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Report No: PAD1790

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 89.20 MILLION
(US\$125.00 MILLION EQUIVALENT)

TO THE

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

FOR A

AGRICULTURE SECTOR MODERNIZATION PROJECT

JUNE 6, 2016

Agriculture Global Practice
SOUTH ASIA REGION

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CURRENCY EQUIVALENTS

(Exchange Rate Effective May 31, 2016)

Currency Unit = Sri Lankan Rupee (LKR)
LKR 145.95 = US\$ 1
US\$ 1.40288 = SDR 1

FISCAL YEAR

January 1 - December 31

ABBREVIATIONS AND ACRONYMS

ATD	Agriculture Technology Demonstration
CBSL	Central Bank of Sri Lanka
CGS	Credit Guarantee Scheme
CPCC	Central Project Coordination Committee
CPS	Country Partnership Strategy
DA	Designated Account
EA	Environmental Assessment
EAMF	Environmental Assessment and Management Framework
EMP	Environmental Management Plan
ERR	Economic Rate of Return
FAO	Food and Agriculture Organization
FM	Financial Management
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IDA	International Development Association
IPM	Integrated Pest Management
IUFR	Interim Unaudited Financial Report
M&E	Monitoring and Evaluation
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOPI	Ministry of Primary Industries
NPV	Net Present Value
OP	Operational Policy
PCG	Partial Credit Guarantee
PDO	Project Development Objective
PFI	Participating Financial Institution
PMP	Pest Management Plan
PMU	Project Management Unit

PPMU	Provincial Project Management Unit
PPP	Purchasing Power Parity
R&D	Research and Development
RAP	Resettlement Action Plan
RDD	Rural Development Department
RPF	Resettlement Policy Framework
SME	Small and Medium Enterprises
SMF	Social Management Framework
TFP	Total Factor Productivity
TRG	Technical Review Group

Regional Vice President:	Annette Dixon
Country Director:	Françoise Clottes
Senior Global Practice Director:	Juergen Voegele
Practice Manager:	Martien van Nieuwkoop

Task Team Leaders:	Ulrich Schmitt, Seenithamby Manoharan
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DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
Agriculture Sector Modernization Project

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PAD DATA SHEET

Sri Lanka

Sri Lanka Agriculture Sector Modernization Project (P156019)

PROJECT APPRAISAL DOCUMENT

SOUTH ASIA

GFA06

Report No.: PAD1790

Basic Information			
Project ID P156019	EA Category B - Partial Assessment	Team Leader(s) Ulrich Schmitt, Seenithamby Manoharan	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 15-Oct-2016	Project Implementation End Date 31-Oct-2021		
Expected Effectiveness Date 30-Sep-2016	Expected Closing Date 31-Dec-2021		
Joint IFC No			
Practice Manager/Manager Martien Van Nieuwkoop	Senior Global Practice Director Juergen Voegele	Country Director Francoise Clottes	Regional Vice President Annette Dixon
Borrower: Ministry of Finance			
Responsible Agency: Ministry of Agriculture			
Contact: Telephone No.:	Badullage Wijayarathne 94112868920	Title: Secretary Email: sec.agriculture@yahoo.com	
Responsible Agency: Ministry Primary Industries			
Contact:	Bandula Wickramaarachchi	Title: Secretary	

Telephone No.: 94777792966	Email: bandulamopi@gmail.com
Responsible Agency: Provincial Councils of Northern, Eastern, North-Central, Central and Uva Provinces	

Contact: Provincial Secretaries of Agriculture	Title: Secretaries
Telephone No.: 94112868920	Email: sec.agriculture@yahoo.com

Project Financing Data(in USD Million)			
<input type="checkbox"/> Loan	<input type="checkbox"/> IDA Grant	<input type="checkbox"/> Guarantee	
<input checked="" type="checkbox"/> Credit	<input type="checkbox"/> Grant	<input type="checkbox"/> Other	
Total Project Cost:	169.84	Total Bank Financing:	125.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	0.74
International Development Association (IDA)	125.00
Local Communities	0.00
Local Farmer Organizations	44.10
Total	169.84

Expected Disbursements (in USD Million)										
Fiscal Year	2016	2017	2018	2019	2020	2021	2022	0000	0000	0000
Annual	0.00	20.00	25.00	40.00	30.00	10.00	0.00	0.00	0.00	0.00
Cumulative	0.00	20.00	45.00	85.00	115.00	125.00	125.00	0.00	0.00	0.00

Institutional Data	
Practice Area (Lead)	
Agriculture	
Contributing Practice Areas	
Cross Cutting Topics	
<input checked="" type="checkbox"/> Climate Change	

- [] Fragile, Conflict & Violence
- [X] Gender
- [X] Jobs
- [] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	Agricultural extension and research	20		
Agriculture, fishing, and forestry	Crops	20	20	20
Industry and trade	Agro-industry, marketing, and trade	20		
Agriculture, fishing, and forestry	Irrigation and drainage	20	20	20
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	20		
Total		100		

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Rural development	Rural markets	20
Environment and natural resources management	Water resource management	20
Rural development	Rural policies and institutions	20
Rural development	Rural services and infrastructure	20
Human development	Nutrition and food security	20
Total		100

Proposed Development Objective(s)

The Project Development Objectives are to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas.

Components

Component Name	Cost (USD Millions)
Agriculture Value Chain Development	102.73
Productivity Enhancement and Diversification Demonstrations	58.63
Project Management, Monitoring and Evaluation	8.48

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	Moderate
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]
Does the project require any waivers of Bank policies?	Yes []	No [X]
Have these been approved by Bank management?	Yes []	No []
Is approval for any policy waiver sought from the Board?	Yes []	No []
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	

Forests OP/BP 4.36		X
Pest Management OP 4.09	X	
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37	X	
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

Legal Covenants

Name	Recurrent	Due Date	Frequency
Central Project Coordination Committee		30-Aug-2016	

Description of Covenant

The Recipient shall establish, no later than August 30, 2016, and thereafter maintain throughout the implementation of the Project, a Central Project Coordination Committee.

Name	Recurrent	Due Date	Frequency
Ministry of Primary Industries Project Management Unit		30-Aug-2016	

Description of Covenant

The Recipient shall establish, no later than August 30, 2016 and thereafter maintain throughout the implementation of the Project, a Ministry of Primary Industries Project Management Unit.

Name	Recurrent	Due Date	Frequency
Board of Directors		30-Aug-2016	

Description of Covenant

The Recipient shall establish, no later than August 30, 2016 and thereafter maintain throughout the implementation of the Project, a Board of Directors with composition, qualifications, experience and under terms of reference satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
Technical Review Group		30-Aug-2016	

Description of Covenant

The Recipient shall establish, no later than August 30, 2016, and thereafter maintain throughout the implementation of the Project a Technical Review Group with composition, qualifications, experience and under terms of reference satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
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Matching Grants Operations Manual		30-Aug-2016	
Description of Covenant			
The Recipient shall adopt, no later than August 30, 2016, a Matching Grants Operations Manual in form and substance satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Partial Credit Guarantee Operations Manual		30-Aug-2016	
Description of Covenant			
The Recipient shall adopt, no later than August 30, 2016, a Partial Credit Guarantee Operations Manual in form and substance satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Ministry of Primary Industries-Central Bank of Sri Lanka Memorandum of Understanding		30-Aug-2016	
Description of Covenant			
The Recipient shall cause the Ministry of Primary Industries, no later than August 30, 2016, to enter into a Memorandum of Understanding with the Central Bank of Sri Lanka in form and substance satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Central Bank of Sri Lanka Implementation Responsibility	X		CONTINUOUS
Description of Covenant			
The Recipient shall cause the Central Bank of Sri Lanka to implement Part 1 (c) of the Project in accordance with the provisions of Partial Credit Guarantee Operations Manual and the provisions of the Financing Agreement.			
Name	Recurrent	Due Date	Frequency
Ministry of Agriculture Project Management Unit		30-Aug-2016	
Description of Covenant			
The Recipient shall establish, no later than August 30, 2016, and thereafter maintain throughout the implementation of the Project, a Ministry of Agriculture Project Management Unit.			
Name	Recurrent	Due Date	Frequency
Agriculture Technology Demonstrations Operations Manual		30-Aug-2016	
Description of Covenant			
The Recipient shall adopt, no later than August 30, 2016, an Agriculture Technology Demonstrations Operations Manual in form and substance satisfactory to the Association.			

Name	Recurrent	Due Date	Frequency
Provincial Project Management Units		15-Sep-2016	
Description of Covenant			
The Recipient shall cause each of the Participating Provinces to establish, no later than September 15, 2016, and maintain throughout the implementation period, a Provincial Project Management Unit.			
Name	Recurrent	Due Date	Frequency
Project Coordination Committee		15-Sep-2016	
Description of Covenant			
The Recipient shall establish, no later than September 15, 2016, and thereafter maintain throughout the implementation of the Project, a Coordination Committee with composition and terms of reference satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Safeguards	X		CONTINUOUS
Description of Covenant			
The Recipient shall ensure that the Project is carried out in accordance with the provisions of the Safeguards Instruments.			
Name	Recurrent	Due Date	Frequency
Environmental Management Plans and Resettlement Plans	X		CONTINUOUS
Description of Covenant			
The Recipient shall prepare an Environmental Management Plan or Resettlement Action Plan in accordance with the provisions of the Environmental Assessment and Management Framework or Resettlement Policy Framework, as applicable; furnish to the Association for review and approval; and thereafter adopt and disclose as approved by the Association, in a manner satisfactory to the Association.			
Name	Recurrent	Due Date	Frequency
Safeguards Instruments	X		CONTINUOUS
Description of Covenant			
The Recipient shall ensure that each contract for works under the Project includes the obligation of the relevant contractor to comply with the relevant Safeguard Instruments applicable to such civil works commissioned/awarded pursuant to said contract.			
Name	Recurrent	Due Date	Frequency
Safeguards Implementation Monitoring	X		CONTINUOUS
Description of Covenant			

The Recipient shall take all measures necessary to regularly collect, compile, and submit to the Association, as part of the Project Reports, information on the status of compliance with the Safeguards Instruments.

Name	Recurrent	Due Date	Frequency
Annual Work Plans	X		Yearly

Description of Covenant

The Recipient shall, throughout Project implementation, furnish to the Association for approval as soon as available, but in any case not later than September 30 of each year, an annual work plan and budget for the Project for each subsequent fiscal year.

Name	Recurrent	Due Date	Frequency
Progress Reports	X		Semi-annual

Description of Covenant

The Recipient shall monitor and evaluate the progress of the Project and prepare Project Reports, covering the period of one calendar semester, and shall be furnished to the Association not later than one month after the end of the period covered by such report.

Name	Recurrent	Due Date	Frequency
Financial Management System	X		CONTINUOUS

Description of Covenant

The Recipient shall maintain or cause to be maintained a financial management system in accordance with the provisions of Section 4.09 of the General Conditions.

