RURAL INFRASTRUCTURE AND
AGRO-INDUSTRIES DIVISION

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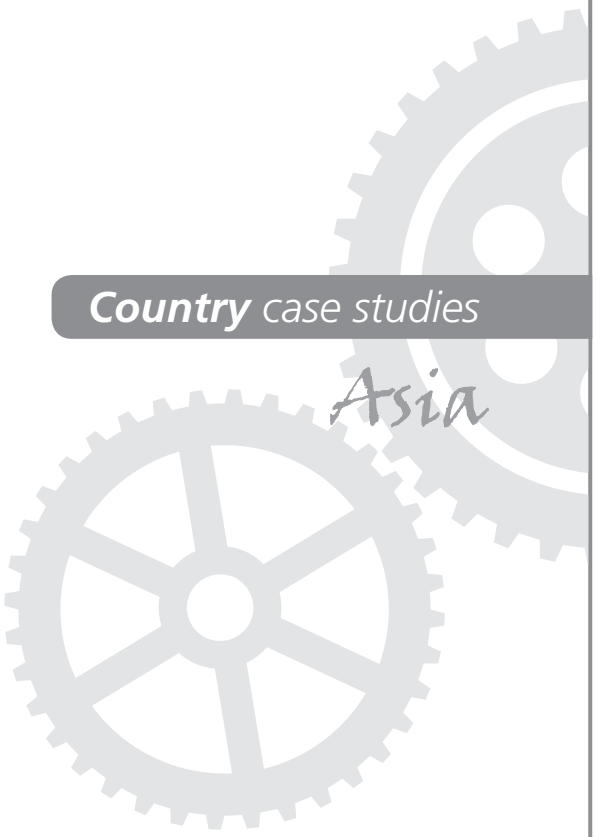
Asia

AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Pakistan



Country *case studies*

Asia

Muhammad Fida
Umm e Zia

AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Pakistan

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Muhammad Fida and Umm e Zia

Acronyms and abbreviations

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
AGS	Rural Infrastructure and Agro-Industries Division (Food and Agriculture Organization of the United Nations)
ASF	Agribusiness Support Fund
ASLP	(Australia Pakistan) Agriculture Sector Linkages Program
AUF	Agriculture University Faisalabad
AusAID	Australian Agency for International Development
Barani	Rainfed
BARI	Barani Agricultural Research Institute
BDS	Business Development Services
BoD	Board of Directors (of ASF)
COAG	Committee on Agriculture (FAO)
DAFWA	Department of Agriculture and Food, Western Australia
EC	Executive Committee
ECC	Economic Coordination Committee (of the Cabinet)
FEG	Farmer Enterprise Group
FSC&RD	Federal Seed Certification and Registration Department
GB	Governing Body
GCI	Global Competitiveness Index
GDP	Gross domestic product
GLOBALG.A.P.	Good Agricultural Practices worldwide standard
GTZ	German Agency for International Cooperation
IK	Idara-e-Kissan
LUMS	Lahore University of Management Sciences
M&E	Monitoring and Evaluation
MINFAL	Ministry of Food, Agriculture and Livestock
MoC	Ministry of Commerce
MoF	Ministry of Finance
MOU	Memorandum of understanding
MTDF	Medium Term Development Framework
NGO	Non-governmental Organization
NMTPF	National Medium Term Priority Framework
PCU	Project Coordination Unit
PHDEB	Pakistan Horticulture Development & Export Board
PHDEC	Pakistan Horticulture Development & Export Company
PKR	Pakistani rupee
PLPP	Pattoki Livestock Production Project
PMOs	Produce Marketing Organizations
PPP	Public-private partnership
PRHA	Participatory Rapid Horticulture Appraisal
PSC	Punjab Seed Corporation
QldDAFF	Queensland Department of Agriculture, Fisheries and Forestry
R&D	Research and Development
RSPs	Rural Support Programmes
SLMP	Sustainable Land Management Project
SMEDA	Small and Medium Enterprises Development Authority
SOP	Standard Operating Procedure

UAF	University of Agriculture, Faisalabad
UQ	University of Queensland
USAID	United States Agency for International Development
VC	Village Committee
WTO	World Trade Organization

Preface

It is recognized that high levels of investment are required to unleash the potential of agriculture for sustainable development and poverty reduction in developing countries. However, in recent decades, many countries have decreased their relative budget allocations to the agricultural sector yet, at the same time, the expected increase in private sector investment and the associated efficiency improvements have not been forthcoming. The high risk (actual and perceived) of doing business in agriculture often deters private sector participation in agrifood sector investments. Against this backdrop, public-private partnerships (PPPs) are being promoted as an important institutional mechanism for gaining access to additional financial resources, sharing risks and addressing other constraints in pursuit of sustainable and inclusive agricultural development.

Although various forms of collaboration between the public and private sectors have existed for some time, limited systematic information is available about current experiences and best practices for using PPPs to initiate agricultural programmes. Moreover, despite a surge of interest in PPPs in the agricultural sector in recent years, there remains significant variation in the type of partnerships involved and poor documentation of the real potential for these partnerships to deliver on commonly stated objectives associated with rural employment and income generation, food security and increased agricultural competitiveness.

In 2010, FAO initiated a series of appraisals of PPPs implemented in 15 countries in Africa, Asia and Latin America. The primary objective was to draw lessons that could be used to provide guidance to member countries on how to collaborate effectively with the private sector to mobilize support for agribusiness development. Accordingly, a specific subset of PPPs was selected, which conformed to two key criteria: each partnership should involve an agribusiness enterprise and there should be a formalized relationship between specific public and private partners. There should also be an expectation of positive societal impacts resulting from the partnership.

Seventy individual case studies were profiled and details provided on the circumstances leading to PPP formation, management and performance to date. The partnerships analysed cover different topics and intervention areas and involve different types of arrangements and actors. Special attention was paid to identifying specific roles and functions for each partner, including roles in governance, implementation and monitoring. Key results of the study include identification of the factors influencing success or failure in the development and implementation of PPPs, and best practices for creating an enabling environment for greater investment in agriculture by means of such partnerships.

FAO is publishing this series of case studies on agribusiness PPPs to help enhance knowledge and information sharing on these partnerships and so foster informed decision-making on investment promotion and agrifood sector development.

Executive summary

Agriculture is the mainstay of economies in many developing countries. Pakistan is no exception to this, where the sector accounts for 21 percent of gross domestic product (GDP), provides employment for 45 percent of the country's labour force, and accounts for over 70 percent of exports (Economic Survey of Pakistan, 2010–11). The sector is characterized by the high risks of doing business and the large scale of investments required. These constraints are further compounded by the underdeveloped agricultural services sector, less than optimal farm size, and business investment climates that are not particularly conducive to private sector investment.

An important institutional mechanism for mitigating the risks facing agribusiness enterprises – both productive enterprises and service providers – is the PPP. In its 2007 meeting, FAO's Committee on Agriculture (COAG) identified the potential importance of PPPs for supporting the development of agribusiness and agro-industries. The new FAO Strategic Framework commits FAO to providing support for public-private investment programmes.

In response to the interest shown by FAO member countries, FAO's Rural Infrastructure and Agro-Industries Division (AGS) has undertaken a cross-regional appraisal of experiences in which both the public and private sectors have engaged in partnering arrangements in order to mobilize support for agribusiness enterprises.

The purpose of the PPP study was to:

- appraise the national development context, trends and policies influencing the relevance of and need for agribusiness PPPs;
- characterize and appraise specific agribusiness PPPs (four to five case studies);
- draw lessons on challenges and specific issues that need to be considered in the development and implementation of agribusiness PPPs; and
- prepare a country report on agribusiness PPPs.

The appraisal focused on a specific subset of the broader range of PPPs, whereby each partnership must involve an *agribusiness enterprise*. The criteria for the selection of PPPs for appraisal took into account several other factors such as duration of partnership; outcome of the partnership in terms of increased investment/profitability; expectation of positive social impacts; potential for ongoing dialogue between the public and private partner; and the scale of investment.

Pakistan's agriculture sector is going through significant structural changes. International competitiveness remains a key issue for the economy, and improving it a major challenge. The scale of the challenge is manifested in Pakistan's global ranking in the Global Competitiveness Index (GCI) where the country ranked 119th among the 142 countries in terms of GCI (World Economic Forum, 2011).

Agribusiness enterprises in Pakistan range from micro village-based operations to large nationally recognized companies. Small- and medium-scale agribusiness and marketing enterprises in the informal and formal sectors employ an estimated 1.5 million people. The lack of a suitable and functional institutional framework has been one of the major impediments for both domestic and foreign investment. Consequently, there is a need to assess and provide guidelines for the development and management of agribusiness PPPs. The legal, institutional and policy frameworks for PPPs in Pakistan were introduced on 24 January 2010, when the Economic Coordination Committee (ECC) of the Cabinet formally approved the Government of Pakistan's policy on PPPs. The Government recognizes the importance of PPPs for sustaining economic and social development in its various strategic documents such as the Medium Term Development Framework (2005–2010) (MTDF), National Medium Term Priority Framework (NMTPF) 2007–2010, Vision 2030 and the National Agricultural Sector Strategy (2008).

In the agriculture and agribusiness sector, a limited number of PPPs exist, most of which have been institutionalized under the Ministry of Food, Agriculture and Livestock (MINFAL) and the Ministry of Commerce (MoC). To date, there are very few examples of formal PPPs in the agriculture sector that have been implemented in accordance with the PPP policy introduced in 2010, and most other examples

of PPPs have been in operation for less than a decade. Thus, a clear definition of a PPP in the agribusiness sector in Pakistan is difficult to determine at this time. Five case studies where public and private partners have cooperated for the purpose of agribusiness development are presented in this report.

These include the Farmer Enterprise Group (FEG) formation project and GLOBALG.A.P. (Good Agricultural Practices worldwide standard) certification for a citrus project, which were both implemented under the Agribusiness Support Fund (ASF); a mango supply chain management project supported under the Pakistan Horticulture Development & Export Company (PHDEC); the Idara-e-Kissan (IK) dairy processing project implemented under the Pattoki Livestock Production Project (PLPP); and a drought-resistant wheat seed variety development project implemented under the Sustainable Land Management Project (SLMP). A brief description of each case, its purpose and achievements is provided below.

CASE 1. FARMER ENTERPRISE GROUP (FEG) FORMATION

Partnerships for FEGs were developed from 2006 to 2007 between the Agribusiness Support Fund (ASF) under the Ministry of Food, Agriculture and Livestock (MINFAL); intermediary organizations including Non-governmental Organizations (NGOs) and Rural Support Programmes (RSPs); and individual FEGs. The focus of the intervention was on the horticulture and livestock/dairy subsectors. The development of FEGs occurred in two phases. ASF funding was available to finance 100 percent of the formation cost of FEGs, while 50 percent matching grants were provided later for implementation of enterprise development activities. FEG formation was outsourced to NGOs/RSPs and their capacity was strengthened through technical and managerial training. A total of 2 000 FEGs were formed with 20 000 participating farmers. FEGs were assisted through the partner organizations in setting up 1 121 micro agribusiness enterprises owned and operated by FEGs, which have generated direct employment for 26 138 people and indirect employment for 9 935.

CASE 2. GLOBALG.A.P. CERTIFICATION FOR CITRUS VALUE CHAIN DEVELOPMENT

The public partner in this project was again ASF while the private partners were citrus exporters and producers organized into Produce Marketing Organizations (PMOs). The overall purpose of the funding was to contribute to economic growth and employment generation through agribusiness development in Pakistan. Through ASF, it was intended that the agribusiness sector operators would be provided with appropriate support services through matching grants. The private partners in this PPP were 14 existing citrus exporters who demonstrated a willingness to commit to the adoption of GLOBALG.A.P. processes by co-investing and working directly with 324 producers. The project had a duration of three years from 2007 to 2010 with some promising results. Thanks to project intervention, citrus exports increased from 150 000 tonnes in 2006 to 360 000 tonnes in 2010.

CASE 3. PPP FOR MANGO SUPPLY CHAIN MANAGEMENT

As a PPP initially funded from the export cess, PHDEC has implemented a number of goal-oriented projects. One of the partnership projects implemented was the Mango Supply Chain Management Project carried out from 2006 to 2010 with financial and technical assistance from the Australian Government through the Australian Centre for International Agricultural Research (ACIAR). With the aim of enhancing the potential of the mango supply chain and make it more competitive and profitable, this project was jointly implemented by Australian and Pakistani institutions in collaboration with private sector stakeholders in the supply chains, including farmers, exporters and retailers. As a result of the project, new export markets were developed for Pakistani mangoes in the United Kingdom, United Arab Emirates, Singapore, Malaysia and China, and modern domestic market chains were developed in Lahore and Faisalabad in collaboration with the Metro Cash and Carry chain.

CASE 4. DAIRY COLLECTION, PROCESSING AND MARKETING – IDARA-E-KISSAN (IK)

In 1983, in response to the limited access of small dairy farmers to markets, poor productivity and low incomes, and challenges associated with the outreach of public sector extension services, the Pattoki

Livestock Production Project (PLPP) was initiated and funded by the German Government in partnership with MINFAL, Government of Pakistan. The IK Dairy Cooperative was originally established in 1983 and subsequently registered as a cooperative under the Pakistan Societies Act in 1989. The emphasis of IK was on developing a model of collection, processing and marketing of milk as well as provision of extension services to participating farmers. As the private partner, the cooperative has received assistance from the government in the form of an ongoing leasing agreement for the utilization of milk processing plants in Lahore and Islamabad and support from government R&D facilities for the provision of free vaccines to members. The cooperative provides a package of veterinary and livestock extension services to its members. In order to have access to these services, dairy farmer members must provide a minimum quantity of milk meeting quality standards to the cooperative over a six-month period.

