. change 03/05 as % of 94/96
Wheat	1.6	444	708	2.6	+62	603	+36	1,577	+123
Barley	1.5	160	246	2.3	+53	155	-3	350	+42
Maize	1.2	11	13	4.6	+383	32	+190	149	+1046
Cotton	1.3	213	267	1.6	+23	86	-40	143	-53
Potato	9.4	18	173	13.1	+39	65	+261	856	+394
Tomato	18.1	2?	210	17.3	-5	25	+1150	427	+103
Cucumber	11.4	5	52	12.5	+10	12	+140	155	+198
Onions	10.5	5	48	11.2	+7	14	+180	156	+483
Cabbage	15.7	4	56	14.6	-7	6	+50	94	+59
Watermelons	6.8	7	46	11.7	+72	31	+343	359	+680
Apples	4.2	53	219	6.5	+55	22	-62	150	-32
Grapes	3.4	89	299	7.5	+220	8	-89	65	-78
Pears	7.7	2	18	7.6	-1%	4	+100	33	+83
Meat	-	-	84	-	-	-	-	142	+69
Milk	-	-	818	-	-	-	-	1,193	+46
Eggs	-	-	27	-	-	-	-	44	+63

Source: FAO data.

Table A.5: Azerbaijan—Growth in Agricultural Value Added (1992–2009)

YEAR	AGRICULTURAL VALUE ADDED (US\$ MILLION CONSTANT 2000 PRICES)	PERCENT CHANGE ON PREVIOUS YEAR
1992	1022	-
1993	855	-16.3
1994	746	-12.7
1995	694	-6.9
1996	714	3.0
1997	665	-6.9
1998	706	6.2
1999	756	7.1
2000	848	12.2
2001	942	11.1
2002	1003	6.5
2003	1059	5.6
2004	1107	4.6
2005	1190	7.5
2006	1202	1.0
2007	1255	4.4
2008	1330	5.9
2009	1410	6.0

Source: World Bank World Development Indicators, 2009 and 2010 (GDF central data base, 2009 and 2010).