Name	Recurrent	Due Date	Frequency
Interim Unaudited Financial Report	X		Quarterly

Description of Covenant

The Recipient shall prepare and furnish to the Association not later than forty-five (45) days after the end of each calendar quarter, interim unaudited financial reports for the Project covering the quarter, in form and substance satisfactory to the Association.

Name	Recurrent	Due Date	Frequency
Financial Audit	X		Yearly

Description of Covenant

The Recipient shall have its Financial Statements audited in accordance with the provisions of Section 4.09 (b) of the General Conditions. Each audit of the Financial Statements shall cover the period of one fiscal year of the Recipient. The audited Financial Statements for each such period shall be furnished to the Association not later than six months after the end of such period.

Name	Recurrent	Due Date	Frequency
Mid-term Review		15-Jan-2019	

Description of Covenant

The Recipient shall prepare, under terms of reference satisfactory to the Association, and furnish to the Association by no later than January 15, 2019, a consolidated mid-term review report for the Project.

Conditions

Source Of Fund	Name	Type
IDA	Disbursement of Matching Grants	Disbursement

Description of Condition

No withdrawal shall be made for the Matching Grants under Part 1(b) of the Project unless the Recipient has: (i) adopted an Matching Grants Operations Manual in form and substance satisfactory to the Association; and (ii) caused the Ministry of Primary Industries and the Central Bank of Sri Lanka to enter into a Memorandum of Understanding in form and substance satisfactory to the Association.

Source Of Fund	Name	Type
IDA	Disbursement of Partial Credit Guarantees	Disbursement

Description of Condition

No withdrawal shall be made for transfer to the Partial Credit Guarantee Account under Part 1(c) of the Project unless the Recipient has adopted a Partial Credit Guarantee Operations Manual in form and substance satisfactory to the Association.

Team Composition**Bank Staff**

Name	Role	Title	Specialization	Unit
Ulrich K. H. M. Schmitt	Team Leader (ADM Responsible)	Program Leader	Team Lead	SACSL
Seenithamby Manoharan	Team Leader	Senior Rural Development Specialist	Team Lead	GFA06
Haider Raza	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist	Procurement	GGO06
Bernadeen Enoka Wijegunawardene	Financial Management Specialist	Sr Financial Management Specialist	Financial Management	GGO24
Darshani De Silva	Environmental Specialist	Senior Environmental Specialist	Environment	GEN06
Hisham A. Abdo Kahin	Team Member	Lead Counsel	Lead Counsel	LEGES

Kumala Surangi Weerakoon	Team Member	Consultant	Financial Management	GGO24
Madhur Gautam	Team Member	Lead Economist	Project Economist	GFA12
Mohamed Ghani Razaak	Safeguards Specialist	Senior Social Development Specialist	Social Development	GSU06
Mokshana Nerandika Wijeyeratne	Safeguards Specialist	Consultant	Environment	GEN06
Nugegodage Dona Anne Shanuki Gunasekera	Team Member	Operations Analyst	Financial Sector	GFM06
Panayotis N. Varangis	Team Member	Head	Credit Guarantee Specialist	GFM3A
Ramziath Teni Ola Abebi Adjao	Team Member	Young Professional	Project Economist	GFA12
Tisarani Rathnija Arandara	Team Member	Operations Officer	Financial Sector	GFM06
Zeenath Marikar	Team Member	Program Assistant	Team Assistant	SACSL

Extended Team

Name	Title	Office Phone	Location
Josef Ernstberger	Senior Agriculture Economist	49 6849 1616	Kirkel
Nihal Fernando	Senior Irrigation Engineer	94 11 2448070	Colombo

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required? Consultants will be required

I. STRATEGIC CONTEXT

A. Country Context

1. Sri Lanka is a lower-middle-income country with a per capita Gross Domestic Product (GDP) of US\$ 3,811 and a total population of 20.5 million (2014). Growth over the past decade has been strong, averaging 6-7 percent per year, and has resulted in significant poverty reduction. Absolute poverty declined from 22.7 to 6.7 percent from 2002 to 2012/13 while per capita consumption of the bottom 40 percent of the population grew at 3.3 percent a year, as compared with 2.8 percent for the total population. Since 2009, however, consumption and income inequality have been increasing again. Roughly one quarter of the Sri Lankan population remains nearly poor, as defined by living above the national poverty line (about US\$ 1.5 per day) but below US\$ 2.50 per day (2005 Purchasing Power Parity - PPP terms). Living standards of the near-poor are closer to those of the poor than those living above the US\$ 2.50 per day threshold. Sri Lanka has comfortably surpassed most of the Millennium Development Goals. Primary school enrollment is near universal. Secondary and tertiary enrollment has substantially increased. Maternal and infant mortality rates are at very low levels. At 74 years, life expectancy has been above its regional peers for over a decade.

2. Following the end of the civil war in 2009, investments in reconstruction and new infrastructure, including through World Bank support, and increased consumption have delivered a strong economic peace dividend. The non-tradable sectors, in particular construction, domestic trade, transport, and public sector investments have been the main drivers of this growth that has led to higher labor demand and employment. Sri Lanka is also undergoing a structural transformation away from agriculture, which now accounts for 10 percent of GDP, towards industry (32.5 percent) and services (57.5 percent), which is associated with productivity growth and accelerating urbanization. However, this transformation is progressing relatively slowly and 30 percent of the labor force have remained in agriculture, highlighting the challenge of overcoming inequality. More recently, Sri Lanka has undertaken renewed efforts to advance governance reforms and political reconciliation to secure long-term peace.

3. The country's fiscal landscape is challenging. In 2014, a widened deficit and a slowdown in growth increased the fiscal deficit to 5.7 percent and the public debt to 71.8 percent, as a share of GDP, marking a slight reversal of the fiscal consolidation path of the post-conflict period. The fiscal deficit for 2015 was 7.4 percent of GDP and the government projected a deficit of 5.4 percent of GDP for 2016. The government presented its economic policy in November 2015 that includes as priorities the generation of one million job opportunities, enhancing income levels, developing the rural economy, and creating a wide

and a strong middle class. It proposed fiscal consolidation through increasing revenue collection, reforms of state owned enterprises, and enhanced trade and foreign investment.

B. Sectoral and Institutional Context

4. Sri Lanka's agriculture is characterized by a *non-plantation sector* and a *plantation sector*. Of the country's approximately 2.3 million hectares of agricultural land, 80 percent is used for non-plantation food crops, comprising rice, maize, fruits, vegetables and other crops that are primarily grown on smallholder farms. About 1.65 million smallholder farmers operate on average less than 2 hectares and contribute 80 percent of the total annual food production. Traditional commercial crops (export agriculture crops) include cinnamon, pepper, cocoa, coffee and others, and are grown on small and medium land holdings as well. Plantation crops—coconut, rubber and tea—are cultivated in large estates and small and medium land holdings. Typically, non-plantation crops are grown under irrigated conditions while plantation and export agriculture crops are grown in the rain-fed areas. Monsoonal rainfall patterns shape the agricultural seasons and irrigation patterns. Two thirds of the agricultural area are located in the dry zone, which covers the northern and eastern and southeastern parts of the country, where the bulk of the country's irrigation infrastructure is located.

5. Agriculture has been an important driver of poverty reduction and accounted for about one third of the decline in poverty over the past decade. Poverty reduction in rural areas was driven by higher agricultural wages which grew annually by an average of 5.7 percent during 2006 to 2013 and caused rural poverty to fall more rapidly than in other sectors. Increases in domestic food prices during 2006 to 2009 and the increase of the international price for tea, a major export commodity, by more than 50 percent over the same period improved the returns to self-employed farm labor and provided space of higher wages for employed workers in the tea plantation sector, despite little change in yields. There is a risk that these income gains may not be sustainable if agriculture productivity does not improve and the sector does not start to modernize through diversification, commercialization and value addition.

6. Sri Lanka's has successfully attained self-sufficiency in rice and recently also in maize production. Rice production has increased steadily from 2.9 million tons (2002) to 4.8 million tons (2015), in part because previously inaccessible land was reopened for cultivation after the end of the conflict but also through the introduction of high-yielding varieties, the expansion of irrigation capacity, and distinct policy choices, such as fertilizer subsidies for paddy, restrictions on crop choices, and import substitution. Achieving self-sufficiency has also meant that the agriculture production structure has remained concentrated in the low value food crops. In 2013, about 45 percent

of the cultivated area was under rice cultivation (up from 37 percent in 1980) but the share of rice in the overall value of crop production was only 18 percent. In addition, average rice yields of 4.06 tons per hectare have remained relatively low despite some recent improvements. Agriculture productivity, as measured by total factor productivity (TFP), has only grown by an average of 0.6 percent per year since 1980 and Sri Lanka lags significantly behind other South and East Asian countries.

7. Agriculture policies have encouraged import substitution of basic agriculture commodities and neglected the domestic fruits and vegetable sectors despite growing domestic demand and potential for export growth. Demand has mostly been met by increased imports, for example of potatoes, chili, and onions. Border taxes on imports and exports of agriculture products and tradable agriculture inputs are used to support farmers that are engaged in import-competing activities and tax the producers of export-oriented products to generate fiscal revenue. The high protection of importables, motivated by self-sufficiency in food crops, has restricted crop diversification and discouraged the production of exportables. Sri Lanka's agriculture trade policy has also been overly complex and unpredictable and is working at cross-purposes.

8. Part of the revenue earned through agriculture taxation and tariffs is used in subsidizing fertilizer, which features prominently in Sri Lanka's agriculture budget. In 2014, Sri Lanka imported 765,000 tons of chemical fertilizer and approximately 8,200 tons of formulated pesticide products, of which more than 70 percent were distributed for paddy cultivation subsidized at almost 90 percent below the market cost. On the other hand, public expenditures on Research and Development (R&D) and extension services, which are critical to generate new technology and productivity improvements and are non-distorting, account for only 3 percent of total agriculture expenditure, and much of this limited budget is spent on rice research. As a result of the public underinvestment in R&D, Sri Lanka has fallen behind in the generation of new knowledge and technology as well as in the distribution of new technologies that are critical for modern farming. Private sector R&D has not been able to close this gap. Besides the very limited allocation of public funding for R&D, the research and extension systems is often described as ineffective because of their supply-driven nature and insufficient demand orientation.

9. With rice self-sufficiency secured, a consensus has recently emerged within government that the country should capitalize more strategically on the opportunity to diversify the production structure out of the relatively low value food crops and move towards high-value agriculture and promote agriculture exports. This structural shift is critical to sustaining income growth going into the future, accelerating poverty reduction and reversing the trend in increasing inequality. Since most of the fruits and vegetables not only

generate higher income as compared to rice but demand more intensive labor input, higher levels of technology input, better crop management, and investments in post-harvest management, marketing, and better organized value chains overall, there is also significant potential for employment growth and more productive jobs in agriculture. This shift would also imply moving towards a more high-value production structure, agro-processing and value addition activities, and increased competitiveness. This will likely involve revisiting and aligning current trade policy to become more consistent and conducive for high-value export agriculture; realigning public sector support away from general fertilizer subsidies to better targeted support and greater attention to R&D, including private R&D; revisiting and relaxing the rice self-sufficiency policy and allowing for more demand-driven and market oriented production; and overcoming long-standing structural constraints, such as low organizational levels of farmers, land fragmentation, and poor price information systems.