CASE 5. PROMOTION OF DROUGHT-TOLERANT LOW DELTA CROPS IN THE BARANI TRACT OF PUNJAB

This PPP was set up in 2010 by the Sustainable Land Management Project (SLMP) and the Barani Agricultural Research Institute (BARI) as the public partners, with the Zamindara Seed Corporation as the private partner. The PPP was implemented in line with the Government of Pakistan's PPP policy introduced in May 2010, and benefited greatly from the newly created PPP unit in the Planning and Development Department of Punjab. The unit was instrumental in streamlining the procedural formalities for the agreement and set an example for future PPP endeavours. The total cost of the project was PKR1.373 million (~US$14 273).[1] Funding was shared by the private seed company and SLMP. The company provided 52 percent of the total cost while 48 percent was provided by SLMP. The expected income from the sale of 90 000 kg certified seed is PKR2.137 million (~US$22 588). The expected benefits for farmers were an increase in wheat yield of 200 kg per acre (0.4 ha) as well as improved land cover to control soil erosion.

PPPs represent a relatively new approach to project planning and management in Pakistan. The structure and nature of those investigated in this study varied considerably since the legal and institutional framework for PPPs did not exist prior to the approval of the PPP Policy in 2010. To support PPP implementation, an Act has been promulgated in the province of Punjab and work has already been initiated on drafting regulations in other provinces as well. This will establish a strong basis for future PPPs in the country.

Although the PPP modality to implement projects and programmes is relatively new in Pakistan, it has been successfully piloted in the agribusiness sector. Results have been quite appreciable through joint implementation of the initiatives by the partners with a targeted and time-bound approach. The cases appraised reveal that objectives were mostly achieved, even though in several of the cases no formal assessment was made to evaluate the overall effectiveness of the partnerships in terms of achieving the predefined goals of the PPPs. The initiatives were generally based on innovative ideas and aimed to improve linkages with the market. Available evidence suggests that the partnerships did result in increased income for stakeholders and enhanced rural employment opportunities.

The PPP modalities, nevertheless, varied depending upon the case and were not in line with well-defined infrastructure models such as Build-Operate-Transfer or Build-Lease-Transfer. The participation of the public sector was significantly higher in all cases, with benefits being shared by the participants involved. It is fair to say that, based on the case studies appraised, and perhaps because of limited experience with PPP development in Pakistan at this time, the public sector partners have been the driving force behind the partnerships to stimulate agribusiness growth and development. In recent years, there has been a phenomenal policy shift recognizing greater importance for a leading role of the private sector in agribusiness sector growth. As a result of the case studies, some key issues to be considered when developing agribusiness PPPs are: identification of appropriate project ideas that include small farmers and enterprises; identification of appropriate partners; robust implementation management, monitoring and evaluation (M&E); alignment with regulatory framework and policies; and flexibility and sustainability.

[1] US$1 = PKR96.1988 as of 27 November 2012.

Several key lessons were learned from this study, including the realization that the effectiveness of a PPP is enhanced when the private sector is rigorously involved in the decision-making process right from the planning stage through to the closing of the project. In addition, with the exception of the fifth case study operating in the state of Punjab, the lack of regulatory framework currently in existence offered flexibility to the arrangements but also added ambiguities to the PPP scenario. PPPs should be adopted as an ongoing arrangement rather than a one-off ad hoc alternative for implementation of difficult projects. The development of PPPs must also exclude any potential for political interference and should be replicated in underserved areas where agribusinesses have potential for growth but carry associated risks.

Chapter 1
Introduction

Agriculture and agribusiness are the mainstay of economies in many developing countries. However, particularly in the agribusiness sector, development is predominantly constrained by the high risks of doing business and the scale of investments required. These constraints are further compounded by the underdeveloped agricultural services sector, less than optimal farm size, and business investment climates that are not particularly conducive to private sector investment.

An important institutional mechanism for mitigating the risks facing agribusiness enterprises – both productive enterprises and service providers – is public-private partnership (PPP). Analytical work to characterize and appraise PPPs is not new. In its 2007 meeting, FAO's Committee on Agriculture (COAG) identified the potential importance of PPPs for supporting the development of agribusiness and agro-industries. The issue of PPPs was also considered by FAO members during the Global Agro-industries Forum in 2008. In 2009, COAG addressed the issue of "engaging the private sector in agricultural development" and called on FAO to provide support to member countries to help them develop effective working relationships with the private sector. The new FAO Strategic Framework commits FAO to providing support for public-private investment programmes.

In response to the interest shown by FAO member countries, FAO's Rural Infrastructure and Agro-Industries Division (AGS) has undertaken a cross-regional appraisal of experiences in which the public and private sectors have engaged in partnering arrangements in order to mobilize support for agribusiness enterprises. The medium-term purpose of the cross-regional appraisal is to draw lessons that can be used to provide guidance to FAO member countries on how to partner effectively with the private sector to mobilize support for the development of agribusiness enterprises.

In order to achieve this objective and develop practical guidelines on PPPs for the technical officers of Ministries of Agriculture, as well as those in Ministries of Commerce and Finance that deal with the agribusiness sector, it was considered necessary to learn from experience in the field. Consequently, FAO contracted local consultants in 2011–2012 to investigate existing PPPs that involve agribusiness enterprises in a range of sectors, and to produce country study monographs that could be electronically published by FAO and thus made available for distribution to all interested stakeholders. Fifteen countries have been appraised, using a case-study approach, across the three regions of Africa (five), Latin America (five), and Asia (five). A total of 70 individual PPP cases have been analysed (four to five cases per country).

Pakistan was selected as one of the five countries in Asia where case studies of PPP were investigated. Other countries included in the regional study are Thailand, Indonesia, China and the Philippines.

1.1 OBJECTIVES AND PURPOSET

The purpose of the PPP country-level appraisal was to:

- appraise the national development context, trends and policies influencing the relevance of and need for agribusiness PPPs;
- characterize and appraise specific agribusiness PPPs (four to five case studies);
- draw lessons on challenges and specific issues that need to be considered in the development and implementation of agribusiness PPPs; and
- prepare a country report on agribusiness PPPs.

1.2 METHODOLOGY AND APPROACH

Overall focus

The appraisal focused on a specific subset of the broader range of PPPs. The first and most obvious restriction was that each PPP must involve an *agribusiness enterprise*.[2] The appraisal focused

[2] An agribusiness enterprise might include firms or business entities that produce or provide inputs, produce raw materials and fresh products, process or manufacture food or other agricultural products, transport, store or trade agricultural production, or retail such products. For the purposes of this study, family farms and micro and small enterprises that operate in the informal sector will not be included in the target set of agribusiness enterprises.

only on PPPs that involved explicitly stated collaborative relationships[3] between specific public and private partners for the purpose of increasing investment in and improving the profitability of a specific agribusiness enterprise or multiple agribusiness enterprises in specific locations. Public sector policies, programmes or initiatives that are not firm or location specific were not covered. Similarly, private sector contributions that are not firm, location or project specific were also not covered.

Selection criteria

The following criteria were taken into account when identifying and proposing the specific PPP cases for appraisal.

- The partnership must have been in operation for at least two years in order to provide sufficient basis for analysis.
- The partnership should increase investment, profitability and/or reduce risk for the target beneficiary agribusiness enterprise(s).
- The partnership agreement should explicitly state that there is an expectation of positive societal impacts (e.g. income, employment, value addition, etc.).
- The partnership agreement should call for some type of ongoing dialogue, as well as an ongoing role in governance and implementation for both public and private partners.
- The scale of investment mobilized through the partnership should preferably be more than US$100 000.

Selection process

The study involved a two-step process. The first step involved assembling preliminary information on prospective agribusiness PPPs in order to validate that they meet most, if not all, of the above-mentioned selection criteria.[4] Twelve cases (see Annex 1) were identified that met most of the criteria. The final selection of five cases was then made by the FAO study coordinators. The second step involved in-depth analysis of the selected cases.

Approach

In both stages, two main sources of information were used to appraise the PPPs:

- a review of secondary information and data; and
- key informant interviews.

For the secondary data collection, priority attention was given to a review of:

- strategy, policy and planning documents related to PPPs;
- investment appraisals and reports;
- reports and communications materials from chambers of commerce and other private sector associations;
- relevant reports from universities, research institutes and development agencies.

For the key informant interviews, a comprehensive stakeholder analysis (relevant policy-makers, public sector technical officers, private investors and entrepreneurs, bankers, development partners, etc.) was undertaken to ensure that the key participants in each of the PPPs were interviewed in sufficient depth. A list of the stakeholders interviewed can be found in Annex 2.

As a means of gathering in-depth information about the individual cases selected, a "Case Appraisal Information Form" was completed prior to compiling the country report. This form was used as a guiding checklist during discussions with key informants and stakeholders and was shared with the study coordinator before compilation of the report.

[3] The relationship might be made explicit in diverse ways, ranging from project documents (e.g. MOUs) to formal contractual and equity (including joint ownership) arrangements.

[4] It is worth noting that it was particularly difficult to identify cases that met all five criteria listed above, given Pakistan's limited experience with PPPs in the agribusiness sector.

Chapter 2
Background and overview

2.1 COUNTRY DEVELOPMENT CONTEXT AND SECTORAL OVERVIEW

Pakistan's agriculture sector, accounting for 21 percent of GDP, providing employment to 45 percent of the country's labour force, and accounting for over 70 percent of exports (Pakistan Economic Survey, 2010–2011) is going through significant structural changes. Growth in the sector, which is dominated by traditional food (wheat, rice) and industrial crops (cotton, sugar cane), declined to an average annual rate of 2.4 percent with sharp year-to-year fluctuations from 1990 to 2010, as compared with the overall rate of 3.5 percent achieved from 1960 onwards. Yields of major crops have largely stagnated for the past decade, mainly as a result of devastating floods in the Indus Valley. Diversification into high-value crops and dynamism in the livestock subsector are encouraging, but the dominance of the major traditional crops in agricultural GDP has slowed the performance of the agriculture sector as a whole.

Despite severe internal and external challenges, the country's economy has shown resilience in recent years. During 2011 to 2012, the agriculture sector exhibited growth of 3.1 percent, supported by positive growth in agriculture-related subsectors, except minor crops. Major crops accounted for 31.9 percent of value-added agriculture and experienced a growth of 3.2 percent in the fiscal year 2011–2012 compared with a negative growth of 0.2 percent in 2011. The significant growth in major crops is contributed by rice, cotton and sugar cane. Minor crops contributed 10.1 percent of value addition in agriculture and exhibited a negative growth of 1.3 percent in 2011–2012 against a 2.7 percent growth in 2011. The livestock sector, contributing a 55.1 percent share in the agriculture sector, grew by 4 percent during the year. A relatively small but increasingly important fishery sector grew by 1.8 percent compared with 2011 growth of 1.9 percent. The forestry sector also posted a positive growth of 1.0 percent in 2012 as compared with negative growth of 0.4 percent in 2011 (Ministry of Finance [MoF], 2012).

The stagnating performance and persistence of high poverty in agriculture stand in contrast to the potential growth opportunities provided by domestic and international markets. In Pakistan, as in all other rapidly growing economies, consumers are shifting their preferences towards higher-quality and more convenient food. This change in preference embodies the need for much higher value addition and employment generation in agroprocessing and throughout the marketing system. During the medium term, and in part as a result of World Trade Organization (WTO) agreements, international markets will pose new opportunities and challenges for Pakistan's agriculture and agribusiness sectors. High levels of investment will be required in order to increase the competitiveness of these sectors in the context of a globalized agribusiness market. This is further corroborated by the fact that, while many developing countries have seen a fairly rapid expansion in agricultural exports, Pakistan's share in total world exports has actually declined over the last few decades.

International competitiveness remains a key issue for the economy, and improving it is a major challenge. The scale of the challenge is manifested in Pakistan's global ranking in the Global Competitiveness Index (GCI). Pakistan ranked 119th among the 142 countries in terms of GCI (World Economic Forum, 2011). This issue of competitiveness is also illustrated in Pakistan's share of world exports, which has declined over the past decade from 0.16 percent in 2002 to 0.13 percent in 2008, while the share of South Asia as a whole has increased from 0.27 to 0.34 percent over the same period (Ahmad, 2009).

Major challenges facing the economy over the past three years have been the sharp rise in the number of incidents of terrorism across the country, and recent flooding of large areas of Pakistan.

Agribusiness enterprises in Pakistan range from micro village-based operations to large nationally recognized companies. Small- and medium-scale agribusiness and marketing enterprises in the informal and formal sectors employ an estimated 1.5 million people. These enterprises are labour intensive and are generally located in or close

to rural areas, thus the potential for direct and indirect (through linkages to farms) growth and employment generation is much greater than for large firms. Hence, there has been a need to promote the transition of small marketing enterprises into larger, more dynamic operations in order to develop a competitive and modernized marketing sector that maximizes the impacts on rural growth and poverty reduction. The lack of a suitable and functional institutional framework has been one of the major impediments both for domestic and foreign investment. Consequently, there is a need to assess and provide guidelines for the development and management of agribusiness PPPs.

2.2 POLICY STATEMENTS AND STRATEGIC DOCUMENTS RELATED TO AGRIBUSINESS DEVELOPMENT AND PPPs

The legal, institutional and policy frameworks for PPPs in Pakistan are established by the Government of Pakistan's Policy on PPPs, dated 24 January 2010, approved by the Economic Coordination Committee (ECC) of the Cabinet. The first policy on PPPs in the country was drafted and submitted to the cabinet in 1994 but was not approved. Prior to the enactment of the policy in 2010, some PPPs already existed, although they were mainly informal or ad hoc arrangements at the ministry level. There were also examples of PPPs that were regulated under specific Acts or registered as private limited companies. The Government of Pakistan recognizes the importance of PPPs for sustaining economic and social development in the Medium Term Development Framework (MTDF) 2005–2010. The policy is based on the notion that PPPs can be used to draw on the superior skills of the private sector in the areas of innovation, efficiency and creativity, and bring these benefits into the public sector. Thus, the success of the PPP hinges entirely on the ability to direct private sector advantages towards optimizing public objectives.

The National Medium Term Priority Framework (NMTPF) 2007–2010 put forward PPPs as a strategy to achieve competitiveness in the agriculture sector. The priority identified under the framework was to develop strategic policy guidance, incentives and regulatory/legal frameworks to stimulate private-public sector agribusiness partnerships with active involvement that would generate increased employment for the rural and urban poor. Vision 2030 also emphasized the importance of private sector-led development in agriculture. The latest National Agricultural Sector Strategy (2008) proposed PPPs as an intervention strategy for a number of proposed actions.

2.3 SCOPE AND NATURE OF PPPs IN PAKISTAN

A number of PPPs exist in the country in various sectors, particularly in the traditional PPP areas of infrastructure development, energy and telecommunications. Other PPPs can be found in the education and health sectors. Since the 1990s, Pakistan has progressively been promoting PPPs in many sectors. Examples include the Gawadar deep-sea port and various container terminals (Qasim and Karachi) that have been implemented using a PPP model. In the railway sector, concessions exist in freight handling and maintenance as a PPP model. In the aviation sector only one PPP exists, i.e. Sialkot Airport Authority. Various toll roads in the country currently use the PPP model, such as the Islamabad-Lahore and the Lahore-Faisalabad motorways. Moreover, a PPP feasibility study (financed by the Asian Development Bank [ADB]) for a new ring road in Rawalpindi combined with commercial and residential zones has recently been concluded.

In the agriculture and agribusiness sector, a limited number of PPPs exist, most of which have been informally institutionalized under MINFAL and the Ministry of Commerce (MoC). Most have been in operation for less than a decade. Some examples include a PPP for market infrastructure development between the Punjab Agriculture Department and the private partners TolLink. The Small and Medium Enterprises Development Authority (SMEDA) under the Ministry of Industry has also been involved in the development and implementation of various PPPs both in the food and non-food sectors. In the food sector, SMEDA has participated in developing a meat processing plant, a mango pulp factory and an agrofood processing plant (not yet fully operational). PPPs have also been in operation under various donor projects and a national agribusiness programme.

2.4 BRIEF OVERVIEW OF CASES

Five case studies are presented in this report. These include the Farmer Enterprise Group (FEG) formation project and GLOBALG.A.P. certification for citrus, both implemented under the Agribusiness Support Fund (ASF) programme; a mango supply chain management project under the Pakistan Horticulture Development & Export Company (PHDEC); the Idara-e-Kissan (IK) Dairy Cooperative processing project implemented under the Pattoki Livestock Production Project

(PLPP); and a drought-resistant wheat seed variety development project implemented under the Sustainable Land Management Project (SLMP). These were selected from an initial list of 12 cases (see Annex 2), based on the selection criteria discussed under section 1.2. Details of each of the partners and the contributions made to the partnership are given in Table 1.

TABLE 1
Overview of country cases

Case	Public partner(s)	Private partner(s)	Nature of public support	Nature of private support
FEG formation	ASF – MINFAL	Small farmer groups and national NGOs/ RSPs	Technical assistance and 100% funding for FEG formation, matching grants (50%) for enterprise development	Matching contribution (50%) and in-kind contribution
GLOBALG.A.P certification for citrus development	ASF – MINFAL	14 established exporters	50% matching grant and technical assistance	50% contribution and in-kind contribution
Mango supply chain management	PHDEC – MoC	Mango supply chain actors, exporters and retail chains	Financial and technical assistance	In-kind contribution and participation in supply chain action research
Dairy collection, processing and marketing	MINFAL	IK Dairy Cooperative	Financial and technical assistance, provision of dairy processing plants	In-kind contribution, supply of milk
Drought-tolerant wheat seed for Barani area	SLMP, BARI, PSC	Private seed company	48% funding, technical assistance, R&D, seed certification	52% funding for seed distribution and marketing

Source: authors, 2012.

Chapter 3
PPP case studies

3.1 *CASE 1*. FARMER ENTERPRISE GROUP (FEG) FORMATION

More inclusive development for smallholder farmers is a key challenge facing Pakistan's agricultural sector in order to ensure that farmers also benefit from development gains. One of the features characterizing this sector is the inability of small farmers to participate because of inadequate marketable surpluses and a lack of capacity to market their own products independently. The sector is further characterized by a situation where there are either large enterprises or very small micro enterprises, with limited agribusiness operations in the middle range. In response to this situation, a public support programme was developed and financed by ADB, to support the formation of FEGs that would help to increase the market focus and commercialization of small-scale farmers through the development of small agribusiness enterprises. It was also an opportunity to introduce farmers gradually to the concept of paying for business development services (BDS) in order to improve productivity and competitiveness.

Partnerships for FEGs were developed from 2006 to 2007 between ASF,[5] intermediary organizations including NGOs and RSPs, and the individual FEGs. The focus of the interventions was on horticulture and the livestock/dairy subsectors.

The development of FEGs was in two phases. ASF funding was available to finance 100 percent of the formation cost of FEGs while 50 percent matching grants were later provided for implementation of enterprise development activities. FEG formation was outsourced to NGOs/RSPs and their capacity was strengthened through technical and managerial training. A total of 2 000 FEGs were formed with 20 000 participating farmers. They were assisted through the partner organizations in setting up 1 121 micro agribusiness enterprises owned and operated by FEGs, which have generated direct employment for 26 138 people and indirect employment for 9 935.

Characterization of PPP arrangements

The purpose of ASF was to enhance competitiveness of the agribusiness sector through the provision of agribusiness support services. Its specific objectives were:

- to enable agribusiness enterprises to utilize BDS effectively in order to enhance productivity, product and market diversity, and penetration and profitability;
- to enhance BDS providers' capacity to reach agribusiness enterprises through the delivery of more varied and effective services.

Through ASF, it was intended that agribusiness sector operators be provided with appropriate support services through matching grants. Eligible services were provided under the broad thematic areas of business development and aimed for agribusiness start-ups, existing enterprises and small producers. ASF also implemented innovative initiatives in the area of private sector research and extension services.

The formation and strengthening of FEGs were one of the key areas of intervention, aimed at promoting the entry of small farmers into the agribusiness sector, and assisting them in developing more favourable marketing systems to reduce the transaction costs of traditional arrangements with produce traders. Support was in two phases, with the second phase more strongly representing the concept of a PPP since it required co-investment from the partners. ASF funding was available to finance 100 percent of the formation cost while 50 percent matching grants were later provided for eligible BDS contracted by farmers, including the costs of establishing farmer group agribusiness, production and marketing enterprises.

Direct beneficiaries were the NGOs/RSPs involved in the implementation of the programme as they received both financial and technical support to mobilize farmers to form FEGs; and the FEGs themselves, who received capacity-building support to form and manage a group, followed by

[5] ASF was established by MINFAL in 2005 as a not-for-profit company under the ADB-funded Agribusiness Development and Diversification project, governed by a Board of Directors (BoD) with majority representation from the private sector.

financial and technical support through matching grants to procure inputs and technologies and access necessary BDS. Eligible services for matching grants included any demand-driven private sector service throughout the agribusiness value chain, including input supply, technical support for production and processing, and access to domestic and export markets.

During the first phase, a total of 2 000 FEGs were formed with 20 000 participating farmers at an investment cost of PKR114 million (~US$1.2 million) in collaboration with ten partner organizations. Once the groups were formed, basic training was provided and groups were assisted to prepare grant applications together with business plans to apply for ASF's support in setting up and operating profitable agribusiness ventures. During the second phase, the total investment, including matching contributions by FEGs and NGOs/RSPs, is estimated to be PKR460 million (~US$4.8 million). Table 2 highlights the co-investment per region: 1 121 grant applications were approved and received funding worth PKR247.76 million (~US$2.6 million) to invest in business development activities, including increasing productivity and introducing processing and marketing functions. The remaining contributions made by the private partners were mostly in kind, in terms of provision of logistical facilities for capacity-building activities. Support was provided for both existing production activities and for the establishment of new micro enterprises undertaking value addition. These included dairy enterprises such as milk collection and processing centres; cheese and butter production; livestock groups for improved goat and sheep production; and horticulture enterprises such as fruit and flower nurseries, processing of dehydrated fruits, potato chips and pickles, and off-season vegetable production. The size of the grants varied, depending on the nature of the supported activity; however, individual grants ranged from PKR130 000 to PKR250 000 (US$1 350–2 600).

The Board of Directors (BoD) of ASF provided an oversight role for the governance of the initiative while operational responsibility fell to the partner organizations, i.e. NGOs/RSPs. However, ongoing support was also provided to the partner organizations by ASF throughout the implementation of the initiative. The partnership between ASF and the NGOs/RSPs was formalized through an MOU and a contract agreement. Partnerships between ASF/NGOs and FEGs were formalized through grant agreements that defined the responsibilities of each of the partners – ASF, FEGs and NGOs/RSPs.

Development of PPP arrangements

ASF was established as a not-for-profit company under Section 42 of the Companies Ordinance (1984) under ADB's Agribusiness Development Project initiated in 2006. The company was managed by an independent BoD including representation from the public sector Ministry of Food, Agriculture and Livestock (MINFAL), Ministry of Industries and Ministry of Commerce (MoC) with majority members from the private sector. The concept of FEGs was developed based on a consultative and participatory process that was followed during the preparatory stage of the project in which various national and international specialists participated. Focus group discussions and consultative workshops were held in all provinces of Pakistan. Thus, FEG formation was recognized by both public and private partners to be a much-needed strategy for the agribusiness sector

TABLE 2
Regional/provincial distribution of ASF total investment in FEGs

Region	Number of FEGs	Investment (PKR)	Percentage
Punjab	370	85 100 000	19
Sindh	330	75 900 000	17
KPK	640	147 200 000	32
Baluchistan	300	69 000 000	15
AJK	60	13 800 000	3
Gilgit-Baltistan	300	69 000 000	15
Total	**2 000**	**460 000 000**	**100**

Source: ASF, 2012 (www.asf.org.pk).

to be more inclusive of smallholders. Partnerships for the formation of FEGs were developed by ASF with NGOs/RSPs over the period from 2006 to 2007. The first agreement was signed in November 2006 and the first set of grants for FEGs was approved in 2008. These agreements came to an end in 2010.

The RSPs or NGOs to take the lead in supporting the implementation of the FEG strategy were selected through a competitive selection process in the target areas. ASF then further developed the conceptual framework for FEGs regarding eligibility criteria, guidelines for the formation of FEGs, their monitoring framework and terms of reference in the form of an MOU to be signed by the RSPs and NGOs with ASF.

All partnerships for FEG formation were target based. The number of FEGs to be formed and strengthened determined the extent of assistance and contributions from each partner. While the formation cost was 100 percent financed by ASF, further costs were incurred by the NGOs/RSPs in terms of the additional human resources required to monitor and support the groups during this process. The average cost paid by ASF for the formation of a FEG was PKR57 000 (~US$593). Ten NGOs/RSPs had agreements with ASF to support the formation of FEGs in various provinces throughout the country as shown in Table 3.

During the second phase, 50 percent matching grants were provided by ASF with the other 50 percent contributed by FEGs. The eligibility criteria against which the grant applications were assessed included the relevance of the activity proposed, its feasibility and institutional ability to implement the grant-related activities. The grant appraisal panel evaluated each application and decided which to approve.

The expected benefits from FEGs were estimated in both financial and economic terms, i.e. increase in income, creation of employment and value addition with the ultimate objective to alleviate poverty. There were, however, no clearly defined targets. Private benefits were expected in the form of increased incomes, employment generation and value addition. Public benefits were anticipated in the form of job creation in rural areas and economic growth through agribusiness development. The enabling business environment was also appraised through studies and technical assistance for policy formulation. These studies included a comparative and competitive advantage study and a livestock and dairy sector study. Policy support was also provided for the development of a national agribusiness strategy and for the development of provincial horticultural policies that were undertaken by the ASF programme under a separate component.

The operational responsibility in the formation of FEGs rested with the partner organizations (NGOs/RSPs), while monitoring and provision of funds were the responsibility of ASF. Strategic decisions were made by the BoD of ASF. These roles continued in both phases of FEG development with ASF reviewing grant applications against criteria and approving funds for matching grants that were then channelled through the NGOs/RSPs to FEGs.

TABLE 3
Partnerships with NGOs/RSPs for formation and strengthening of FEGs

Partner	Number of FEGs formed	Number of farmers
Aga Khan Rural Support Programme (AKRSP)	300	3 000
National Rural Support Programme (NRSP)	100	1 000
Sarhad Rural Support Programme (SRSP)	340	3 400
LASOONA	240	2 400
Taraqee Foundation	300	3 000
Rural Community Development Society (RCDS)	250	2 500
Centre of Excellence for Rural Development (CERD)	60	600
Sindh Agricultural and Forestry Workers' Coordinating Organization (SAFWCO)	220	2 200
Sindh Rural Support Programme (Sindh-RSP)	110	1 100
MOJAZ Foundation	80	800

Source: Agribusiness Support Fund, 2012 (www.asf.org.pk).

Management and operations

Both the concepts of FEGs and PPP were relatively new for Pakistan and therefore presented an opportunity for all partners to learn through implementation. In terms of roles and responsibilities, ASF maintained liaison with the partner organizations at the strategic level and monitored the progress on a quarterly basis (technical and financial). ASF also provided technical assistance to the partner organizations on an ongoing basis to build their capacity and to ensure a common understanding of the FEG concept and strategies. Partner organizations were responsible for implementation of the programme and day-to-day management of operations. During the first phase, the professional staff of these organizations formed and organized FEGs and, whenever necessary, called on the services of professional trainers to strengthen FEGs through training on various technical and managerial themes.

During the second phase, the partner organizations worked with FEGs to identify viable business opportunities and develop grant applications and business plans to submit to ASF. The main role of ASF during this phase was to design and implement the procedure for evaluating grant proposals submitted by FEGs. In the original proposal, only grants for BDS were anticipated; however, it was recognized that small farmers need assistance in kind as well as subsidies for accessing service provision, which did not form part of the original eligible grant categories. Therefore, these criteria needed to be revised to include categories for in-kind assistance such as the development of tunnels for the production of high-value vegetables, irrigation infrastructure, value addition facilities and support for establishing on-farm enterprises. Of the 1 250 FEGs that applied, 1 121 received support from ASF in the form of matching grants.[6]

Once the grant application had been received by ASF, the grant proposals went through a preliminary assessment by a financial analyst, and then an evaluation by the appraisal panel. If successful in these first two stages, final approval was needed from the Chief Executive Officer or BoD.[7]

The managerial procedure for outsourcing and subcontracting services for FEGs was indirect and implemented through the partner organizations as part of the MOU signed with ASF. During the implementation phase of the grants, ASF, through its own staff as well as through a third party, evaluated the performance of those FEGs that had received the matching grants. Self-monitoring mechanisms were also introduced into FEGs to track progress. Additional support was availed by the partner organizations for FEGs through linkages to public service providers such as research institutions and private sector intermediaries. For example, the Department of Agricultural Extension and state-based agricultural research institutes provided assistance to FEGs in the areas of animal breeding and skills training in the use of food-processing technology.