10. To achieve such modernization, differentiated strategies are needed for different parts of the country. In the north and east, there is significant scope for agriculture expansion and productivity growth – both through traditional and non-traditional agriculture – as productivity remains low, markets and value addition activities remain undeveloped and the potential for niche commodities remains significant for domestic and export markets. In other parts of the country, it is important to promote more robust investment and innovation in agribusinesses for value addition and farmer integration into high value chains through scaling up and diversification into more commercial crops. This modernization drive has to be crucially underpinned by a supportive policy and regulatory enabling environment, with due consideration to the economic and evidence-based policy decision making processes.

C. Higher Level Objectives to which the Project Contributes

11. The proposed project is aligned with the Country Partnership Strategy (CPS) 2013-2016 (Report 66286-LK, May 22, 2012). The project seeks to contribute to two CPS focus areas, namely: *“Supporting structural shifts in the economy”* and *“Improved living standards and social inclusion”* through: (a) improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka’s structural transformation; (b) providing and strengthening rural livelihood sources, employment opportunities in agriculture and along agriculture value chains, as well as market access for the poor, bottom 40 percent, and vulnerable people, thereby improving income sources and livelihood security in lagging rural areas; and (c) contributing to improved flood and drought management, through project’s linkages to the water and irrigation sectors and a climate-smart agriculture approach. The project is also aligned with the proposed new CPS 2017-2020 (Report 104606), which is scheduled to be discussed by the

Executive Directors of the World Bank on June 28, 2016 and seeks to promote diversification, value addition and increased competitiveness in the agriculture sector.

12. The overall relevance and importance of the agriculture sector for the Bank's poverty reduction and shared prosperity agenda in Sri Lanka is discussed and highlighted in the Systematic Country Diagnostic of 2015. In terms of government strategy, in October 2015, the new government released a National Program for Food Production 2016-2018 that aims at increasing agriculture production and productivity with the overall purpose to reduce dependency on food imports and improve the sector's value added and its contribution to the national economy. The new program highlights the need for diversification away from basic staples towards higher value crops, such as fruits, vegetables, specialized crops, aquaculture, and livestock. Diversification is to be achieved by gradually freeing up farmland previously devoted to rice production but no longer needed as productivity is increasing. Diversification would mark an important and long overdue shift towards more market and demand orientation as well as exploitation of comparative advantage.

13. Through the proposed project, the Bank seeks to reengage in the agriculture sector after many years of absence. The project is planned and envisaged as a first intervention of a longer term sector engagement and partnership with government. As a strategic choice, the proposed project would mainly focus on the demonstration of agriculture diversification and technology improvement, value-chain development for higher value-added production and better market linkages, and income generation from agriculture. The Bank is well placed to ensure that the agriculture diversification agenda is inclusive and poor farmers, including women, are enabled to benefit from investments into: value addition, new skills and technology improvements, sustainable crop management, and new financing and marketing arrangements. The proposed project would not address the structural reform issues in Sri Lanka's large irrigated rice sector and the plantation estate sector at this point. In these important agriculture sub-sectors, the Bank would first engage through sequenced analytical and technical assistance support with the purpose to develop a better understanding and consensus for downstream policy and institutional reforms as well as possible investments later on.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

14. The Project Development Objectives are *to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas.*

Project Beneficiaries

15. The project is national in scope. The project's matching grants program is expected to support approximately 350 existing and newly established farmer producer organizations and approximately 50 agribusiness partnership arrangements under a demand-driven approach for project investment support. It is estimated that up to 15,000 smallholder farm households will directly benefit from the matching grants program through higher productivity, new income opportunities, value added production, and improved market linkages. The evaluation criteria for the approval of matching grant support under the project give preference to women-led farmer producer groups and organizations under the matching grants small funding window and promote women representation in productive and value added activities in the envisaged partnership arrangements between producer organizations with agribusinesses. It is expected that approximately 30 percent of the farmer producer organizations benefitting under the project's small matching grants window will be women-led farmer producer organizations.

16. In addition to the matching grants program, the project specifically targets selected districts in the lagging regions of the *Northern, Eastern, North-Central, Central, and Uva Provinces* that are characterized by high poverty headcounts and high absolute numbers of poor. The project's agriculture technology demonstrations parks and the complementary production infrastructure investments are intended to cover 7 priority districts of *Jaffna, Mullaitivu, Anuradhapura, Batticaloa, Moneragala, Matale, and Polonnaruwa*. It is estimated that at least 14,000 farm households will directly benefit from the project's agriculture technology demonstrations through improved production capacity, improved input supply and management, better and more efficient technology, improved market linkages, as well as opportunities for value addition. In addition, an estimated 20,000 farm households would benefit from project support to establish professional farmer organizations and from capacity building through farmer business and marketing training activities, and improved eligibility to access the matching grants or commercial financing.

17. The project will also benefit the Ministry of Primary Industries (MOPI), the Ministry of Agriculture (MOA) and the five participating Provincial Councils

through the respective Provincial Ministries of Agriculture through institutional capacity building and support to sector policy analysis and development to become more effective and better coordinated public services providers and facilitators of the modernization of the agriculture sector. The project will indirectly benefit commercial banks to deepen the understanding of investments opportunities and risks in commercial agriculture and participating agribusinesses through their participation in the project's matching grant program and the partial credit guarantee facility.

PDO Level Results Indicators

18. The achievement of the PDO will be measured using the following results indicators:

- Number of direct project beneficiaries (disaggregated by gender).
- Number participating farmers who adopted an improved agriculture technology promoted by the project (productivity indicator; disaggregated by gender).
- Increase in the average value of sales of agriculture products due to project interventions (percentage; market access indicator).
- Number of new jobs created through investments in agriculture small and medium enterprises (SMEs) under the project (value addition indicator; disaggregated by gender).

III. PROJECT DESCRIPTION

A. Project Components

19. The project comprises three components, which are summarized below. A detailed project description is provided in Annex 2.

20. **Component 1: Agriculture Value Chain Development** (*Total US\$ 102.73 million, IDA US\$ 58.63 million*). The component seeks to promote commercial and export-oriented agriculture; attract and leverage investments from farmer producer organizations and agribusinesses for high value agriculture production and value addition; and provide the enabling environment, incentives, and access to finance for such investments through matching grants, technical assistance support, linkages to the commercial banking sector, and a Partial Credit Guarantee (PCG) facility. Component 1 comprises the following sub-components:

- a) *Sub-component 1.1: Investment Preparation Support (Total US\$ 7.41 million, IDA US\$ 7.41)*, supporting: (i) a training program on the matching grants program; (ii) public advertisements and information workshops for prospective applicants to the matching grants program and annual conferences to review the performance of the matching

grants program; (iii) honoraria and incremental operating costs for the Technical Review Group (TRG) and Board; (iv) international advisory support to operationalize the matching grants program; (v) salaries and allowances for a Matching Grants Officer, an Agribusiness Expert and an Office Assistant to be recruited into the Matching Grants Secretariat of the Project Management Office (PMU) of MOPI; (vi) salaries and allowances for support staff to the offices at sub-national levels; (vii) office equipment, office rental, vehicle rental and incremental operating cost for the matching grants office and regional support offices; (viii) technical assistance and mentoring for applicants to the matching grant program; and (ix) technical assistance to support the project's environmental and social safeguards requirements within the matching grants program.

b) *Sub-component 1.2: Matching Grants to Farmer Producer Organizations and Agribusinesses (Total US\$ 88.20 million, IDA US\$ 44.10 million)*, supporting a matching grants program to attract and leverage investments from farmer producer organizations and agribusinesses. Matching grants would be provided under two windows:

- (i) Matching grants of US\$ 5,000 up to US\$ 75,000 would be provided for investments to be developed and implemented by farmer producer organizations. Matching grants would provide parallel co-finance to approved investment proposals up to 50 percent of the total investment. Eligibility criteria for farmer producer organizations to participate in the matching grants program would include, among others, the registration under Sri Lanka's Company Act No. 7, 2007 at the time of application; appointment of a qualified accountant; a minimum cash contribution of 10 percent of the total investment cost to be deposited into an account opened at a licensed bank in the name of the organization at the time of application; and availability of commercial financing of up to 40 percent of the total investment. More favorable matching grant co-financing terms would be provided for women-led farmer organizations.
- (ii) Matching grants of US\$ 75,000 up to US\$ 500,000 would be provided to agribusiness for agriculture and value chain investments. Established agribusinesses with a good track record or start-up agribusinesses with good development potential would be eligible to apply for and access the matching grants. For investments between US\$ 75,000 to US\$ 150,000, the matching grant provided would be 50 percent of the total investment amount in parallel co-financing. For investments from US\$ 150,000 to US\$ 500,000, the matching grant funds would be 50 percent for the first US\$ 150,000 and then 35 percent for the

tranche from US\$ 150,000 to US\$ 500,000. For investment of up to US\$ 1 million, for the tranche from US\$ 500,000 to US\$ 1 million, the matching grant amount for be 20 percent. For investments above US\$ 1 million, the maximum matching grant amount would be US\$ 500,000. The contributions from agribusinesses would be provided through own-sourced or commercial financing.

The details on management, governance, ownership structure, capitalization, auditing and others of such farmer producer organizations and agribusinesses are described in detail in the Matching Grants-Operations Manual. Procurement and disbursement procedures are also described in the Matching Grants-Operations Manual.

- c) *Sub-component 1.3: Partial Credit Guarantee (Total US\$ 7.12 million, IDA US\$ 7.12 million)*, supporting a PCG to share financial risk with Participating Financial Institutions (PFIs) that are interested in lending to beneficiaries of the matching grants program. The PCG would be administered by the Central Bank of Sri Lanka (CBSL) through the Regional Development Department (RDD) that has demonstrated prior experience with administering financing schemes for farmers and SME agribusinesses through both public and private financial institutions. The PCG will operate on the basis of the World Bank Group Principles on PCG Schemes, published in December 2014, covering the governance, management, administration, sustainability, and monitoring of PCGs. The applicable principles are described in the PCG in Annex 4. In addition, given that the project involves the use of a partial credit guarantee by eligible financial intermediaries, OP/BP 10.00 applies on *Financial Intermediary Financing*. Detailed operating modalities and claim processing procedures under the PCG are described in a PCG-Operations Manual.