The three major risks associated with programme implementation were the willingness of communities to participate in the programme interventions; lack of coordination by the partner organizations; and varying perceptions of the FEG concept among these organizations. The risk associated with the willingness of communities to participate was mitigated by using partners who already had established linkages with the communities through previous experience working in the area. To address the coordination and mixed perception risks, ongoing support was provided by ASF staff to the NGOs/RSPs to build capacity and ensure a common understanding of the FEG concept. Guidelines for FEG formation were also developed.

One of the key challenges in the implementation of FEG formation and strengthening was to convince small farmers of the usefulness of BDS. Similarly, it was challenging to encourage the transition of farmers from subsistence farming to commercial production for the market. Another common challenge was the lack of record-keeping by farmers about their costs and returns. Attempts to address these challenges were made by ASF and the partner organizations in the form of capacity-building activities, institutionalization of record-keeping and participatory planning and reporting involving FEGs.

Partnerships for FEG formation and strengthening were time bound. Under the partnership agreement, materials, technology and services were procured and delivered to FEGs via the partner organizations, and ASF monitored progress. Once the objectives and targets had been achieved, this partnership was technically completed. However, given that each of the partner organizations operates within the locality of FEGs, it is anticipated that

[6] Originally the project had the target of forming 1 250 FEGs over a period of five years. However, during the final year of the project, ASF approved funding for the formation of an additional 750 FEGs but they were not eligible to apply for grants since the project had to begin the process of scaling back funding and phasing out.

[7] Grants exceeding US$25 000 required the approval of the BoD.

FEGs will be able to call upon (and hopefully pay for) their services whenever needed. ASF continued to maintain relationships with the partner organizations and signed several additional MOUs for future collaboration. Based on the successful completion of this initiative, a new agribusiness project is currently being implemented by ASF in collaboration with the United States Agency for International Development (USAID) under which 3 000 FEGs will be formed, strengthened and linked to the market chain in the horticulture and livestock subsectors.

Performance and development outcomes

During the first phase of implementation of the ASF FEG project, the total investment costs for FEG formation and strengthening were PKR113.30 million (~US$1.18 million). Under the initiative, capacity-building support was also provided to ten partner NGOs/RSPs for the establishment of 2 000 FEGs consisting of more than 20 000 smallholder farmers, including women. During the second phase, FEGs were assisted by the partner organizations to set up 1 121 micro agribusiness enterprises owned and operated by FEGs, consisting of 10 187 male and 1 869 female farmers.

An impact assessment study conducted by Lahore University of Management Sciences (LUMS) revealed that ASF support has led to a substantial increase in real profit for FEGs, thereby increasing income levels of small-scale farmers (Burki, 2010). The study indicated that there has been a 165 percent increase in the average starting real profit of FEGs following support from ASF, and an increase of 139 percent in employment generation on assisted farms when compared with non-assisted farms in the same areas. The formation of FEGs resulted in the direct employment of 26 138 people and indirect employment of a further 9 935. The study also suggests that farms of assisted FEGs earned RPK64 733 (~US$673) more profit when compared with the control group. Empirical evidence suggests that productivity growth has been a result of the assistance provided. The study found, however, that many of these on-farm efficiency improvements are restricted to those farms where the actual activity takes place (i.e. the central operations of FEGs), because of the type of intervention supported. At this stage, therefore, it is too early to conclude that benefits manifested from the activities can stimulate a change in farming practices by other members of the group and the community in the long term.

Forward and backward linkages have, however, been strengthened among FEGs through integration of the production base and through access to markets. A number of product- and process-related improvements were facilitated through training and grants for the purchase of BDS for FEGs. Examples of new products for sale in local markets included items such as cheeses, pickles, processed walnuts and mushrooms; and new processes introduced by FEGs included dehydration of fruit and vegetables and breed improvements for sheep and goats.

The PPP agreements helped to reduce the risk of smallholder exclusion from the market by enabling them to identify market opportunities and address these through some form of collective action and value-adding activities. However, by making producers market oriented, they are now exposed to new risks such as price uncertainty, quality standards and potential internal conflicts within the groups. The regulatory framework related to food safety standards introduced by the Government of Pakistan represents a potential threat to FEG operations in the future if they are unable to ensure compliance. In relation to the sustainability of FEGs, the risk of disassociation of the groups has been reduced by developing a constitution for them to institutionalize their operations. Consequently, a likely key requirement for the future would be the registration of FEGs under an appropriate law in order to operate as legal business entities, although this comes with additional costs, including potential taxation. FEG operations are currently at a level where they are not affected by trade, tax and land policies but, if operations continue to grow, follow-up assessment of how these policies could impact on business operations would be useful to determine the positive/negative impacts.

The enhanced capacity and availability of BDS as a result of this programme and the individual PPP agreements can be considered an opportunity for the future that may help FEGs to expand and graduate from micro to small and medium enterprises. The expectation of key informants with respect to long-term societal and development impacts is positive, thanks to the creation of decent jobs, lower levels of poverty and an improved quality of life. In addition, there is increased recognition among FEG members of the usefulness of BDS and a willingness to pay for these services.

3.2 *CASE 2*. GLOBALG.A.P. CERTIFICATION FOR CITRUS VALUE CHAIN DEVELOPMENT

One of the major challenges hampering horticultural exports from Pakistan is an inability to ensure compliance to quality standards. As a result, exporters are increasingly losing ground in high-end markets. In 2005, for instance, Pakistani citrus was banned by the

Russian Federation and other Central Asian states because of its non-compliance with quality standards, notably exceeding maximum residue levels through an excessive use of agrochemicals. In response to this situation, two PPP projects for implementation of the internationally recognized Good Agricultural Practices standard (GLOBALG.A.P.) were launched in 2007 to support stakeholders operating in the citrus and mango supply chains. This case study focuses on the citrus supply chain.

The public partner in this PPP was again ASF, representing MINFAL, as discussed in Case 1. ASF has been functioning since 19 July 2005 with the overall aim of contributing to economic growth and employment generation through agribusiness development in Pakistan. With the aid of ASF, it was intended that agribusiness sector operators be provided with appropriate support services through matching grants. The private partners in this PPP were 14 existing citrus exporters who demonstrated a willingness to commit to the adoption of GLOBALG.A.P. processes by co-investing and working directly with 324 producers. The project had a duration of three years from 2007 to 2010 and came up with some promising results. Citrus exports increased from 150 000 tonnes in 2006 to 360 000 tonnes in 2010.

Characterization of PPP arrangements

The purpose of the project was to build capacities within the citrus value chain for ensuring compliance to quality standards in export markets, particularly those of the Russian Federation and European Union. Project benefits were shared by a number of participating agribusinesses involved along the chain, including farm labourers, contractors, traders, clearing agents and consumers. The main beneficiaries, however, were primary producers organized in the form of Produce Marketing Organizations (PMOs)[8] and 14 traders (exporters) operating in the Bhalwal district of Punjab province, a major citrus production area in Pakistan. The specific objectives of the partnership arrangement were to: (i) increase PMO capacity to address quality issues in general and GLOBALG.A.P. requirements in particular; (ii) design and implement a programme on plant protection, improved harvesting and post-harvest handling; (iii) train the trainers and extension service providers; and (iv) assist in GLOBALG.A.P. certification. Anticipated economic impacts included access to high-end markets willing to pay a premium for certified fruit; reduction of production costs; and improved produce quality and yields. Positive social impacts were envisaged because of higher income, improved governance in the value chain, and reduced risks through the safe and judicious use of pesticides.

Assistance was given to the beneficiary PMOs in order to achieve the project objectives. Specifically, this was for certification, capacity building and project management. As a PPP, ASF and the 14 citrus exporters shared the cost of activities on the basis of a 50:50 contribution of investment capital. The beneficiary PMOs represented by exporters were also supported in developing linkages with international markets through their participation in exhibitions, exposure visits and other market promotion activities. An agreement was signed between the PMOs and ASF to formalize the commitment to implementing the requirements and standards of GLOBALG.A.P., as well as promoting the relationship between farmers and exporters. The roles and responsibilities of each stakeholder, i.e. growers, exporters and ASF, were clearly defined in the contract agreement signed between ASF and the participating exporters.

Development of PPP arrangements

The GLOBALG.A.P. certification project was launched in early 2007 by ASF together with private sector stakeholders, in response to declining market conditions for citrus export from Pakistan. The task of assisting growers and exporters in the subsector to combat this situation was assigned to ASF by the Government of Pakistan. The main drivers/units for the partnership arrangement were the fruit and vegetable exporters' associations, MINFAL, PHDEC, the University of Agriculture, Faisalabad (UAF) and the certification bodies. ASF began by initiating dialogue between the participating exporters at the association level.

The GLOBALG.A.P. initiative was negotiated between ASF and 14 leading exporters. Exporters were selected through their association, and those exporters included in the project had to demonstrate their relevance and willingness to contribute towards the undertaking. Consultations were also held with producers, particularly those who had already been supplying to the identified exporters. In order to receive the matching grant and formalize the PPP, the private partners (exporters) had to

[8] Each PMO consisted of a leading exporter and the farmers supplying produce for export. The total number of farmers involved in the PMOs was 324, with individual PMOs ranging from four to 29 farmers.

follow the standard ASF application process. This involved the following five steps.

1. Preparation of the grant application for submission to ASF – description of the opportunity, technical and financial feasibility, management and cost proposal with matching contribution indicated.
2. Evaluation of the grant application by the financial analyst of ASF – ratio analysis, payback period, net present value and relevance to the priorities of the programme.
3. Assessment of the grant application by the appraisal panel.
4. Approval by the management of ASF.
5. Contract negotiation and signing of contract.

In the preparation of the grant application, participating PMOs assessed the export markets to be targeted[9] in order to estimate the potential benefits and requirements for compliance to quality standards. Since they were already operating in the fruit export business, their assessment was realistic and the underlying prospects of enhancing their business through involvement in the PPP were obvious. Consultations were also held between exporters and growers' associations, and participatory rapid horticulture appraisals (PRHAs) were undertaken to assess the current situation for citrus production in the area and then design the project interventions.

In relation to an assessment of the enabling environment for the PPP (i.e. relevant legal frameworks and policies), the ASF programme had a separate component to deal with policy and regulatory framework amendments. The participating exporters and growers were invited to participate as members of the consultative forum for the development of horticultural sector policies.

The PPP was negotiated in early 2007 over a period of six months, to be implemented in the next three years. ASF and the PMOs contributed 50 percent each to the total cost of the initiative. The financial contribution from the PMOs was funded by the exporters, while growers contributed in kind only through the provision of facilities for training, labour and material for upgrading their farms. Total implementation costs for the project were PRK50 million (~US$520 000) and were to be used to cover costs of activities such as: (i) certification; (ii) project management; (iii) capacity building; and (iv) R&D. The expected revenues and returns from the PPP were estimated in terms of higher unit price as a result of access to higher value markets, increased quantities exported and increase in farmgate prices for growers. The economic impact from 14 PMOs has been estimated to be PKR37.5 million (~US$390 000) in terms of incremental annual export earnings in the first year. A total of 324 farmers benefited while organized into the 14 PMOs, covering cumulatively an area of 15 116 acres (6 117 ha) under citrus orchard. The number of farmers per PMO ranged between four and 29.

Management and operations

The partnership between the public and private sector players was strategic and results oriented. They shared investment capital for the project on a 50:50 basis. The private sector partners were primarily responsible for involving citrus growers in the project and implementing project activities, while the public partner was responsible for providing technical assistance and supporting the private sector in the implementation of activities. A project office was set up in the target area, headed by a principal investigator/consultant who provided technical assistance to the PMOs. Each PMO also had a project manager with direct responsibility for the Monitoring and Evaluation (M&E) activities of their group, with support from the full-time ASF M&E officer.

Technical and financial assistance was provided by the project for successful implementation of project activities under the initiatives. Since the concept of GLOBALG.A.P. certification was new in Pakistan, the necessary expertise was not available locally. The services of international certification bodies were used to address this issue by building the capacity of local service providers, mainly within the private sector, who could then assist growers/exporters. Rigorous and continuous training was carried out by the project field office with the PMOs to ensure implementation of GLOBALG.A.P. and prepare PMOs for independent certification. Material support was also provided in the form of spray kits, pruning saws, first-aid kits, etc. Geographic mapping of farms was undertaken to ensure traceability at the farm level so that each field had a proper code and produce could be identified back to the exact production block.

An MOU was signed between the exporter and the PMO, outlining the terms and conditions of supply. Producers agreed to follow strictly GLOBALG.A.P. requirements and associated

[9] Russian Federation, Central Asian states, Indonesia, Middle East and the European Union.

procedures for warning, suspension and/or cancelling of supplier status. Pricing was not part of the MOU and was competitively based on prevailing market rates. Pricing and sourcing arrangements were negotiated between the exporters and producers at the onset of the season and a payment schedule was also set up for compliance.

Standard procedures for advertising and bidding were used for outsourcing and subcontracting of services, and for procurement of material. Performance monitoring and appraisal were carried out through an ASF ongoing monitoring programme and third party evaluation.

There were a number of risks associated with the implementation of the project. These included the insufficient capacities of the service providers to support the producer groups; unrealistic expectations of farmers to obtain high price premiums for certified produce; high certification costs because of inadequate national laboratory testing facilities; purchase of non-compliant fruit by exporters during years of low harvest; and a lack of trust between farmers and exporters. In order to mitigate these risks, the project management needed to increase awareness and understanding of GLOBALG.A.P. processes and associated costs, and facilitate greater interaction and communication between stakeholders.

Through the PPP, several new interventions have been initiated by other public and private partners related to both technical and financial services, such as credit products for producers from commercial banks. Several challenges were faced by the partnership, but were managed during the implementation of the initiative through collaborative actions by the partners in the PPP. A key challenge was to ensure equitable distribution of the ensuing benefits among the operators. The other important challenge was to establish long-term relationships between exporters and producers. A further significant challenge has been the lack of transparency and information sharing by some of the private sector partners. In addition, since PPPs are an emerging approach, operations can be time consuming when both partners follow different management directions. Nevertheless, this issue of operational decision-making was overcome by delegating decision-making powers to the field office to speed up the process of implementation.