21. Component 2: Productivity Enhancement and Diversification Demonstrations (US\$ 58.63 million, IDA US\$ 58.63 million). The component aims at supporting smallholder farmers to produce competitive and marketable commodities, improve their ability to respond to market requirements, and move towards increased commercialization. Component 2 comprises the following sub-components:

- (a) *Sub-component 2.1: Farmer Training and Capacity Building (Total Cost US\$ 6.20 million, IDA US\$ 6.20 million)*, supporting knowledge building and capability improvements of smallholder farmers and the establishment of farmer producer organizations to help them to respond better to market opportunities.

(b) *Sub-component 2.2: Modern Agriculture Technology Parks (Total Cost US\$ 33.44 million, IDA US\$ 33.44 million)*, supporting the introduction, demonstration, and scale-up of innovative agriculture technology packages that are not yet available or practiced by smallholder farmers and producer organizations but would support productivity improvements, diversification, commercialization, more sustainable and climate resilient production patterns (high value products, new varieties, technology, soil, water, fertilization etc.). The sub-component will support the establishment of agriculture technology demonstration parks in seven proposed districts of *Jaffna, Mullaitivu (Northern Province), Batticaloa (Eastern Province), Monaragla (Uva Provinces), Anuradhapura, Polonnaruwa (North-Central Province), and Matale (Central Province)* which have been identified based on high poverty headcounts and agriculture development potential. These agriculture technology demonstration parks will be set up to demonstrate entire agriculture value chain approaches with a clear end-market focus for selected crops, involving: farmer mobilization and training, agriculture production, post-harvest handling and/or processing, and marketing. Each park will include approximately eight to ten entire villages and can be expanded based on demand and resource availability.

The sub-component will also support the organization of two international technology fora/ conferences in the first and second year of project implementation, inviting international and domestic service providers to discuss and present their agricultural development models successfully implemented and demonstrated in similar agro-ecological and socio-cultural environments. The detailed implementation modalities of the agriculture technology demonstration approach are described in the Agriculture Technology Demonstration (ATD) Operations Manual.

(c) *Sub-component 2.3: Production and Market Infrastructure (US\$ 14.71 million, IDA US\$ 14.71 million)*, supporting: (i) the up-grading and rehabilitation of small-scale irrigation infrastructure and existing water tanks and irrigation systems in the selected priority project areas and linked to the agriculture technology demonstrations parks; (ii) the improvement of selected production and market access roads and construction of new field access tracks to improve transportation, access to markets and accessibility for agricultural machinery; and (iii) village level storage and product handling facilities, including drying platforms and sheds, composting facilities of crop residues, storage facilities and others. Infrastructure investment would complement investments in the agriculture technology demonstration parks under *sub-component 2.2*. Procurement and management of civil works contracts would be under the management of the Provincial Project Management Units (PPMUs)

under the overall project implementation responsibility of Ministry of Agriculture-Project Management Unit (MOA-PMU).

(d) Sub-component 2.4: Analytical and Policy Advisory Support (Total Cost US\$ 4.28 million, IDA US\$ 4.28 million). The component will provide support to: develop an evidence-based policy, legal and regulatory framework; address knowledge gaps as well as policy and regulatory inconsistencies as they may arise from time to time with policy decisions emanating from different parts of the government; and formulate sector and sub-sectoral strategies to provide the suitable enabling environment for a sustainable and competitive modern agriculture and food system. The sub-component will be implemented under the responsibility of the MOA-PMU. Activities to be supported under this sub-component would include technical assistance to: (i) evaluate policies and regulations and recommend adjustments, reforms or new policies needed to make agriculture more competitive, responsive to market demand, gender sensitive, sustainable, and resilient; (ii) undertake strategic market analysis for promoting new and high value exports, and analyze the changes needed in the policy, regulatory and institutional framework, or public investments needed to address the binding constraints to the evolution of high impact value chains; (iii) evaluate the social and economic impact of policies and public expenditures and make recommendations on course corrections to improve the efficiency and effectiveness of public expenditures; (iv) undertake external and independent monitoring and evaluation functions, including formal impact evaluations of government programs and investments, to provide the critical learning and feedback loop into the ministries' decision making processes. It would also support: (v) annual conferences on Sri Lanka's agricultural policy; (vi) equipment, office furniture, and communications technology for MOA's proposed Center of Excellence; (vii) technical assistance to conceptualize a national agriculture information system, with the medium-term objective to build capacity for data collection and management in support of policy formulation, enhanced public service provision, and improved risk monitoring in agriculture.

22. Component 3: Project Management, Monitoring and Evaluation (Total Cost US\$ 8.48 million, IDA US\$ 7.75 million). The component will support the PMUs of MOPI and MOA and the PPMUs in the participating provinces in project management and coordination, technical supervision, financial management, procurement, social and environmental safeguards, and monitoring and evaluation (M&E). The component will support: (a) project orientation workshops, training and study tours; (b) engagement of technical assistance and short term experts for overall project management; (c) design and installation of a project M&E and Management Information System; (d) M&E surveys and reviews (baseline, mid-term and end of project impact

evaluation through an external agency/ institute); (e) regular supervision of environmental and social safeguards implementation; (f) procurement of office equipment, office renovation or rental, and vehicles; (g) incremental operating costs; and (h) support to the PMUs/ PPMUs to recruit PMU/ PPMU staff and for training in project management and operational expenses.

B. Project Financing

23. The project will be an Investment Project Financing funded by an International Development Association (IDA) Credit in the amount of US\$ 125.00 million equivalent over an implementation period of 5 years.

Project Cost and Financing

24. **Project Cost.** Total project cost are estimated at US\$ 169.84 million, including price and physical contingencies of 10 percent. Project cost would be financed by an IDA Credit of US\$ 125.00 million equivalent as well as investments from farmer producer organizations, already or newly established under the project, and from agribusinesses. Government seconded staff at national and provincial levels would support implementation. Table 1 below summarizes the project cost and financing percentages by component and sub-component.

Table 1: Project Cost (USD million)

	Cost Including Contingenc ies	% of Tota l	IDA Financin g	% Financi ng
A. Agricultural Value Chain Development				
Preparation Support	7.41	4.4	7.41	100.0
Matching Grants to Farmer Producer Organizations and Agribusinesses	88.20	51.9	44.10	50.0
Partial Credit Guarantee	7.12	4.2	7.12	100.0
Subtotal Agricultural Value Chain Development	102.73	60.5	58.63	57.1
B. Productivity Enhancement, Diversification & Commercialization				
Farmer and Farmer Organization Capacity Building	6.20	3.6	6.20	100.0
Modern Agriculture Technology Parks	33.43	19.3	33.43	100.0
Production & Market Infrastructure	14.71	10.6	14.71	100.0
Analytical and Policy Advisory Support	4.28	2.5	4.28	100.0
Subtotal Productivity Enhancement, Diversification & Commercialization	58.63	36.0	58.63	100.00
C. Project Management, M&E				
Central Project Coordination Committee	0.32	0.2	0.32	100.0
Ministry of Primary Industries	2.56	1.5	2.42	94.5

Ministry of Agriculture	2.56	1.5	2.42	94.5
Provincial Project Management Units	3.04	1.8	2.59	85.2
Subtotal Project Management, Monitoring and Evaluation	8.48	5.0	7.75	91.3
		100.		
TOTAL	169.84	0	125.00	73.6

25. **Retroactive Financing.** Retroactive financing up to an aggregate amount of US\$ 25.00 million equivalent will be available for eligible expenditures incurred under all project components prior to the date of the signed Credit Agreement, but on or after June 15, 2016.

C. Lessons Learned and Reflected in the Project Design

26. The Bank has gained experience and insights from a large number of projects¹ and programs, both Bank and non-Bank financed, where private sector entities and businesses are important development partners². The design of the proposed project has incorporated lessons and experiences, which in particular refer to the following points discussed below. For each of the lessons some key references are referred to in footnotes below:

¹ For some important project level experiences see:

1. World Bank: "Turkey Technology Development Project." Project Appraisal Document. Washington, DC: World Bank.
2. World Bank: "China Agriculture Technology Transfer Project." Project Appraisal Document, and Implementation Completion Report. Washington, DC: World Bank.
3. World Bank: "Zambia Smallholder Agricultural Commercialization Strategy." Report No. 36573-ZM. Washington, DC: World Bank.
4. World Bank: 2008. "Vietnam Agriculture Competitiveness Project." Project Appraisal Document. Washington, DC: World Bank.
5. PPAP in PNG

² For some of the analytical work see:

6. van der Meer, K., and M. Noordam. 2004. "The Use of Grants to Address Market Failures: A Review of World Bank Rural Development Projects." Agriculture and Rural Development Paper No. 27. Washington, DC: World Bank.
7. World Bank: 2010. Designing and Implementing Agricultural Innovation Funds: Lessons from Competitive Research and Matching Grant Projects." Report No. 54857-GLB. Washington, DC: World Bank.
8. World Bank: Agricultural Innovation Systems: An Investment Sourcebook. See specifically Module 5: Innovative Partnerships and Business Development, with Thematic Notes on Foundations for Public Private Partnerships, Innovation Funds, and Agricultural Clusters; http://siteresources.worldbank.org/INTARD/Resources/335807-1330620492317/9780821386842_ch5.pdf,
9. Geoff Tyler and Grahame Dixie. 2012. "Investment in Agribusiness: A Retrospective View of a Development Bank's Investments in Agribusiness in Africa and East Asia", Washington, DC: World Bank
10. World Bank/UNCTAD: Field Survey of the application of principles of responsible agricultural investment with Investors and Local Communities, Hafiz Mirza, Will Speller & Grahame Dixie, 2013, Joint UNCTAD World Bank report, (to be published)

- *Importance of alignment with the country's policies and programs and political stability (see references (2),(6) and (7)):* The project is fully aligned with Sri Lanka's development strategy of using private sector investment as an engine of equitable agricultural growth; bringing innovation and market access to smallholders, and employment opportunities. The project is also aligned with recent policy statements of the government on agriculture sector development priorities.
- *Importance of a transparent and predictable policy environment for investors (see reference (9)).* For many interested investors, it is not so much the level of taxation, duties, fees, licences or other regulations to be followed, which prevents them from investing, but the transparency and predictability of such government policies. To improve transparency and predictability, the proposed project will include an Analytical and Policy Advisory Support sub-component (sub-component 2.4) to better inform policy makers and generate policies conducive for more private sector investment led agricultural growth.
- *The need to build on basic comparative advantages in the project area, rather than trying to change them (see reference (8)):* The proposed project investments will build on comparative advantages in Sri Lanka related to location, infrastructure, agro-climate, work force and skills. The project will support specific value chain analysis studies confirming the comparative production advantage and informing potential investors.
- *Matching grant schemes can be highly effective, especially if the lessons learned from the Bank's extensive project portfolio are incorporated.* The use of matching grants both targeted at producer organizations and agri-businesses, have a long and mainly successful record in the Bank. In the early 2000s, there was a number of projects in Eastern Europe, which focused on supporting new technology and marketing channels with about 40 percent funding being channeled through agribusiness. These projects were successful. One of the first was in Romania which had a weighted Financial Rate of Return at 111 percent.
- In the LAC region, partnership programs called Productive Alliance now amount to over 16 projects. By October 2013, nearly 3,000 partnerships benefited 110,000 families in this region. The best established scheme is the Colombia program with 775 supported partnerships, and an assessment that over 75 percent of the Productive Alliances are assessed as being sustainable businesses. The preliminary results of the Bolivia Productive Alliance of 159 projects has shown increases in productivity (by 50 percent), prices, marketable surpluses and sales incomes for the small holder producers linked with agribusiness.

- In Zambia, the Agricultural Development Support Project provided some 24 competitiveness matching grants to agribusiness. The full results are yet to be written up, however, there is good evidence that the results were positive. Matching grants have been taken up in three other projects in Zambia. The key problem, after a slow start in disbursement, is the failure of the private sector to release their matching funds. The project has addressed this by providing additional support in accessing commercial loans through a PCG. In addition it requires an up-front down payment of 10 percent of the total investment by the matching grant recipients.
- *Need for results to be agreed up front, then transparently pursued and monitored (see references (2) and (7))*: The matching grants program specifically identifies a set of results laid out in the Operational Manual. These include: (i) increases in the number of smallholders, and particularly women farmers, operating as out-growers; (ii) increase of incomes received by smallholders; increased employment; and (iii) improvements in the availability of agricultural inputs to smallholders. Applications for matching grant funding will have to specify the targeted gains for each specific indicator, and the matching grant program contracts will require transparent monitoring of accomplishment. In cases of non-compliance, the project implementing authorities will stop disbursements to the grantee and seek full or partial reimbursement.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

27. The institutional responsibilities and arrangements for project implementation are summarized below and described in detail in Annex 3. They include the following entities at the national and subnational levels:

28. **Ministry of National Policies and Economic Affairs.** A Central Project Coordination Committee (CPCC) will be set up in the Ministry of National Policies and Economic Affairs with representation from the Ministry of Finance (MOF), CBSL, MOPI, MOA, and the Provincial Councils of the participating provinces. The CPCC will: (a) act as project steering committee and ensure effective coordination and communication between the Ministry of National Policies and Economic Affairs, MOF, CBSL, MOPI, MOA, and the five Provincial Councils; (b) provide overall policy guidance and support to project implementation; (c) mobilize and ensure coordination with other relevant public and private stakeholders; and (d) oversee the project's internal auditing of the two main investment components, to be conducted MOPI and MOA according to existing internal auditing procedures, to ensure adherence to project principles and transparency in economic decision making, including

the award of matching grants and the management of agriculture technology demonstration parks. The CPCC will be chaired by the Secretary of the Ministry National Policies and Economic Affairs.

29. **Ministry of Primary Industries (MOPI).** MOPI will be responsible for implementing Component 1, *sub-components 1.1 and 1.2*, and will oversee the following units and entities:

- **Project Management Unit (PMU).** A PMU will be set up in MOPI to be responsible for the management of Component 1, *sub-components 1.1 and 1.2*, including annual work and budget planning, coordination with the *Department of Export Agriculture in Kandy* and the three regional offices (*Kilinochchi, Ampara, and Matara*), procurement, fund withdrawal and financial reporting; technical and institutional aspects of implementation; general oversight, field supervision and acceptance checks; and training and capacity building, and the periodic reporting on implementation progress and achievement of indicators to the Bank. The PMU will be led by a Project Director and include a/an: Deputy Project Director, Financial Management Specialist/ Accountant; Procurement Officer, M&E officer, Environmental Officer, and Social Development Specialist, and technical subject matter specialists that can be recruited on demand basis.
- An office will be set up as part of the PMU to manage the day-to-day implementation of the matching grants program, including public advertising and solicitation of value chain investment proposals, providing and managing technical assistance support to improve proposals of agro-enterprises and farmer cooperatives to meet project eligibility criteria and ensure technical and business feasibility. The office will comprise: a matching grants officer, an agribusiness specialist, and an office assistant.
- **Board of Directors - Matching Grants Program.** A Board of Directors will be set up to oversee and govern the application process and approval of matching grants program. The Board will be chaired by the Secretary of MOPI and include representatives from MOF, Board of Investment, Export Development Board, CBSL, Chamber of Commerce, and the relevant Provincial Councils, which will be represented through the Provincial Secretaries of Agriculture. The Board will be responsible for reviewing and approving applications for matching grants, ensuring that proposals are in accordance with government policy, especially outreach and integration of farmers and female entrepreneurs; make good business sense; and are in compliance with project regulations, including safeguards.

- **Technical Review Group (TRG).** A TRG will be appointed, comprising representatives from government technical departments, academia/research, industry-related enterprises, and other stakeholders. The TRG will provide guidance to farmer producer organizations and agribusinesses on technical and business-related aspects of investment proposals. The TRG will also advise on technical assistance to improve investment proposals to become eligible for project support. It reports to the Board and is supported by the MOPI-PMU.

30. **Regional Development Department (RDD), CBSL.** The RDD of CBSL would be responsible for administering the PCG under Component 1, sub-component 1.3. It will maintain the PCG-Operations Manual, develop a business plan and pricing model, continuously review the eligibility criteria for loans, establish a registration system for loans to be covered under the PCG, and manage the claims processing system under the project.

31. **Ministry of Agriculture.** Under MOA, the following units and entities would be set up:

- **Coordinating Committee.** A Coordinating Committee will be set up in MOA to be responsible for the coordination between MOA and the Provincial Councils of the participating provinces, based on the principles of the *Wadduwa Declaration* signed between the National and Provincial Ministers of Agriculture on September 30, 2015, which is included in the ATD-Operations Manual. The Coordinating Committee would ensure that sub-components 2.2 (Agriculture Technology Demonstration Parks) and 2.3 (Upgrading Production and Marketing Infrastructure) are fully coordinated with the Provincial Councils and implemented in line with the devolved mandates for agriculture and rural development.
- **Project Management Unit (PMU).** A PMU will be set up to be responsible for day-to-day coordination and management for activities to be implemented under the responsibility of MOA, including annual work and budget planning; coordination with PPMUs in public outreach and community mobilization, procurement and contract management, fund withdrawal and financial management, including and financial reporting; technical and institutional implementation aspects, field supervision and acceptance checks; and training and capacity building. The PMU will comprise a Project Director, Deputy Project Director, Financial Management Specialist/ Accountant; Procurement Officer, M&E officer, Environmental Officer, and Social Development Specialist. Technical subject matter specialists can be appointed as needed.

32. **Provincial Councils/ Provincial Ministries of Agriculture.** PPMUs will be set up in the Provincial Councils of the five provinces participating in

Component 2 (*Northern, North-Central, Central, Eastern, Uva*) and will be represented in the project through the respective Provincial Ministries of Agriculture. The PPMUs will participate as members in the Board of the Matching Grants Program for matching grant proposals relevant to their respective provinces. They will be responsible for the day-to-day implementation and technical supervision of the project activities implemented under *Component 2, sub-component 2.2. and 2.3.* They will closely coordinate all activity implementation with the MOA-PMU and provide progress reports on a regular basis.

33. Farmer Producer Organizations and Agribusinesses. Farmer Producer Organizations and agribusiness SMEs that participate in the matching grants program will have implementation responsibility for the investment activities agreed and approved in the investment and business plans and as per their contractual arrangements with the PMU of MOPI. They will organize group members, implement the activities approved in the investment and business plans, provide training and technical support to their members; facilitate linkages between organizations and agribusinesses; support the introduction of new technologies, and provide technical training, technical exchanges and advisory services to their members.

34. Agriculture Technology Service Providers. The implementation of agriculture technology demonstration parks under *Component 2, sub-components 2.2* will be managed through technical service providers which will be contracted under the project on the basis of output and performance-based contracts. These services providers are expected to be firms of high international reputation that would be recruited on a competitive basis to deliver - design, built, operate, transfer - the agriculture technology demonstration parks to local communities in the selected project areas. Contractual arrangements between the MOA-PMU, PPMUs and the service providers will include the requirement to ensure that technology and knowledge is transferred to local stakeholders, including local extension services and agrarian services departments.

B. Results Monitoring and Evaluation

35. The Result Framework describes the gender-disaggregated PDO-level outcome indicators and the component-level intermediate indicators, including core sector indicators, and respective baselines and targets (Annex 1). Project M&E and reporting will be under the responsibility of the PMUs of MOPI and MOA for the project activities under their respective implementation responsibility. A designated M&E officer will be appointed at each PMU for compiling M&E data for consolidation into the semi-annual and annual project progress reports. A simple computerized progress monitoring system will be set-up at the PMU/ PPMU levels to help track and document physical, institutional, and financial project progress. In addition, the PMUs will be

responsible for implementing an overall internal third party audit program to track progress and performance of the matching grants program and of establishment of modern agriculture technology demonstration parks, including adherence to the provisions in the various operation manuals and for ensuring transparency in the allocation of project funds for commercial investments. The M&E system will also include baseline, mid-term and end of project surveys and studies to be carried out by independent specialists that will be recruited under the project.

C. Sustainability

36. Sustainability considerations that have guided project design include:

- a) *Agribusiness participation and financial viability.* The project seeks to leverage commercial private sector investments. Investment commitments from the private sector, including from farmer producer organizations and agribusinesses, are expected to provide an important indication for the business rationale and longer-term sustainability of the agriculture production and value chain investments. In addition, the matching grants program includes a detailed review process of feasibility studies to ensure the technical, financial, and market viability of individual investment proposals that will be supported under the project's matching grants scheme.
- b) *Farmer Producer Organizations.* The project seeks to ensure institutional sustainability and effectiveness through dedicated support to farmer producer organizations to establish them as independent economic entities and actors. The project will provide extensive capacity building in business management skill development, support to registration, and access to finance through the matching grants mechanisms and commercial banks.
- c) *Agriculture Technology Demonstration Parks.* Project support to the development of agriculture technology demonstrations seeks to introduce modern agriculture technology packages in lagging areas with underexploited potential for higher value agriculture. Parks will be designed to allow participating local communities to: form formal farmer producer organizations (farmer companies); significantly improve productivity and output of various crops through defined technology packages; and achieve higher levels of scale in terms of production areas and output that will allow for accessing markets strategically and for investments into product processing and value chain development. The implementation of this demonstration approach will be through service providers that will be contracted on a performance-basis but have no direct commercial interest in the production. They will hand-over the tested operations to local producer organizations as specified

in the ATD-Operations Manual. It is expected that successful demonstration will attract additional investments into downstream processing through commercial investors, ensuring longer term sustainability of the approach. Sri Lanka's national extension service and agrarian services departments will benefit through technology transfer and capacity building.