Performance and development outcomess

Data obtained from the household survey estimate the costs of compliance with the GLOBALG.A.P. standard for small-scale exporters operating under the Option Two certification scheme at approximately PKR36 600 (~US$380) per individual exporter, and about PKR8 390 (~US$87) per member in the group certification option, the cost being borne by the project with equal contributions from ASF and exporters. The investment cost borne by individual farmers represents approximately 30 percent of their total annual crop income. The bulk of the costs incurred by individual farmers (~90 percent) are for investment in infrastructure and upgrading equipment. These represent non-recurring costs associated with necessary structures to support compliance practices such as record-keeping (e.g. office construction), crop protection (chemical store and pesticide disposal pit) and worker health and safety (toilet and bathroom).

Findings from a survey of the main beneficiaries of the PPP, i.e. the farmers involved in the PMOs, highlighted a number of benefits from compliance with GLOBALG.A.P. They perceived that adoption would assure them of markets and higher prices as well as timely payment by exporters. These perceptions were realized to a significant extent through an increased proportion of exportable surpluses sold and premium prices. Results show farmers who adopted standards enjoyed a higher income benefit. Compared with a net income before the project of only PKR8 727 (~US$91), the increase in net income attributable to GLOBALG.A.P. adoption per farmer is PKR22 443 (~US$233).

The project created the impetus to address quality standards in the subsector. In addition, it provided stimulus to the private sector for investment in quality control infrastructure through the provision of matching grants. Process innovations and capacity building realized by the PPP include GLOBALG.A.P. certification of produce and upgrading of skills for farmers and exporters regarding compliance with international standards. As a result of the PPP, the risk of rejection of produce in the international market has been reduced through GLOBALG.A.P. certification and, at the same time, the risk of a glut in the local market has been mitigated as the proportion of fruit for export will help to stabilize local prices. Risk to human, animal and plant health has also been reduced through the safer use of agrochemicals.

The project has had a direct impact on trade. Exports of citrus have substantially increased from 150 000 tonnes in 2006 to 360 000 tonnes in 2010 and new markets have become accessible for Pakistani citrus products. Capacities of local institutions have been consolidated and information has been regularly shared with all relevant stakeholders,

affecting the subsector in general. Prior to introduction of the project, no inspection or certification services existed in Pakistan and consequently all horticultural produce exported faced the risk of rejection. The PPP has contributed towards initiating the regulatory framework and institutions required to address this issue by developing local capacity in inspection and compliance services. The performance of the value chain has been enhanced through the project, including profitability and market share. The intervention is sustainable and it is likely that the certification programme will continue, because of the benefits associated with improved market access and increased profitability. These should make the initiative self-sustaining without the need for additional external support. In the new scenario, farmers are better integrated into the export value chain since they have contractual relationships with exporters, and exporters now have access to new markets and buyers because of the demonstrated quality of the produce. The relationship between producers and exporters has also been considerably improved, which is essential for long-term collaboration and continued exports.

The key informants are optimistic about the long-term impacts in terms of higher income, less unemployment and enhanced value addition. It was estimated that 1 000 full-time equivalent jobs were created through process improvement and better harvest and post-harvest management.

3.3 *CASE 3*. PPP FOR MANGO SUPPLY CHAIN MANAGEMENT

The Government of Pakistan identified horticulture as one of the subsectors with strong potential for export growth. There was no institutional mechanism to promote and develop the subsector and therefore it was deemed important to establish a specialized agency. The Pakistan Horticulture Development & Export Board (PHDEB) was set up in August 2002 as an autonomous corporate board under the MoC, Government of Pakistan. The BoD has majority representation from the private sector. PHDEB was mandated to promote, regulate, coordinate and improve the export of horticulture products for the benefit of all stakeholders in the horticulture value chain. The main thrust has been to enable Pakistan to gain a share of the high-end international markets through concerted marketing efforts together with integrated interventions and facilitation of the value chains in the subsector. While PHDEB was originally established as a Board under the MoC, it was registered in 2009 as a not-for-profit company under Section 42 of the Companies Act, and was renamed the Pakistan Horticulture Development & Export Company (PHDEC). The company is managed by a BoD with majority representation of private sector representatives, including horticulture producers, processors and exporters. The mango supply chain initiative was undertaken as a PPP project.

As a PPP initially funded from the export cess, PHDEC has implemented a number of goal-oriented projects. One of the partnership projects implemented included the Mango Supply Chain Management project. This project was an initiative of the Australian Centre for International Agricultural Research (ACIAR) and was implemented in collaboration with mango industry stakeholders and PHDEC. Financial and technical assistance was provided by the Australian Government through ACIAR.

Mango is the fifth largest major fruit produced in the world in terms of its total production. Pakistan ranks fifth among mango-producing countries with respect to its annual production, representing ~6 percent of the world's total (Collins et al., 2007). The country is the fourth largest mango exporter in the world, although its current export volumes are relatively low at about 10 percent of total domestic production. The average unit price fetched by Pakistani mango is also substantially less at US$307.48/tonne when compared with other mango-exporting countries (ACIAR, 2007). With the aim of enhancing the potential of the mango supply chain and making it more competitive and profitable, this project was jointly implemented by Australian and Pakistani institutions in collaboration with private sector stakeholders in the supply chains, including farmers, exporters and retailers. Under the project, new export markets were researched for Pakistani mangoes in the United Kingdom, United Arab Emirates, Singapore, Malaysia and China, and modern domestic market chains were developed in Lahore and Faisalabad in collaboration with the Metro Cash and Carry chain.

Characterization of PPP arrangements

The Mango Supply Chain Management project under the Australia Pakistan Agriculture Sector Linkages Program (ASLP) was initiated in late 2006 and had a duration of four years. The overall objective was to address the factors limiting the profitability of mango supply chains in Pakistan. The specific objectives of the project were to: (i) improve and maintain mango quality from harvest to con-

sumption; (ii) identify and assess market needs and potential; (iii) collaborate with selected mango supply chains; and (iv) build capacity in Pakistani mango R&D. The direct beneficiaries of the project were the mango growers and exporters from Punjab and Sindh provinces. Expected benefits included a reduction in post-harvest losses, improved quality, reduced transport costs, and higher prices through access to new markets for Pakistani mangoes. The total financial worth of the project was AU$1.2 million (US$1.25 million), with 22 percent of the total funds (~US$275 000) allocated to domestic counterpart agencies. Technical and financial assistance was given in the thematic areas of market research (domestic and international); product quality improvements; establishing and working with selected supply chains; and capacity building. Public sector support was channelled through PHDEC and the University of Agriculture, Faisalabad (UAF) in the form of institutional strengthening for testing and standards development.

The project involved many partners from both the public and private sectors. Partners involved in the agreement included PHDEC, UAF, University of Queensland (UQ), Queensland Department of Agriculture, Fisheries and Forestry (QldDAFF) and the Department of Agriculture and Food, Western Australia (DAFWA). Other key supply chain stakeholders from the public and private sector that participated in the project included: (i) the Post Harvest Research Centre, Ayub Agricultural Research Institute (AARI) Faisalabad; (ii) Sindh Horticulture Research Institute Mirpur Khas; (iii) Punjab & Sindh agricultural extension services; (iv) Bahauddin Zakariya University, Multan Punjab; (v) Agribusiness Development and Diversification Project; (vi) Punjab Fruit & Vegetable Development Project; and (vii) industry players – growers, traders and service providers. A joint Australia-Pakistan project planning and management team was responsible for planning and review of all project activities from season to season, meeting on a biannual basis. PHDEC and UAF were responsible for the operational management of activities and coordination.

The bilateral agreement between Australia and Pakistan was facilitated by MINFAL for the Agriculture Sector Linkages Program (ASLP) with the cooperation of the Australian Agency for International Development (AusAID). ASLP was initiated in light of the Agreement on Development Cooperation (13 July 1991) and the programme of collaborative agricultural research for development (13 November 2000) signed by the Government of Australia and the Government of Pakistan. The Australian Government designated authority of the programme to ACIAR, and MINFAL participated on behalf of the Government of Pakistan. The Mango Supply Chain Management project was initiated under these umbrella agreements in 2006. Separate sub-agreements were signed by both partners.

Development of PPP arrangements

As mentioned above, this project was developed under the Australia Pakistan ASLP. Various assessments and fact-finding missions were conducted by ACIAR in collaboration with MINFAL prior to the initiation of the mango supply chain project in December 2006. Comprehensive policy studies were undertaken and consultations held with various stakeholders in the public and private sector, including key participants in the mango supply chain in both Australia and Pakistan. The costs, revenues and returns from the project were estimated in both the current scenario and the improved scenario after project interventions, to be realized through reduced post-harvest losses, reduced transportation costs and higher market prices. The enabling environment was also appraised during project scoping studies, including an assessment of the availability and quality of R&D and the extension services.

TABLE 4
Public and private sector institutions participating in the Mango Supply Chain Management PPP

Public sector	Private sector
1. MINFAL, Government of Pakistan	
2. PHDEC/MoC	1. *Farmers' associations:* Multan Mango Growers' Association, mango growers in Sindh
3. UAF	
4. ACIAR	*2. Marketing organizations:* commission agents and exporters/ Fruit & Vegetable Exporters' Association
5. UQ	
6. Departments of Agriculture, Queensland and Western Australia	3. *Retailers:* Metro Cash and Carry chain

Source: PHDEC, 2011 (www.phdeb.org).

Based on findings from these studies, a formal agreement was reached to begin implementation of the project almost two years after initial discussions began. The project was designed and implemented jointly by Australian and Pakistani institutions in collaboration with private sector market chains. The main drivers of the project included the fruit and vegetables exporters, MINFAL, PHDEC, UAF and ACIAR. The main reasons for the partnership were to address mango supply chain issues such as: (i) low proportion of exports; (ii) lower unit value; (iii) high cost of freight; and (iv) difficulties achieving compliance with standards.

The project proposal was formalized between the nominated institutions to be counterpart implementing partners in Pakistan and the Australian counterpart agencies. A budget was agreed upon, based on the needs of the intervention model developed. While the total value of the project was AU$1.2 million to support financial and technical assistance, with 22 percent going to national counterparts, the contribution made by the primary beneficiaries was in kind. For example, producers and exporters covered the risks associated with product losses during market trials. The contribution of national partner institutions was also in kind, in terms of the human resources and institutional services to be provided during the project period from 2006 to 2010. For example, UAF provided the facilities to establish a laboratory under the project where compliance testing and post-harvest research could be undertaken. The first phase of the project (three years) was launched following market research in both domestic and international markets.

Management and operations

Multiple implementing partners were responsible for the execution of the project. Overall strategic management was provided by ACIAR and MINFAL, and the partners responsible for direct implementation of the project were both Pakistani (PHDEC, UAF) and Australian (UQ, QldDAFF, DAFWA). The Australian counterpart agencies provided assistance in planning, management and technical areas to help local partners to implement activities, while the day-to-day execution of the arrangements was handled by the Pakistani counterpart organizations. Many other national collaborating agencies were involved in project activities, including AARI and the agricultural extension services in Punjab and Sindh.

Technical expertise and assistance were provided under the project for mango post-harvest management; market research and market trials; upgrading of a post-harvest and quality testing laboratory; introduction of packaging material; supply chain training and capacity building of chain operators. New dimensions of mango exports were studied and explored, especially export of mangoes via sea freight. The project conducted action research throughout the supply chain from start to finish, in collaboration with the private sector, to explore the opportunity of sea and air freight to various international markets and also linking farmers to domestic markets.

The administrative procedures of the implementing agencies were followed for outsourcing and subcontracting technical assistance for implementation of the project activities. Monitoring was carried out on an ongoing basis by the project management at the strategic level, involving both partners. Evaluation at the end of the project also helped in planning the next phase.

There were several risks that needed to be addressed during implementation, including the lack of capacities of chain operators in post-harvest procedures associated with sea freight; high expectations of the private sector; organizational complexities; and the short time frame for the project. These risks were mitigated through joint project planning, consultative dialogues, regular meetings and collaborative activities.

Certain challenges were also faced during implementation of the project. These included: (i) varying mandates of the implementing and collaborating partners; (ii) changing priorities of the management of the implementing partners and government; and (iii) trust gap between public and private sector partners. The project managed these challenges through effective coordination, joint planning, collaborative actions and sharing of information.

One of the main problems encountered in maintaining the relationships between partners was caused by a lack of alignment in the type of agreements used between partners. The partnership cooperation between the high-level strategic partners (i.e. ACIAR and MINFAL) was based on a formal agreement of strategic cooperation, while collaboration at the implementation level was based on time-bound contracts. The project therefore encountered slight delays during the first year of its implementation.

Performance and development outcomes

The project successfully managed to develop five new supply chains for the export of mangoes,

involving traders and farmers. Four export chains linking farmers, exporters and retailers (via air freight) were explored to send produce to the United Kingdom, China, Malaysia and Singapore; and a new export chain to retailers in the United Arab Emirates was developed via sea freight. Two new domestic chains were also explored for producers to supply directly to Metro Cash and Carry stores in Lahore and Faisalabad.

The project has trained about 1 500 producers and exporters in better post-harvest practices to retain product quality from farm to end-consumer. It arranged for a paid consultancy to train 80 commercial operators in order to increase their capacity in packing house operations. Moreover, it provided international training opportunities for eight researchers in the areas of product quality improvement, disease management, supply chain management and project management. The project has also invested in setting up a laboratory at UAF.

An evaluation of the project was carried out at the end of the first phase, seeking feedback from project beneficiaries. Feedback from industry stakeholders indicated that the project has demonstrated a 59 percent increase in product handling knowledge, 57 percent increase in market knowledge, 53 percent improvement in product presentation, and participating producers/exporters realized an average 21 percent increase in product prices by the end of the third year of the project (PHDEC, 2010). Additional agribusiness investment is anticipated in establishing packing houses, improvement in farming practices and product presentation, including packaging material. Thanks to the demonstration effect, five new packing houses were under construction towards the end of 2010 in mango production areas.