- d) *Policy support.* To ensure longer-term sustainability, the project will also provide support for more systematic and continuous analyses of sector policies and their impacts on sector performance. Complementary policy is expected to help improve the overall enabling environment for agriculture and hence contribute to the project's long-term sustainability.
- e) *Rural infrastructure.* Infrastructure investments and public services are directly linked to the proposed agricultural investments (sub-projects). They will be implemented through the Provincial Councils to strengthen the overall sustainability of productive investments by cooperatives and agro-enterprises.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

37. The overall risk rating for this project is *substantial*. Principal project-level risks are associated with: (a) macroeconomic and fiscal challenges, including a slowdown in overall growth, a widening fiscal deficit, low FDI inflows, and foreign exchange outflows that could negatively impact the project; (b) an existing sector policy framework focused on staple food self-sufficiency concerns and public subsidization and the need for the formulation of a comprehensive agriculture strategy that provides clear guidance on a sector reform agenda towards private-sector driven sector development, innovation and technology and modernization, and more market orientation of the agriculture sector; (c) institutional implementation capacity constraints in the participating ministries that have only limited prior experiences in implementing Bank-financed operations but also have limited technical capacity in modern agribusiness development, capacity building and technology applications; and (d) fiduciary and governance risks associated with the project's matching grant program and the transfer of project resources to a large number of recipients for investment purposes. Specific technical project design risks are moderate as the project will promote technologies and approaches that are already well established in other countries. Environmental and social risk is also rated moderate.

38. The above described risks are mitigated through: (a) application of eligibility criteria for participating financial institutions (PFIs) to participate in

the project, including capital adequacy, solvency, liquidity, and portfolio quality; (b) support to sector policies analysis and formulation and to the development of a policy and regulatory framework for a modern agriculture sector through a dedicated policy sub-component; (c) financial incentives through the matching grants program to attract private sector to provide services, innovation, and market linkages; (d) the outsourcing and delivery of major technology demonstrations and capacity building programs through qualified private sector service providers based on output-based performance contracts; (e) institutional capacity building support to the implementing entities; and (f) formulation of clear implementation procedures and selection criteria for project investments documented in the project's operational manuals, and the institution of an internal auditing system at the level of MOPI and MOA, which will be reviewed by the Ministry of National Policies and Economic Affairs to ensure adherence to agreed project regulations and principles.

VI. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

39. The project's development impact is expected to be: increased smallholder returns from agriculture through improved productivity for selected field crops, higher agricultural output, increased value-addition, and new market opportunities, fostering increased incomes and employment opportunities. These benefits would result from: (a) the adoption of new production technology packages; (b) improved water and soil resources management; (c) improved product processing, packaging, and marketing; (d) improved product quality and reduced post-harvest losses; (e) better access to services, markets, and information; (f) better market differentiation through product certification, brand naming etc., and (g) advantages from economies of scale through new organizational production arrangements. Indirect benefits are expected to include: (a) strengthened capacity and the organizational level of producers and marketing groups, including strengthened capacity of female farmer entrepreneurs; (b) improved quality and reduced costs of forward and backward linkages of farmers to markets and higher-up value chain operators; (c) increased awareness of technology, climate smart agriculture, and resources management; (d) new models of small producers and private sector enterprises working together; and (e) improved nutrition through diversification of agriculture away from rice and increased production of nutrient rich product, in particular fruits and vegetables; and (f) improved institutional capacity of key ministries and government agencies to review and formulate sector policy.

40. Under Component 1, the project's matching grant program is expected to support at least 350 existing and newly established farmer producer

organizations and 50 agribusinesses. The matching grants are designed to finance sub-projects that are locally identified through open call-for-proposals during project implementation. Given the demand-driven nature of project engagement, this analysis does not lend itself easily to detailed ex-ante cost-benefit analysis. The expected benefits from agribusinesses financed by the matching grants are difficult to anticipate and quantify, and as such are not attempted in the present economic and financial analysis. The economic justification of these sub-projects will be part of due diligence during implementation, with the requirement that all proposals for subproject investments include an economic analysis. This economic/financial filter will be applied as part of subproject eligibility criteria for matching grant funding and as such each subproject would meet the strict criteria of economic viability with a threshold Economic Rate of Return (ERR) of 6 percent (as per the current Bank guidelines).

41. For Component 2, indicative net benefits potential crop production opportunities are used, using detailed crop enterprise budgets from the Socio-Economics and Planning Centre, Department of Agriculture, for the five targeted project districts. The analysis is indicative, focusing on typical farming activities that have the potential to support diversification and modernization of agriculture. The project (investment) costs used for the analysis include all costs for Component 2, which is directly focused on productivity enhancement and diversification of agriculture (US\$ 58.63 million). Pro-rated expenses of Component 3 (half) are included as project costs (US\$ 4.24 million). Finally, some activities of Component 1 are expected to yield benefits to farmers through better prices, marketing and options for diversification, half of the costs of sub-component 1.2 (US\$ 88.20 million, including beneficiary matching funds) are included in project costs. The rationale for using half the cost of this sub-component is that there will be additional benefits accruing to the investors in agribusinesses, yet unknown and hence cannot be accounted for in the analysis. The ratio (half) is assumed as an important objective of the project, specifically Component 1, because it provides the enabling environment for farmers to diversify. Overall, the scope of the analysis accounts for 71 percent of project costs.

42. The analysis considers four scenarios: (a) import substitution crops only; (b) high value agriculture (mainly horticulture crops) with rapid growth in domestic demand and potential for exports; (c) traditional exports; and (d) a mix of all three types of crops. Among the project districts, only two have historically had a significant share of acreage under traditional exports. It is assumed that the current cropping pattern, in which rice dominates, and current practices would continue as the “without-project” scenario while the “with-project” scenario would reflect increased area allocation to high value crops, with the incremental area resulting from rice area freed up by reducing the rice yield gap.

43. Two approaches are used to assess the project economic viability. One is to identify the minimum scale of diversification, measured as the incremental area allocated to crops in each scenario, needed to meet the minimum ERR threshold of 6 percent. This “break-even” analysis indicates that the minimum incremental area required to justify the project investment represent about 2.4 percent of the current total cultivated land in the 5 project districts (selected for the economic and financial analysis) if they were to focus solely on import substitution crops. A reallocation of 1.5 percent would be required for the traditional export crops only scenario, and 4.6 percent for emerging exports scenario. If the current cropping pattern was maintained and scaled up, the mixed scenario, then 2.9 percent of land would need to be reallocated to the high-value crops. These estimates indicate that the aggregate project level, the needed level of diversification is modest and eminently achievable. The picture varies, as expected, by district with each district showing a different levels of expansion needed under alternative scenarios, given their current status (and revealed comparative advantage). Focusing on high value horticulture/ emerging exports emerges as the preferred alternative in *Jaffna, Mullaitivu, Batticaloa, Anuradhapura*, while traditional exports are the “best-bets” in *Moneragala*. These patterns suggest that quick wins based on historical patterns and regional specializations are possible.

44. The second approach assesses the economic returns associated with a 25 percent increase in production, phased in over the project life (5 years), from the base year level of output. A 25 percent increase may sound optimistic, but considering the low levels of current production (and acreage) allocated to these crops, the assumed increase does not appear unrealistic. The results show that at the project level, all scenarios, except notably import substitution, are economically viable with the assumed increase in output. More specifically, an overall ERR is estimated at -2.8 percent with a Net Present Value (NPV, using a discount rate of 6 percent) of -US\$ 70.74 million for the import substitution scenario. Emerging exports yield an ERR at 9.3 percent with NPV of US\$ 38.12 million. Traditional exports yield an ERR at 12.1 percent with NPV of US\$ 104.62 million. The best outcome is the mixed model, with an ERR at 20.2 percent with NPV of US\$ 264.34 million for the mixed model.

B. Technical

45. The project design is built on the concept of agricultural value chain development based on partnerships of the public and private sectors. This concept has proven technically successful and is implemented widely in similar projects across the Bank’s portfolio supporting agricultural sector modernization. The approach to support entire agricultural value chains is a successful development tool to generate agriculture growth by adding value and solving growth restricting bottlenecks along the chain of actors from the

farmer to the national or international consumer. The project takes into account that this vertical integration cannot function in isolation and an important aspect of the value chain approach is that it also considers horizontal integration elements in the chain, such as developing the business and commercial attitude of farmers through business training; organizing farmers in groups for joint action and joint production along agreed standards and quality criteria, decision making and responsibility; provision and access to finance for investments; and the general enabling policy and business environment. Detailed operations manuals, including a Matching Grants Operations Manual, a Partial Credit Guarantee Operations Manual, and an Agriculture Technology Demonstration Operations Manual, have been prepared and, subject to final Bank review, to be adopted by the Recipient prior to implementation in the field.

46. The matching grants program proposed under the project is based on good practices and lessons learned from programs in other regions and countries funded by the World Bank and other donors. Similar matching grants programs have proved to be well-suited to support farmer producer organizations, rural businesses and entrepreneurs; introduce innovative partnership and market linkage arrangements; and contribute to increased competitiveness and commercialization of smallholder farmers. The demand-driven approach of the proposed matching grant program and the requirement for a matching contribution will increase the likelihood that the successful applicants are the most innovative and that investment proposals are relevant to the needs of the beneficiaries. To complement this activity and reduce risks, the project will also support training and technical assistance in business planning, management and marketing that will help the development of farmer producer organizations as strong and competitive business entities and attractive partners for other private agribusiness operators. It is expected that the implementation of the matching grant program will go through an initial learning curve, which could require an adjustment of the design parameters and implementation procedures and potentially impact implementation.

47. The support and capacity building to farmer producer organizations builds on an existing program of building farmer companies implemented under MOA. This program provides the basis for identifying capacity building and other priority needs for farmer producer organizations (farmer companies). Furthermore, the teaching of farm business enterprise management and supporting farmers through upgrading and improving technical and operational processes to meet market requirements (quality, standards) will contribute to improving the performance of farmers to enable access to commercial markets and increase farmer incomes. The quality provision of technical and business advice and the overall farmer capacity building will depend on local service providers which exist in the country.

48. Limited experience exists with the implementation of agriculture technology demonstration parks. However, there are examples in the water supply sector and from private investors, which have implemented turn-key contracts in Sri Lanka. The challenge would be in the identification of suitable service providers and in the contract management. The project design includes a number of technology fora, where suitable service providers could present examples of successfully implemented technology packages. A selection and supervising panel with broad government and non-government representation would guide the process.

49. Infrastructure investments will be of relatively small scale and are not expected to pose any significant technical challenges. Technically complex infrastructure and any infrastructure involving large water storage facilities would not be supported under the project.