The project has led to trials of new processes that could contribute to increasing the competitiveness of the Pakistani horticultural subsector. These innovations include sea shipment of mangoes to export markets such as the United Arab Emirates and improved post-harvest and handling practices such as the introduction of better packaging. Significant training and capacity building of value chain actors have also taken place so that they can now better meet the needs of their clients. The project was also in line with trade policy objectives and has helped to inform proposed horticulture policies in Punjab and Sindh.

Agriculture (especially R&D) institutions benefited both directly and indirectly from the interventions. The infrastructure and technical capacity of the post-harvest laboratory at UAF were enhanced to meet the challenges of the market and become more responsive to the needs of the private sector engaged in the mango supply chain. Project interventions tested and promoted value addition at farms in rural areas, thereby encouraging transfer of value to the farmgate. This will result in the creation of employment opportunities for skilled and unskilled labour, expected to be enhanced by 10 percent, and on-farm increases in income by 20–30 percent.

The key informants are optimistic about the long-term impacts in terms of higher income, increased employment opportunities, value addition and rural development. Further action, research and assistance are required to validate the commercial viability and sustainability of the supply chain improvements and these will be undertaken during the second phase of the project, which has already been approved and implementation initiated for a period of three years spanning from 2010 to 2013.

3.4 *CASE 4*. DAIRY COLLECTION, PROCESSING AND MARKETING – IDARA-E-KISSAN

In 1983, in response to the poor access of small dairy farmers to markets, poor productivity and low incomes, and the challenges associated with the outreach of public sector extension services, the Pattoki Livestock Production Project (PLPP) was initiated, which was funded by the German Government in partnership with MINFAL. The objective of the project was to support the development of a processing plant that could be used to procure, process and market fresh milk. The project had a duration of nine years and was completed in 1993.

Under this project, the Idara-e-Kissan (IK) Dairy Cooperative was established in 1983. The cooperative has been working with government and received assistance in the form of an ongoing lease agreement for the use of milk processing plants in Lahore and Islamabad.

Characterization of PPP arrangementss

The IK cooperative was established as a PPP in the form of a vertically integrated cooperative enterprise in the dairy sector. IK's purpose was to procure fresh milk, process and market it. Direct beneficiaries of the interventions were members of the dairy cooperative. The expected benefits were to be realized through the enhanced skills of dairy producers, which would have an envisaged impact on the profitability of dairy farmers. It was expected that the cooperative would also increase social benefits among its members.

The cooperative provided a package of veterinary and livestock extension services, technical assistance and demonstration plots for improved feed. Under the PPP, it benefited from the R&D facilities of the government and obtained free vaccines from its facilities. IK has an independent governance structure that is responsible for the strategic management of the cooperative, including the M&E of its members. It was registered under the Pakistan Society Act in June 1989 under the PLPP funded by the German Government with technical assistance from the German Agency for International Cooperation (GTZ). Public sector support was provided in the form of several collaborative programmes, including the utilization of dairy processing plants in Lahore and Islamabad, leased out to the cooperative by the Government of Pakistan without fees for long-term use and maintenance.

Development of PPP arrangements

The IK cooperative was established in 1983 under PLPP. The emphasis of IK was on developing a model of collection, processing and marketing of milk as well as provision of extension services to participating farmers. PLPP and its beneficiaries were the main drivers behind the initiative that developed IK in collaboration with the private sector (i.e. dairy farmers). The main reasons for the establishment of IK were the poor access of small dairy farmers to markets, poor productivity and low farmers' incomes, and notable gaps in the extension services. Initially, the focus was on improving productivity and organizing farmers into groups for integrating into the marketing function of the cooperative.

The initial investment in IK, from 1984 to 1992, was PKR200 million (~US$2.08 million) of which the German Government contributed PKR180 million on behalf of the cooperative. The expected costs, revenues and returns on investment were estimated through a feasibility study conducted by the project that led to the establishment of IK and a milk processing unit in Pattoki in 1987.

The benefits to be accrued by the cooperative members were assessed on the basis of increased productivity and ensured markets. After project completion in 1992, IK's responsibility was transferred to the BoD as an institution, registered under the Pakistan Societies Act. A participatory development process was followed during the transformation and members of the cooperatives were kept involved in decision-making through various fora, i.e. Village Committee (VC), Executive Committee (EC) and Governing Body (GB).

Management and operations

IK's responsibility has been to procure fresh milk from farm collection points, process the milk at its facilities and market it through its distribution network. IK also provides livestock extension and other technical and social services. The responsibility of the dairy farmer members was to provide a minimum quantity of milk that would then entitle them to the services provided by IK through its field teams. There were more than 20 000 members from 519 villages participating as members of the cooperative by 2004. All VCs elect the council members who form the GB of the cooperative. The GB meets quarterly and makes strategic management decisions. In addition, there is an EC made up of nominated members for operational decisions.

Under the arrangement, technology and services were provided to the cooperative by the public partners (MINFAL and GTZ). Each VC is provided with chillers to cool milk down before transportation to the processing facilities and a comprehensive service package is offered. The technical service package includes artificial insemination, vaccination, animal health treatment, improved feed provision and farmer extension and training on various themes related to dairy farming management. Social services are also provided by the cooperative, including family planning, adult literacy, mother and child health education, and goat distribution as a form of social security for its members. New information is obtained by IK from members for developing additional service packages. Furthermore, the R&D facilities of the public sector are utilized.

Competitive bidding as per the rules of business of IK is undertaken for the procurement of services. Internal monitoring is carried out by IK to review targets and determine profits. The main risk has been to keep members committed to providing milk supplies to IK. To address this issue, access to the service package mentioned above was made contingent on supply of a minimum quantity of 300 litres of milk over a six-month period. This requirement helped to mitigate the risk of loss of cohesion among members. Additional support services are received from time to time through other IK initiatives and projects. These include extension services and training. Key challenges for the cooperative include higher milk prices offered by competitors; small profits for individual members; and members ignoring quality control procedures and focusing solely on increasing production.

Performance and development outcomes

There has been an increase in revenue for members as a result of improved milk sales. A study by Lahore University of Management Sciences (LUMS) estimated 29 percent higher productivity, 14 percent higher prices, and 9 percent more wet animals among IK members compared with non-members (Riaz, 2008). The increase in the number of wet milking animals is an indication of investment in dairy animals. On average, 6–7 percent of the turnover of IK has been invested in capacity building of dairy farmers (Riaz, 2008).

Under the arrangement, artificial insemination, vaccination and balanced rationing were introduced to small farmers. Similarly, chilling of milk using chilling equipment was also introduced to increase milk shelf-life. Another pertinent innovation was to link small farmers to markets.

Several of the risks faced by beneficiary agribusinesses were mitigated, including loss in value of fresh milk, exploitation of small dairy farmers by intermediaries, disease and pest attacks on livestock. The role of R&D institutions is important for the IK model, especially regarding the supply of semen for artificial insemination and vaccines.

The key informants consider IK to be a commercially viable organization that has moved to integrate value addition practices further into milk processing, such as pasteurization for the production of UHT milk and the adoption of Tetra Pack™ packaging. In particular, there is increased expectation in the area of breed improvement, higher milk prices for farmers and fodder productivity enhancement to increase livestock carrying capacity on farms. The cooperative is currently functioning as a self-sustaining entity.

3.5 *CASE 5.* PROMOTION OF DROUGHT-TOLERANT LOW DELTA CROPS IN THE BARANI TRACT OF PUNJAB

In the Barani (rainfed) area of Pakistan, wheat is the main cash crop grown by almost every farmer, regardless of farm size. However, productivity is low, with an average yield of about one-third that of irrigated areas. Low rainfall and frequent droughts, coupled with the use of traditional seed varieties, are the main factors contributing to low yields. Consequently, farmers are reducing the area under wheat, resulting in a decrease in soil cover and accelerating surface erosion. These factors affect farm profitability and farmers are gradually losing income, which is increasing the poverty level within the local community. A further consequence of the prevailing situation is the change in land use from farmland to commercial use.

Improved wheat seed of recommended varieties is available to only a fraction of farmers throughout Pakistan. The situation is even worse in the Barani area since seed companies in both the public and private sectors do not provide seeds for most of the crops produced here. Consequently, yields are low because of the unavailability of appropriate seeds. The main reasons for this lack are the following.

- The majority of the crops produced in the area are minor crops. Most farmers have small plots of land and cannot afford to buy expensive seeds that will add to production costs.
- Wheat seed production is profitable in irrigated areas but is not considered so in the Barani area because of the high seed losses of 30–50 percent (seed below standard size, thin and shrivelled grains). These losses are caused by uneven rainfall and variable moisture conditions. By comparison, seed losses in irrigated areas are only 5–10 percent. Barani seed could possibly be multiplied in irrigated areas but this would be an inefficient practice since most traditional Barani area varieties reduce their yield in irrigated areas because of variations in agroclimatic conditions.

In order to address the above-mentioned problems, a PPP was set up in 2010 between the Sustainable Land Management Project (SLMP)[10] and Barani Agricultural Research Institute (BARI) as the public partners, and the Zamindara Seed Corporation as the private partner. The PPP was implemented in line with the Government's PPP policy introduced in May 2010 and benefited greatly from the newly created PPP unit in the Planning and Development Department of Punjab. This unit was instrumental in streamlining procedural formalities for the agreement and set an example for future PPP endeavours. The total cost of the agreement was PKR1.373 million (~US$14 300). Funding was shared between the private seed company and SLMP. The private company provided 52 percent of the total cost and SLMP the remaining 48 percent. The expected income from the sale of 90 000 kg certified seed

[10] SLMP was funded by the Global Environment Facility (GEF), the United Nations Development Programme (UNDP) and GoPakistan, and implemented by UNDP.

is PKR2.137 million (~US$22 575). Expected benefits for farmers from the use of improved varieties were an increase in additional wheat yield of 200 kg per acre (0.4 ha), which can be valued at PKR7500 (US$78), as well as improved land cover to control soil erosion.

Characterization of PPP arrangements

In this PPP, improved variety wheat seed as the major crop of the Barani area was developed and provided to farmers on a pilot basis. The seed was produced in irrigated areas through a PPP by engaging a reputable private sector seed company with the help of SLMP and technical support from BARI.

The specific objectives of the PPP were the following.

- Produce good-quality, certified seed of improved varieties of wheat (Chakwal-50 and BARS-09) for the Barani area (75 acres [30.35 ha]). Chakwal-50 is a high yielding variety suitable for low rainfall areas. It has waxy and erect leaves, a profuse tillering capacity with dense/compact heads, and is disease tolerant. BARS-09 is also high yielding, drought tolerant and UG-99/stem rust resistant.
- Provide certified seed of wheat varieties (90 000 kg) to farmers at a reasonable and affordable price (as per Punjab Seed Corporation [PSC] rates).
- Ensure availability of certified seed to Barani farmers near their farms through sale points of private dealers and at BARI, Chakwal.
- Increase wheat crop yields in the Barani area by providing certified good-quality seed of improved varieties (expected yield increase 200 kg/acre [0.4 ha]).
- Promote seed business for drought-resistant crop varieties through private companies to increase the availability of quality seed for all farmers at affordable prices.

The direct beneficiaries of the PPP were smallholder farmers in the Barani area. Although wheat is the main crop grown, productivity is low when compared with that of irrigated areas. One reason for this low yield is the use of old seed varieties. The varieties in the Barani area are different from irrigated varieties in that they need to have long root systems in order to be drought tolerant. According to trials conducted at BARI and other national and international research institutes, only the use of improved variety seed could increase yield up to four times. Through the PPP, growers in the Barani area would be able to access these improved seed varieties and potentially increase their wheat yields by an estimated 200 kg/acre (0.4 ha). This will ultimately increase farmers' income since there is a readily available local market for wheat and, with this motivation, they may increase the production area under wheat, which will also improve land cover to control soil erosion and help in rainwater harvesting and water conservation.

The PPP also provided an initiative for private seed companies to follow this model in the production of seed for Barani crops in the future. Private seed companies will thus expand their seed business in the area, farmers will have access to higher yielding varieties, and the varieties developed by BARI for the Barani area will be commercialized and spread among the farmers. A total of 90 000 kg of seed was produced on private farmers' land under a buy-back agreement with the company and then sold to farmers in rainfed areas of the country. Five contract growers were involved, with a total land area of 87 acres (35 ha) under production.

BARI was responsible for managing the PPP throughout the project life cycle as the lead implementing agency under an output-based written agreement between the public and private sectors. In addition to the three main partners, and in line with its national mandate, the Federal Seed Certification and Registration Department (FSC&RD) and PSC also participated in the PPP to ensure the purity of the crop and seed produced.[11] The private seed company shared the project cost, provided quality basic seed to growers for producing seed in irrigated areas, then bought back the seed produced and transported it to the rainfed areas and ensured distribution to farmers through dealers at market rates.

The detailed roles of each partner as per the PPP agreement are given below.

Lead implementing partner (IP) – BARI

1. The Director of the Barani Agricultural Research Institute (BARI), Chakwal entered into an agreement with the private seed company to make arrangements for production, processing and marketing of wheat seed varieties.

[11] PSC, a semi-autonomous body of the Government of Punjab, was established under the PSC Act 1976 for systematic seed production, procurement, processing and marketing of major and minor crop seed on scientific lines. In this PPP, the seeds were certified by PSC according to the standards set by FSC&RD, and prices for seed were also set according to PSC rates.

2. BARI appointed the seed company to act as its exclusive producer and distributor for these wheat varieties during the term of this agreement.
3. BARI issued a separate licence to the seed company in respect of each variety for production and distribution of that variety during the specified period.
4. BARI provided basic seed of registered and approved varieties (under Seed Act, 1976) for seed production on 75 acres (30 ha) under this agreement for the crop season starting Rabi 2010.
5. BARI ensured maintenance of genetic purity and provision of seed to the seed company.
6. BARI provided detailed seed protection technology to the seed company for enlisted varieties and continuously monitored the seed production practices for the entire cropping season.
7. BARI ensured that the seed to be procured for farmers was of the standard adopted by FSC&RD and PSC.