C. Financial Management

50. The proposed Financial Management (FM) arrangements are in line with fiduciary requirements of OP 10.00. Separate PMUs will be set up in MOPI and in MOA with the responsibility for overall FM arrangements under their respective components and activities. RDD of CBSL will be responsible for the PCG component of the project for FM purposes. The PMUs will be equipped with sufficient qualified staff, including FM staff with adequate experience and qualifications. MOPI, MOA and the Provincial Ministries of Agriculture are currently working with limited capacity. MOPI and MOA have limited prior experience in World Bank financed operations or not been involved in World Bank operations recently. Because of the current capacity limitations and the relatively complex institutional arrangements involving multiple spending units FM risk is assessed as “high”. FM risk will be mitigated through regular FM supervision missions, desk reviews of internal and external audit reports and quarterly IUFs, and through continuous dialogue with PMU/ PPMU, especially during the initial years of project implementation. In addition, the Bank team will conduct transaction reviews and site visits to periodically monitor the adequacy of the FM system and provide training, capacity building and knowledge sharing for FM staff, internal audit staff, and the external auditor. Disbursements will be report-based. The two PMUs will each have a Designated Account (DA) opened at the CBSL for disbursements purposes. RDD will operate a guarantee fund for the Component 1, sub-component 1.3. The PMUs and RDD will submit separate Interim Unaudited Financial Reports (IUFs) for their respective components within 45 days of end of quarter. The project will be subjected to an internal audit. The external audit of the project will be carried out by the Auditor General of Sri Lanka. There will be three audit reports submitted – MOPI, MOA, and RDD. The due date for submission of audit reports to WB would be within six months of end of financial year. The PPMUs, which are responsible for the implementation of activities devolved to the Provincial Councils, will also recruit FM staff to work in close coordination

with the PMU of MOA on FM aspects under Component 2. There are no overdue audit reports or ineligible expenditures under the main implementing agencies of the project.

D. Procurement

51. Procurement risk is assessed as “high”. The PMUs that will be established in the MOPI and MOA have no or limited prior experience in managing Bank-funded projects. Procurement risk will be mitigated through: recruitment of dedicated procurement specialists in the PMU/ PPMUs, procurement workshops to handle project-specific needs including workshops on contract management), design of a procurement monitoring system, progress reporting, and capacity building, and project websites providing procurement information in a transparent manner. Procurement of goods, works, non-consultancy services and consulting services under the Project will be carried out in accordance with World Bank Guidelines on: (i) *Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers*, dated January 2011 and revised in July 2014 (Procurement Guidelines); and (ii) *Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers*, dated January 2011 and revised July 2014 (Consultant Guidelines), including the provisions as stipulated in the Financing Agreement.

E. Social (including Safeguards)

52. The project is expected to generate positive social benefits and sustainable poverty reduction opportunities for rural communities in lagging rural areas across Sri Lanka. Improved agriculture productivity, organization development, and value chain development are expected to create additional economic returns for farmer households. Expected benefits also include employment opportunities for poorer households, individual and collective empowerment through membership in formal farmer producer organizations and partnership arrangements with agribusinesses, improved access to finance, technology, markets, and rural infrastructure and trading facilities, as well as new technical and management skills. Agriculture technology demonstration parks will be established in formerly conflict-affected and poverty-stricken provinces to provide opportunities for the poor farm households and conflict affected communities. Attention to more equitable sharing of economic gains from investments in commercial agriculture modernized value chains will be paid during the process of farmer producer organization establishment with active support from the implementing agencies.

53. **Involuntary Resettlement (OP/BP 4.12).** No involuntary resettlement is envisaged under the project. Most physical interventions and facilities are expected to be of relatively small scale at household or village

levels on existing farmland of households that are participating in the selected sub-projects on a voluntary basis, following consultation. Specific activities would involve, for example, some land preparation, construction of small-scale household level green houses, installations of on-farm irrigation equipment and others. In addition, the construction of storage facilities, rehabilitation/up-grading of agriculture connectivity roads, markets, facilities for product processing and others at the level of producer organizations or agribusinesses are likely to require some land and may generate a land acquisition case, if land is not donated voluntarily, purchased through willing-buyer willing-seller arrangements (to be financed by counterpart funds), or cannot be made available from State land. A Resettlement Policy Framework (RPF) has been prepared to cover such cases where the need for land acquisition arises. The RFP will guide the land acquisition process and the preparation of sub-project specific Resettlement Action Plans (RAPs) in compliance with the domestic legal and policy framework for land acquisition and OP/BP 4.12. The RPF provides key principles and procedures for land acquisition, covering documentation, compensation and mitigation principles, a grievance redress mechanism, M&E, and institutional arrangements. Households that do not want to join a producer organization, will be able to stay out without being impacted by the neighboring production base.

54. Indigenous Peoples (OP/BP 4.10). Some of the indigenous communities known as ‘forest dwellers’ live in remote locations and close to commercial forests and national forest reserves in the country. Their livelihood depends on forest resources and small scale rain-fed agriculture or Chena cultivation. The main investments of the project are located in the dry zone and focused on irrigation-based farming. The project does not intervene in areas of commercial forests or in close proximity to forest areas therefore forest dweller communities will not be affected through proposed agriculture modernization interventions.

55. Citizen engagement and gender inclusion. The project’s framework approach means that the participating project stakeholders, such as existing and new farmer producer organizations, agribusinesses, and communities, will only be identified during implementation. The Operations Manuals provide guidance on: citizen engagement, beneficiary consultation, gender inclusion, and stakeholder participation in the prospective sub-projects under Components 1 and 2. All sub-projects will be subjected to a social screening and assessment process to ensure adequate and voluntary participation in project interventions as well as outreach to women and poor households. The project will adopt the following as citizen engagement mechanisms: (a) continuous community consultations as social preparation and screening of subprojects; (b) social audit committees at local level to monitor subproject implementation; and (c) third party monitoring of project implementation to ensure projects benefits are distributed equally and efficiently across different social groups and geographical regions. The outcome of the citizen

engagement exercises will be documented and reviewed during implementation support missions. Citizen engagement indicators would be: number of clients reporting satisfaction with project services provided, disaggregated by gender.

56. Opportunities and risks for intended social impacts. Capacity building and institutional development of farmer organizations is expected to foster better access of poor households to markets and farm inputs. Establishing farmer organization is likely to enhance the individual and collective self-development capacity, especially if training combines skill development with managerial and business related capacity building. Investments in local infrastructure will have positive impacts if infrastructure is targeted to serve both agricultural production needs and the needs of local communities. The project is expected to generate entrepreneurial and employment opportunities for women, especially women-headed households, in farmer producer organizations, and will provide them with targeted and customized training in technology and business skills. The project will need to ensure that interested women groups (informally and formally organized) will have sufficient access to project-related information through especially targeted outreach activities to access and benefit from the project. In addition, investments proposals for women-led producer organizations to the matching grant program will receive higher scoring, and upon approval, can receive a higher matching grant share in the total investment (Matching Grant-Operations Manual).

57. While no irreversible negative social impacts are expected, the following potential risks deserve close attention: (a) there may be an overall capacity constraint at the level of poor farmers to transit from subsistence farming to commercial agriculture with higher levels of technology input, which will require specific attention to continuous training and support; (b) women-headed and poor households may be especially vulnerable and their participation in project activities might be limited, resulting in inequitable production arrangements within farmer producer arrangements or partnership arrangements with agribusinesses; (c) despite more efficient organizational arrangements, market risks will remain substantial, and timely access to market information will remain challenging; this may result in farmer producer organizations not being able to assess market and demand conditions adequately; (d) because modern agriculture requires more investment and proposed outputs may provide returns only with time lags; poorer households may face increased economic risk because of their motivation to participate in the project; and (e) producer arrangements promoted under the project will require the organization and streamlining of large numbers of smallholder producers under unified production and land management arrangements, requiring special attention to ensuring voluntary and fully informed participation.

F. Environment (including Safeguards)

58. **Environmental Assessment (OP/BP 4.01).** The project is classified as an Environmental Category B. It is expected to bring positive environmental benefits to the project areas through the introduction and expansion of modern technology applications that help improve cropping patterns and farming methods, increase efficiency in the management of water resources, protect agriculture soils, and roll out integrated pest management. Two project components may involve activities that could have adverse environmental impacts if not mitigated properly. Component 1 will support commercial agriculture and agro-products processing. Component 2 would finance the establishment of agriculture technology demonstration parks and improvements of rural infrastructure, including rehabilitation or improvement of access roads and tracks, rehabilitation of small irrigation schemes, land preparation, construction of market facilities, and others. The project's demand-driven framework approach does not allow to determine these investments and their specific site locations at appraisal. However, it is known that these will be conducted in existing agricultural areas. Specific investments and implementation sites will be determined during implementation as part of the matching grant program and the detailed design of the proposed agriculture technology demonstration parks.

59. An Environmental Assessment and Management Framework (EAMF) has been prepared to guide the screening and selection of such activities from an environmental perspective and manage their environmental impacts. The EAMF defines the screening and selection criteria for sub-projects and sites. It also specifies the content, procedures and responsibilities for the preparation and implementation of individual sub-project Environmental Assessments (EAs) and Environmental Management Plans (EMPs) to address site-specific impacts and subsequent monitoring and reporting requirements. The EAMF will also include sectoral environmental management guidelines for the subsectors of the agricultural processing which will be applicable under the matching grant program. The EAMF will also be applicable to Component 2, sub-component 2.4, to ensure that the principles of the Bank's safeguards policies are adhered to in project supported-advisory and policy support interventions and resulting implementation.

60. **Pest Management (OP/BP 4.09).** The expansion, intensification and diversification of agricultural activities under the project could lead to changes in the application of pesticides for pest and disease control. As per the Bank's safeguard policy, a separate Pest Management Plan (PMP) has been prepared for the project based on Integrated Pest Management (IPM) principles. The PMP describes the relevant national regulatory framework, current status of pest and disease control, monitoring and supervision mechanism, major experience and problems, and lessons learnt from past projects. It specifies a range of non-chemical methods and a training and

monitoring program to facilitate implementation. A list of all chemicals needed for the project that meet Bank requirements, namely, comply with the World Health Organization's recommended categories, has been included in the PMP.

61. Natural Habitats (OP/BP 4.04). Project-supported agricultural activities will take place on existing farmland. No expansion or creation of new farmland into fragile habitats is foreseen. The project will bring improvements to agricultural practices that are expected to reduce pressure on natural habitats and the likelihood of encroachment into sensitive ecosystems. Some activities might negatively impact natural habitats because of the proximity of project interventions, such as the construction and/or upgrading of rural infrastructure. OP 4.04. will therefore be applicable. To ensure impacts to natural habitats are mitigated the EAMF prescribes proper due diligence mechanisms under OP 4.01. Relevant preventive and mitigation measures to ensure the protection of local ecosystems and habitats will be included in the respective sub-project EMPs, as needed, and be subject to Bank review.