Seed company (Zamindara Seed Corporation)

1. The company demanded the basic seed within 15 days of execution of the agreement for the whole contract period.
2. The company contributed the amount tendered as a bid of the total expenditure of the project (i.e. 52 percent) in quarterly instalments.
3. The company deposited quarterly instalments in advance during the entire contract period.
4. The seed so produced under this project was distributed in rainfed areas through at least four distribution/sale points.
5. Quality seed produced in the irrigated tract was sold on to farmers at the rates specified by PSC.
6. Seed rate per unit area required to ensure optimum production levels was maintained.
7. The company signed an agreement with the private farmers that they will be bound to supply the wheat produced to the company for distribution in rainfed areas.
8. SLMP was not to be held responsible for production losses or any other future land or resource degradation suffered by farmers due to the implementation of this agreement.
9. The seed company ensured procurement of 90 000 kg of quality seed from the growers at a premium price.
10. Four sales points were to be established at different locations for the sale of seed in rainfed areas.

SLMP

1. The Lead IP worked in close coordination with the Project Coordination Unit (PCU) of the SLMP team for smooth implementation of the pilot project.
2. Under the overall direction and guidance of the Secretary, Planning and Development Department/Provincial Project Director, SLMP Punjab, the direct reporting relationship of the Lead IP was to the Provincial Project Coordinator, SLMP, based in the Planning and Development Department, Lahore.
3. SLMP advanced funds to the Lead IP in accordance with the schedule of payments specified in the agreement.
4. SLMP was part of the Project Management Committee to monitor the progress of the project on a monthly basis and ensure better coordination between the implementing parties.

An output-based contract was signed between SLMP and the private seed company to formalize the agreement. The agreement was vetted by the Government of Punjab, Law and Parliamentary Affairs Department and by the PPP unit of the Planning and Development Department.

Development of PPP arrangements

The conditions that led to the need for a PPP have been discussed previously. Moreover, SLMP had already planned a PPP component for the promotion of sustainable land management with contributions from the private sector. SLMP negotiated with different private and public sector organizations for the development of these partnerships. As a result, BARI and SLMP developed the concept of this project for engaging private partners and were the main drivers in initiating the PPP process. The arrangement was considered a sustainable initiative to resolve a public issue, i.e. provision of quality seed at reasonable rates to farmers and, at the same time, the private seed company would gain market benefits from the sale of the seed. The arrangement was considered viable because the private sector will take on the activity in future with support from local seed dealers and BARI. SLMP has a stake to promote sustainable land management by involving the private sector, which is very much under the mandate of this project.

BARI already had connections with small farmers in the Barani area through supply of improved seed. Similarly, it also had links with the private sector seed companies since it had been engaged in providing technical support. After a series of meetings and

discussions between BARI and SLMP, the PPP concept was developed, which materialized through this project. After approval by SLMP, BARI was confirmed as the lead implementing partner for the PPP since it could provide the necessary linkage between the public and private sector. However, for the development of the partnership agreement, the SLMP Project Coordination Unit in Punjab and the Planning and Development Department facilitated the whole process by engaging the relevant actors such as the PPP Unit and the Law and Parliamentary Affairs Department of the Government of Punjab.

In order to initiate a competitive and transparent process for selecting a private partner, the Agriculture Department of the Government of Punjab approved a set of Standard Operating Procedures (SOPs) for the functioning of a Foundation Seed Cell to pre-qualify companies, define public-private sector collaboration and a procedure to stop seed leakage from BARI to unauthorized individuals/companies. In accordance with SOPs, the Foundation Seed Cell advertised in newspapers to pre-qualify private seed companies. The project then invited sealed bids from the 25 private seed companies pre-qualified by the Foundation Seed Cell.

The company that made the highest bid above 50 percent of the total cost of the project (reserve rate) was offered the opportunity to join the project. The sealed bids were invited on a short notice of seven days, and were opened in front of all bidders or their authorized representatives on a fixed date and time. A committee headed by the Director/Project Manager, BARI, and comprising representatives from the PPP Unit of the Planning and Development Department, FSC&RD, the National Coordination Unit of SLMP and the Provincial Project Coordinator of SLMP worked together to finalize the selection of the private seed company.

The contributions of all partners were refined during the proposal evaluation stage, the agreement finalization process and during the inception meeting for the project held after signing the agreement. The minutes of the project meetings and visit reports of the partners to the project sites formed the basis for any subsequent formalization required in the project arrangements. The standards set by FSC&RD and PSC formed the technical basis during the project formulation, negotiation and planning processes. An output-based agreement was signed between SLMP and the private seed company. The PPP concept was initiated and the agreement finalized over a period of five months between August and December 2010.

The roles of each partner were defined at the time of concept development, based on their potential and background experience as highlighted earlier. SLMP provided financial support and strategic direction aligned with its mandate. BARI was the lead implementing partner responsible for the implementation and management of the project. Guidance from the project management committee when taking decisions on strategic issues was also sought. Overall review of the progress of the project was undertaken by the Provincial Coordination Committee. The private company, besides its financial contribution, also provided in-kind inputs into the establishment of the enterprise.

The costs, revenues and returns associated with the PPP were estimated according to the regulations established by the Agricultural Department, Government of Punjab. Expected benefits for direct beneficiaries were estimated in the environmental, economic and social context. The increase in crop cover through availability of quality seed offered environmental soil protection against erosion. The expected higher yields and marketing opportunities for wheat provided greater economic and financial benefits for farmers and seed dealers/seed companies. Greater economic benefits for smallholders also contribute to improvement in social indicators.

In terms of the enabling environment for the development of the PPP, the newly created PPP unit in the Planning and Development Department of the province, in line with the Government of Pakistan's PPP Policy introduced in May 2010, was instrumental in streamlining procedural formalities for the agreement. The technical and financial support provided by both local and provincial level institutions was also critical to the success of the project.

Management and operations

Each partner provided specific services according to its respective core competencies as highlighted previously. BARI provided the basic seed for replication and established demonstration plots on smallholder farms. The private seed company provided in-kind inputs for farmers and entered into agreements with the contract growers to purchase the seed and sell it through the four distribution points in the BARI area.

A Project Management Committee was constituted to monitor the progress of the project on a monthly basis and ensure better coordination between the implementing parties. The committee was headed by the Director, BARI, Chakwal and

comprised representatives from the Provincial Coordination Unit of SLMP (Punjab), the PPP cell of the Planning and Development Department, District Government, the private seed company and the National Coordination Unit of SLMP.

The major risks associated with the implementation of the PPP were appropriate weather conditions during the seed production stage and during the sale season. If a drought season persists at the marketing stage, this will hamper the sale of seeds in rainfed areas. An additional risk was associated with the need for a timely flow of funds since seasonal activities were to be implemented. The risk of climatic fluctuations during the production stage was overcome by cultivating wheat in irrigated areas, whereas the risk of suitable weather during the sale season will persist. The risk of timely flow of funds for seasonal activities was mitigated by scheduling sufficient payments before and during the production season.

Additional support for the PPP was provided by the Agriculture Extension Department, Chakwal district. The department was involved in the selection of motivated farmers for demonstration plots and in the social mobilization process to encourage farmers to adopt improved wheat varieties. The possibility of using the platform of the National Rural Support Programme (NRSP) to encourage farmers to adopt improved wheat varieties in other areas of the country will also be explored.

The key challenge for those implementing the PPP was not to miss any seasonal operational activity. The main problem was sustaining the flow of funds from SLMP to the partners. It hampered the physical achievements of the project activities.

Performance and development outcomes

The total investment for the production and sale of wheat seed suitable for cultivating in the Barani rainfed area was PKR1.373 million (US$14 300), while estimated returns are PKR2.137 million (~US$22 215), thus a ~58 percent return on investment for the partnership. New agribusiness investment was stimulated as the private seed company provided 52 percent of funds for the PPP. Increased production of seed will also provide opportunities for wheat dealers in the Barani area and has the potential to generate on-farm and off-farm employment.

A total of 90 000 kg certified seed of rainfed wheat variety was produced over an area of 87 acres (35 ha) and sold to farmers in rainfed areas of the country. For the five contract farmers involved, the production cost was PKR6 700 (US$78)/acre (or US$193/ha), yield was 1 035 kg/acre (2 586 kg/ha) and the price paid by the company for the seed was PKR28.75/kg (US$0.33). Therefore, the net income received for each contract grower was approximately US$264/acre (US$660/ha). As per agreed PSC rates, the company then sold the seed to farmers in the rainfed areas for PKR38/kg (US$0.44).

At a recommended sowing rate of 100 kg/ha, the 90 000 kg of improved seed produced can be used to plant 900 ha. From the improved seed, the project has recorded on-farm yield increases of 46 percent in the Barani area (i.e. an increase of 700 kg/ha) and when used in irrigated areas, the yield increase is 76 percent (i.e. an increase of 2 832 kg/ha). After the completion of the PPP arrangement, the private company has continued production of the seed variety and purchased almost double the quantity of basic seed from BARI for the current sowing season from 2012 to 2013.

Prior to the PPP, the production of wheat seed for the Barani area was not considered to be a profitable venture for private seed companies because of the challenges associated with seed production losses and limited demand by smallholder farmers. These risks have now been overcome. The risk of crop failure caused by unsustainable rainfall in the rainfed areas during the seed production stage was mitigated by producing the seed in an irrigated area. Technical support was provided by BARI to ensure the quality of the seed produced. By establishing distribution points in centralized areas that are accessible to farmers, and by increasing farmers' awareness of the benefits of improved seed varieties, the demand for improved seed has increased. The Government's agriculture extension services positively impacted on the outcome of the project by introducing the quality seed to farmers during field visits. Nevertheless, some challenges still remain.

The regulatory standards set by FSC&RD and PSC had a positive impact on project formulation and in determining the benchmarks required for ascertaining the quality of wheat seed. However, strict enforcement of legislative provisions to prevent the sale of low-quality seed as proxy to quality seed at lower rates is required. Lack of enforcement will discourage marketing efforts of credible seed companies since they will be undercut by local seed dealers selling lower-quality products.

Chapter 4
Appraisal and conclusions

PPP is a relatively new concept in project planning and management in Pakistan and has been piloted in many different sectors with varying approaches. The structure and nature of PPPs have varied considerably since a legal and institutional framework for PPPs did not exist prior to the approval of the PPP Policy in 2010.

Pursuant to the national PPP policy, there was a need for enactment of laws to govern the operational modalities of PPPs in the provinces. As highlighted in Case 5, an Act to support PPP implementation has been promulgated in the province of Punjab and work has already been initiated on drafting regulations in other provinces.

4.1 OVERALL EFFECTIVENESS OF PPP ARRANGEMENTS

While the PPP modality to implement projects and programmes is relatively new in Pakistan, it has been successfully piloted in the agribusiness sector as is evident from the cases appraised. Results have been achieved through implementation of the initiatives jointly by the partners with a targeted and time-bound approach. The initiatives appraised were mostly in areas where there was limited willingness to invest from the private sector alone so that participation of the public sector was essential. In most cases, no formal assessment was carried out to evaluate the overall effectiveness of the partnerships in achieving the predefined goals of the PPPs. In cases where commercial activities were linked to the initiative, effectiveness was more robust since benefits delivered were in terms of increased income through quality certification or linkages to markets.

The initiatives were generally based on innovative ideas that had the potential to increase stakeholders' incomes. For example, the citrus certification programme that led to the implementation of GLOBALG.A.P. was the first of its kind in Pakistan. It was effective because all the participating private sector organizations achieved certification at the end of the intervention and were able to tap into the opportunities it created in the form of improved access to markets. Furthermore, at the macro level, more revenue was generated through increased exports. The ASF FEG initiative was also innovative in the sense that it helped to upgrade the infrastructure and skills of producers, and achieve the economies of scale needed to address the issue of exclusion of small farmers from formal market chains. The increased value addition activities and improved linkages to markets helped to increase participating farmers' income and also enhanced employment opportunities.

PPP modalities, nevertheless, varied according to case and were not in line with well-defined infrastructure models such as the Build-Operate-Transfer and Build-Lease-Transfer models. The Idara-e-Kissan case study in part represented the latter since the milk processing plants, which were built earlier by the public sector, are now being used by the cooperative. In the cases appraised, the public sector (including donors) provided the necessary financial and technical assistance, infrastructure and access to resources. The share of financial and in-kind contributions made by the public sector was significantly higher than the private sector in all but one of the cases appraised (Case 5). Government agencies and line departments involved in the PPP cases played a pivotal role and often made major decisions with regard to contracting partners and selecting private sector operators. It is fair to say that, based on the case studies, and perhaps because of the limited experience with PPP development in Pakistan at this time, the public sector partners have been the driving force behind the partnerships to stimulate agribusiness growth and development.

4.2 KEY ISSUES TO BE CONSIDERED IN DEVELOPING AGRIBUSINESS PPPS

It has already been emphasized that the history of PPPs in agribusiness is relatively new in Pakistan. In recent years, there has been a phenomenal policy shift recognizing greater importance for a leading role to be played by the private sector in agribusiness sector growth. This is because the policy of protection of the sector has proved counterproductive in several cases where the Government has been unilaterally controlling the marketing channel of a commodity with a view to maintaining food

security and encouraging domestic self-sufficiency. The new paradigm requires a role for the private sector. Yet high levels of investment are unlikely in a sector that is traditionally considered risky and where the private sector has always been noticeably absent. Only in 2010 was a PPP policy approved by the cabinet that paved the way for a formal PPP arrangement in many spheres, including agribusiness activities.

From the case studies, some key issues to be considered when developing agribusiness PPPs emerge. These are identification of appropriate project ideas that are inclusive of small farmers and enterprises; identification of appropriate partners; robust implementation management; M&E; alignment with regulatory framework and policies; and flexibility and sustainability. Each of these issues is discussed in more detail below.

- ***Project identification.*** This is by far the most important factor that determines the success of any initiative. PPP projects need to be carefully identified following robust criteria, fact-finding missions and feasibility studies. This has to be carried out before the partners are identified. ASF provides a good example of a programme that follows a structured approach in the identification of the PPP project intervention from the generation of an idea through to its appraisal and approval. A set of assessment criteria was designed by professional staff who are experienced in project analysis and proposals were evaluated by an independent appraisal panel with expertise in selection of the most appropriate and promising projects.
- ***Identification of partners.*** The logical partners should be identified following the project identification stage, rather than as in most cases where the ideas are initiatives of the private sector partner. Inclusion of all partners from the initial stages of the project is essential since this reinforces ownership and trust building among partners. The selection of partners must also be based on mutual complementarities in thematic as well as target areas.
- ***Implementation management.*** Implementation is a key challenge in the face of a lack of skills and expertise. In the case appraisals, technical assistance was invariably required as a key input either from the public sector or from third party sources. Technical assistance was required in both technical and managerial disciplines. The public sector had better access to technical assistance through its capacity to draw on resources from its established networks, including R&D facilities, extension systems and academic institutions. Operational management was, however, the key to excellence for the private sector.
- Monitoring and evaluation. As indicated in the cases appraised, the PPPs faced several challenges in terms of both implementation and risk management. To address these issues, rigorous procedures for M&E should be adopted in order to feed forward information for improved implementation. Lowering the risks for private sector partners to participate in agribusiness projects was the primary role of the public sector in the PPP. This was achieved in a number of ways from direct financing to in-kind technical support. In all the cases, without public sector participation, it is unlikely that the private sector would have engaged in the activities. The involvement of the public sector (and donor agencies) gave them a degree of confidence. Nevertheless, the need for careful M&E is paramount in order to address implementation issues and solve problems as they arise, and to evaluate activities effectively so that lessons learned can be shared with other PPP projects in the future.
- ***Alignment with regulatory framework and policies.*** Because of the lack of a detailed policy and legal framework for PPPs in Pakistan, most of them were created under ad hoc arrangements and formalized under existing legal frameworks such as the law for limited companies or cooperatives, or project level MOUs. However, these institutions may not be the most appropriate structure for the implementation of a PPP project. A well-defined policy and regulatory framework is a necessary precondition for mainstreaming the PPP model in agribusiness development. In certain cases, such as those related to maintaining the intellectual property rights for pre-basic seed and planting material for food security purposes, the public sector may want to maintain some degree of control and regulate the incentive structures for private sector participants, as seen in the BARI wheat seed example. The PPP legal frameworks therefore need to be sufficiently developed in order to deal with issues such as these.
- ***Flexibility and sustainability.*** Many factors influence the success of an agribusiness enterprise, including natural factors associated with agricultural production (e.g. climate, diseases),

market factors and the influence of government policies. This makes PPP project design for agribusiness development particularly challenging. It is important to build a certain amount of flexibility into the design framework and to identify strategies to deal with shifting priorities, potential for delays in implementation and changing market conditions. For example, in both the GLOBALG.A.P. and FEG projects, the outcome of the interventions depended very much on market access, domestic and export demand and pricing, and therefore a certain degree of flexibility was required in order to deal with changing conditions. The sustainability of the PPPs is also a challenge since they are mostly designed as time-bound initiatives. One option to improve this process could be to design a PPP as a programme with a series of phases to move through with the end result focused on achieving self-sufficiency with limited public sector input. The major focus of the cases appraised was on delivering outputs and benefits to private or public sector institutions or agribusinesses, with no direct focus on building institutional capacities regarding implementation of PPPs. This aspect of sustainability should be mitigated through capacity building, particularly for public partners with ongoing roles in PPP design, implementation and evaluation.

4.3 LESSONS LEARNED

Key lessons learned include the following.

- The effectiveness of the PPP is enhanced when the private sector is rigorously involved in the decision-making process right from the planning stage through to closure of the project.
- The lack of regulatory framework currently in existence offered flexibility to the arrangements but also added ambiguities to the PPP scenario. A strong regulatory framework for PPPs will help to bring uniformity in the approaches to decision-making and financing and will help to build the confidence and trust of the private sector to participate in these types of partnerships.
- PPPs should be adopted as an ongoing arrangement rather than as a one-off ad hoc alternative for the implementation of difficult projects. PPPs should be recognized as an institutional arrangement that is a useful option both to leverage private financing and strengthen the delivery of agribusiness development outcomes.
- The benefits from PPPs can be further enhanced if political interference is minimized and key partners are empowered in the decision-making processes.
- PPPs should be used as a tool that can be replicated in underserved areas where agribusinesses have potential for growth but carry associated risks. However, the upscaling of model cases will depend heavily on the ability of the partnership to deliver an equitable sharing of benefits between the public and private partners; the commitment of all partners to transparency in the decision-making process; and the extent of management autonomy given to the private sector.

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ANNEX 1

Proposed case studies on agribusiness PPPs

Project name	Sector	Subsector	Project objectives	Project cost (PKR)	Project location	Beneficiaries	Government department	Private partner	Nature of partnership	Legal status	Implementation status/start and end dates	Priority cases for Documentation
Lahore Meat Company	Livestock	Meat and meat products	Processing of high-quality meat for export to Halal markets	800-1 000 million	Lahore	Livestock farmers, exporters	Government of Punjab	Livestock industry	Financial contribution by government in processing linked to private sector production units	Section 42 Company registered under the Pakistan Companies Act	Started in 2010	A new initiative in the sector's weakest link, i.e. processing and marketing. Involve foreign investment and market potential. Not yet fully functional
Common Facility Centre	Horticulture	Mango pulping and food processing	Pulping and packing of mango pulp and other fruit on fixed charge for farmers	500 million	Multan	Fruit and vegetable growers, exporters	SMEDA	Mango growers' association and other fruit growers	Investment from donor fund, managed by PPP as a service-providing facility	Registered under SMEDA	Started in 2008	First initiative in the country that addresses the economies of size in the case of smallholder farmers. May offer opportunity to document lessons. Not yet fully operational
Wholesale fruit and vegetable market	Horticulture	Wholesale fruit and vegetables	Auction, wholesale, retail, grading/ sorting, repacking of fruit and vegetables	1 200 million	Lahore	Fruit and vegetable growers, commission agents, wholesalers, intermarket traders, input suppliers, exporters	Department of Agriculture (Marketing), Government of Punjab	Market committee (growers and traders)	Managed by the market committee with predominant representation of private sector operators	Working under a registered Trust Board under the Department of Agriculture Marketing	Established in 1971	The case is predominantly influenced by government and politics. Currently many fundamental reforms proposed already in respect of this case
Sialkot International Airport	Livestock, etc.	Leather and other export products	Promotion of exports of leather and other products from Sialkot	52% funding for seed distribution and marketing	Sialkot	Exporters of leather, footballs, sports, rice and other export products	Government of Pakistan	Exporters	Export promotion through direct export from the cluster	Operated by public sector under the aviation authority	Functioning since 2003/04	The project is funded through private sector but operationally taken over by Government with limited role being played by private sector

PHDEC – Mango Supply Chain Management Project	Agribusiness	Horticulture	Promotion of export-oriented development of horticulture sector	AU$1.2 million	Throughout Pakistan (main office at Lahore)	Fruit and vegetable growers and exporters	Ministry of Commerce, Government of Pakistan	Fruit and vegetable growers, traders and exporters	Managed by private sector-led Board, funded under the export cess by the government, and undertake projects	Section 42 Company registered under the Companies Act	Incorporated in 2009	Originally established as a Board under the Ministry of Commerce is currently working as a company. The company has been implementing various projects including the mango supply chain project
Livestock and Dairy Development Board	Livestock and dairy	Meat and milk industry development	PPromotion of commercial livestock fattening and dairy industry in the country	54.3 million	Throughout Pakistan	Livestock and dairy farmers	MINFAL	Livestock growers	Managed by private sector-led Board, providing matching contribution to dairy and livestock fattening	Section 42 Company registered under the Companies Act	Established in 2006	Established under the Ministry of Livestock having implemented few development projects. Board not yet sustainable, therefore has funding issues
Idara-e-Kissan	Livestock and dairy	Milk and dairy collection and marketing	Auction, wholesale, retail, grading/ sorting, repacking of fruit and vegetables	200 million (US$2.08 million)	Throughout Pakistan (mainly in Punjab)	Livestock farmers	MINFAL	Livestock growers	Cooperative with membership of small dairy farmers, infrastructure for processing provided by Government	Registered under Cooperative Act	Started in 2003/04	Working as cooperative with role of public and private sector. May be a good case to review
GLOBAL G.A.P. certification	Agriculture	Fruit and vegetables	Certification of citrus (*kinno*) for export to high-end markets	66 million (US$ 735 000)	Sargodha and Bhalwal districts of Punjab	Citrus growers, exporters and retailers	MINFAL	Fruit and vegetable exporters	Cost-sharing by public and private sector	MOU and project agreement between public and private sector	Started in 2009	A model project to document for learning lessons as a focused project by public and private sectors
Pakistan Dairy Association	Livestock	Dairy	Promotion of dairy industry in Punjab	500 million	Punjab	Dairy farmers	Government of Punjab	Dairy farmers		Registered under Societies Act	Initiated in 2011	A new initiative without much opportunity for learning

continued on next page

Project name	Sector	Subsector	Project objectives	Project cost (PKR)	Project location	Beneficiaries	Government department	Private partner	Nature of partnership	Legal status	Implementation status/start and end dates	Priority cases for Documentation
Cold storage at Lahore International Airport	Agriculture	Horticulture	Storage facility for exporters and importers at airport	23 million	Lahore	Fruit, vegetable, meat and dairy exporters and importers	Punjab Agriculture & Meat Company (PAMCO)	Private sector operator	Investment by Government, operational responsibility of private sector	A project of Section 42 Company registered under the Companies Act	Started in 2007	An initiative to promote exports/ imports, filling a logistical gap in the value chain and therefore worth documentation
ASF FEGs formation	Agribusiness	Horticulture, livestock and dairy	Promotion of competitive agribusiness sector	1 645.5 million (US$4.8 million)	Throughout Pakistan	Fruit, vegetable, meat and dairy exporters and importers	MINFAL	Private sector agribusinesses	Managed by private sector- led Board and financed through matching grant modalities	Section 42 Company registered under the Companies Act	Started in 2006	A company that pioneered grant fund management for agribusiness promotion and have implemented about 5 000 matching grant projects with private sector participation. Offers potential for learning lessons
SLMP Drought-tolerant wheat seed	Agriculture	Grains	Produce good-quality, certified seed of improved varieties of wheat for Barani area to sell to farmers at a reasonable price	1.37 million (US$ 154 500)	Barani area	Wheat farmers, seed companies	SLMP, BARI, PSC	Private seed companies responsible for distribution and sale of improved seed	Technical assistance, R&D & seed certification provided by public partner. Private partner matches public contribution for distribution and marketing costs	Output-based contracts signed between SLMP and private seed companies	Agreement signed in 2010. Implementation ongoing	One of first PPPs to be established in accordance with 2010 Government of Pakistan PPP Policy. Good lessons for other provinces

Source: Authors' compilation.

ANNEX 2

People interviewed in Pakistan

1. Mr Shad Muhammad, Implementation Advisor, Agribusiness Support Fund (ASF), 144-Central Commercial Areas, Block DD, Phase IV, DHA, Lahore. www.asf.org.pk
2. Mr Muhammad Iqbal, Chief Operating Officer, Pakistan Horticulture Development & Export Company (PHDEC), 30-N, Model Town Extension, Lahore. www.phdec.org.pk
3. Mr Muhammad Sohail Mazhar, Project Development Officer, Mango Supply Chain Management Project, Pakistan Horticulture Development & Export Company (PHDEC), 30-N, Model Town Extension, Lahore. www.phdec.org.pk
4. Mr Munir Ahmad, Director, Punjab Agriculture Marketing Institute (PAMI), Agriculture House, 22 Davis Road, Lahore.
5. Mr Arshad H. Hashmi, Director, Agriculture and Livestock, Punjab Board of Investment and Trade (PBIT), GOR, Lahore.
6. Dr Baber Ehsan, General Manager, Business Development, 12-D, Model Town, Lahore.
7. Mr Zahid Munir Alvi, Project Director, Agro Food Processing Facilities, A Project of Ministry of Industries and Production, Plot No. 30-33, Industrial Estate Phase-II, Multan.
8. Col(R) Tariq Ahmad, Field Officer, ASF Liaison Office, House No. 51, Garden Town, Sher Shah Road, Multan.
9. Mr Muhammad Qadeer Khan, Technical Field Officer, USAID Firms Project, Muzzaffargar, Punjab.
10. Mr Muhammad Asif Khan, Agriculture Economist, Market Infrastructure Project, Punjab Institute of Agriculture Marketing.
11. Dr Amanullah Malik, Post Harvest Institute, Department of Horticulture, Agriculture University, Faisalabad, Punjab.
12. Ms Ambareen, MOJAZ, Opposite DCO House, Narowal, Punjab. www.mojaz.org
13. Mr Mukhtar Ahmad, RCDS Bholay Shah Bazar Mandi Faizabad Tehsil and District Nankana Sahib. www.rcdspk.org
14. Dr Hafiz M. Amin, Agri Services Coordinator, Nestlé Pakistan, 2nd Floor Park Lane Tower, 172 Tufail Road, Lahore, Punjab. www.nestle.pk
15. Dr Shahid Sultan, Zahid Packages, Bhalwal/Lahore.
16. Mr Abdul Wahid, c/o PHDEC, Chairman All Pakistan Fruit & Vegetable Exporters Association/ Member Board of Directors PHDEC, 30-N, Model Town Extension, Lahore.
17. Mr Shakeel A. Khan, Agriculture Development Commissioner, Ministry of Food and Agriculture, B-Block, Pak Secretariat, Government of Pakistan.

Country case studies

Asia

AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Pakistan

Public private partnerships (PPPs) are being promoted as an important institutional mechanism for gaining access to additional financial resources, sharing risks, and addressing other constraints in pursuit of sustainable and inclusive agricultural development. While various forms of collaboration between the public and private sector have existed for some time, there is limited systematic information available about the current experiences and best practice for using PPPs to initiate agricultural programmes.

In 2010, FAO initiated a series of appraisals of PPPs implemented in 15 countries in Africa, Asia and Latin America. The primary objective was to draw lessons that can be used to provide guidance to member countries on how to partner effectively with the private sector in order to mobilize support for agribusiness development. The outcome of FAO appraisals is presented in this series of Country case studies as a contribution to enriching knowledge and sharing information on PPPs mechanisms for informed decision making on investment promotion for engendering agrifood sector development.

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