62. Safety of Dams (OP/BP 4.37). Interventions under *Component 2, sub-component 2.3* may include the rehabilitation and up-grading of small-scale irrigation infrastructure and existing water tanks (managed by the Agrarian Services Departments) linked to the agriculture technology demonstrations parks under *sub-component 2.2*. OP/BP4.37 applies because of the dependence on water conveyance and control via the irrigation systems and the links of smaller tanks with the water storage and operation of upstream medium/large dams, which is typical for Sri Lanka's historical cascading tank and irrigation infrastructure. There is an ongoing and effective dam safety program in Sri Lanka targeting all large to medium scale dams (upstream of small irrigation structures) and smaller dams along cascading irrigation systems. Full-level inspections, dam safety assessments, and safety remedial measures have already been conducted and details are documented by the Government satisfactorily to the Bank and in compliance with the provisions of OP/BP4.37 on Dam Safety.

63. Typical interventions under this project would include repairs and improvements, such as protection of downstream slopes of dam embankments, providing toe-filters and toe drains to improve downstream drainage and arresting excessive seepage flows, upstream slope protection strengthening of the structural stability of spillways and sluice structures etc. The anticipated project activities will result in an overall enhancement of the safety of dams (tank bunds) against the risk of failure. The project, however, will not finance construction of new tanks (new dams/tank bunds). Small dams included under the project would be less than 5 meters in height.

64. All irrigation infrastructure related interventions will require a screening, as per the EAMF to verify whether upstream medium to large scale dams are

present and connected hydrologically, and to assess their dam safety status and, if needed outline follow-up actions. If the presence of upstream and hydrologically connected dams is confirmed and these have not been rehabilitated or strengthened and thus have Dam Safety implications, the following will be conducted: an inspection and evaluation of the safety status of the dam, its appurtenances, and its performance history; and a review and evaluation of the mandated dam owners operation and maintenance procedures. A report will be provided on the findings of the review, including recommendations for any remedial work or safety-related measures necessary to upgrade the existing dam to an acceptable standard of safety. Necessary additional dam safety measures or remedial work may be financed under the project. When substantial remedial work is needed, these will be undertaken using the following procedures: a competent professional will be recruited to design and supervise the work. Because the size of dams would be less than 5 meters in height, qualified professionals will be hired by the project to design and supervise the work.

65. **Consultation and Information Disclosure.** Consultations with project beneficiaries and stakeholders will be conducted as part of the participatory process for designing and implementing sub-projects under the main investment components. Providing accurate and detailed information about the project at the planning stage will help prevent misconception, build trust between the affected population and the project, and enhance transparency. Consultation will aim at: sharing information; listening to feedback; engaging citizens in decision making; and involving stakeholders in participation in the implementation and M&E processes. Consultations will also enable the implementing agencies to jointly discuss project issues with beneficiary communities; share ideas about planning and implementation; and benefit from local knowledge to take more informed decisions. Consultation will take place in form of public meetings, focus group discussions, sub-project specific community consultations as part of the social screening process and direct one-to-one consultations. A Public Information Booklet will be used as an information dissemination tool to inform vulnerable and poor framer groups, including women, about the project and the opportunity to participate in project activities.

66. The project's overall safeguards documents, including the EAMF, PMP, and RFP have been reviewed by the World Bank and disclosed publicly through the Bank's Infoshop and locally on the Ministries' websites. RAPs and EMPs, as applicable for specific sub-projects, would be disclosed during implementation as they become available during implementation.

G. World Bank Grievance Redress

67. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to

existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

H. Greenhouse Gas Accounting

68. The quantification of greenhouse gas (GHG) emissions from a project is an important step in managing and ultimately reducing GHG emission, and is becoming a common practice for many international financial institutions. To estimate the impact of the World Bank's agriculture investment lending on GHG emission and carbon sequestration, the Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), which was developed by the Food and Agriculture Organization of the United Nations (FAO) in 2010. EX-ACT allows the assessment of a project's net carbon-balance, defined as the net balance of CO₂ equivalent GHG that were emitted or sequestered as a result of project implementation compared to a without project scenario.

69. The net carbon balance quantifies GHGs emitted or sequestered as a result of the project compared to the without project scenario. Over a period of 30 years, the project is estimated to constitute a carbon sink of 1,912,735 tons of CO₂-equivalents per year. The improved practices will lead to a carbon sink and the planting of perennials will add to the sink. This would be largely due to the improvements in crop management as consequence of the adoption of drip irrigation, good agriculture practices, targeted fertilization, pesticide use energy efficient cooling systems and recyclable steel buildings. Per hectare, the project provides a sink of 1,189 t-CO₂-equivalent over the 30 year period, which is 39.6 t-CO₂-equivalent per hectare and per year.

Annex 1: Results Framework and Monitoring

Country: Sri Lanka

Project Name: Sri Lanka Agriculture Sector Modernization Project (P156019) Results Framework

Project Development Objectives

PDO Statement

The Project Development Objectives (PDO) are to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas.

These results are at

Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values				
		YR1	YR2	YR3	YR4	YR5 End Target
Direct project beneficiaries (Number) (Core)	0.00	1,500	25,000	55,000	90,000	110,000
Female beneficiaries (Number - Supplemental) - (Core)	0.00	200	5,000	14,000	30,000	40,000
Clients who have adopted an improved agriculture technology promoted by the project - (Productivity Indicator); (Number) - (Core)	0.00	500	5,000	15,000	35,000	80,000
Clients who adopted an improved agriculture technology promoted by the project - female (Productivity Indicator) (Number) - (Core)	0.00	0	800	3,000	16,000	24,000
Increase in average value of sales of agriculture products due to project	0.00	0	0	10	-	25

interventions (Market Access Indicator) (Percentage)						
New Jobs generated through investments in agriculture SMEs under the project (Value addition Indicator) (Number; gender disaggregated)	0.00	0	0	2,500	-	12,500

Intermediate Results Indicators

These results are at	Component Level						
	Indicator Name	Baseline	Cumulative Target Values				YR5 End Target
YR1			YR2	YR3	YR4		
	Number of Matching Grants approved (Small Window). (Number)	0	25	150	275	350	350
	Number of Matching Grants approved (Large Window). (Number)	0	10	15	21	50	50
	Share of project-supported famer producer organizations and agribusiness partnerships making profit (Percentage)	0	0	-	50	-	70
	Share of project-supported women-led famer producer organizations and agribusiness partnerships making profit (Percent)	0	0	0	50	-	70
	Share of Matching Grant recipients operating based on updated business plans (Percentage)	0	0	0	50	60	70
	Targeted clients satisfied with agricultural services (Percentage) - (Core)	0	-	-	60	-	75

Targeted clients satisfied with agricultural services - female (Number) - (Core)	0	-	-	60	-	75
Client days of training provided (Number) (Core)	10,000	80,000	150,000	250,000	300,000	350,000
Client days of training provided - female (Number) (Core)	3,000	24,000	50,000	90,000	130,000	150,000
Share of beneficiaries reporting improved access to markets (Percentage)	0	0	-	20	-	30

Number of new farmer organizations registered (Number)	0	25	50	100	150	250
Number of Technology Parks completed and handed over. (Number)	0	0	0	2	4	7
Research Papers completed and delivered to the CPCC (Number)	0	0	2	5	8	10
Policy Notes prepared and published (Number)	0	2	5	10	15	17
Training in project management taken by project staff at all levels (Person times - cumulative) (Number)	0	120	250	300	300	300

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Direct project beneficiaries	Direct beneficiaries directly deriving benefits from the project, including from physical investments, access to finance, or through training and capacity building. This indicator is disaggregated by gender.	Annually	Progress Reports	MOPI, MOA, PPMU
Clients who have adopted an improved agriculture technology promoted by the project (Productivity Indicator).	This indicator measures the agriculture productivity improvements through the number of clients who have adopted an improved agricultural technology promoted by the project. New technology is defined as any new input or changed management technique associated with matching grant investments, farmer training or farmer producer organization development. This indicator is disaggregated by gender.	Annually	Progress Reports	MOPI, MOA, PPMU
Increase in average value of sales of agriculture products due to project interventions (Market Access Indicator) (Percentage).	The indicator measures improvements in market access of clients through the increase in average value of sales, resulting from improvements in quantity and quality of products through project interventions. Sales values	Baseline Mid-term End-of-Project	Independent Surveys, Progress Reports	MOPI, MOA, PPMU Independent Monitor

	are expected to increase 25% over the project's life.			
New Jobs generated through investments in agriculture SMEs under the project.	This indicator measures the changes in value addition in agriculture as is reflected in more and diverse jobs created along agriculture value chains promoted. This indicator is gender disaggregated.	Baseline Mid-term, End-of- Project	Independent Surveys, Progress Reports	MOPI, MOA, PPMU Independent Monitor

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Number of Matching Grants approved (small and large windows).	This indicator measures the uptake of project-supported matching grant support and the increase of private sector investments based on perceived risk and business opportunities into the sector.	Annually	Progress Reports	MOPI
Share of project supported farmer producer organizations and agribusiness partnerships making profit.	The indicator measures the economic sustainability of project-promoted producer and partnership arrangements.	Baseline Mid-term, End-of- Project	Independent Survey	MOPI
Share of Matching Grant recipients operating based on updated business plans.	This indicator measure capacity improvements at the producer level to make informed business planning decisions based on	Annually	Progress Reports, Surveys	MOPI

	improved business and management skills.			
Targeted clients satisfied with agricultural services (percentage).	This indicator measures citizen engagement through measuring the percentage of clients who expressed satisfaction with the services provided in the project areas. This indicator is gender disaggregated.	Baseline Mid-term, End-of- Project	Independent Survey	MOPI, MOA, PPMU
Client days of training provided (number).	This indicator measures the number of client days of training provided, i.e. the number of clients who completed training multiplied by the duration of training expressed in days. This indicator is gender disaggregated	Annually	Progress Reports	MOPI, MOA, PPMU
Share of beneficiaries reporting improved access to markets.	This indicator measure effectiveness of new production and institutional arrangements in increasing market orientation and market access.	Baseline Mid-term, End-of- Project	Independent Survey	MOPI, MOA, PPMU
Number of new farmer producer organizations registered.	This indicator measures improvements in the overall institutional environment in agriculture to overcome structural constraints of small scale scattered farming. Farmer producer organizations are defined as legally registered business entities that can make autonomous economic planning and implementation decisions.	Annually	Progress Report	MOA, PPMU

Number of Technology Parks completed and handed over.	This indicator measures progress in demonstrating horizontal (expansion and standardization of production) and vertical (value-chain development) integration of agriculture in the target areas. Hand-over refers to self-operation of the technology demonstrations by the communities.	Annually	Progress Report	MOA, PPMU
Research Papers completed and delivered to the CPCC.	This indicator measures the contribution of independent research to strategic decision making in the sector above the sector agency level.	Annually	Progress Report	MOA
Policy Notes prepared and published.	This indicator measures progress generating internal sector policy analysis and integration into strategy and policy formulation.	Annually	Progress Report	MOA
Training in project management taken by project staff at all levels (person times - cumulative).	This indicator measure overall improvement in project management capacity in implementing agencies at various levels.	Annually	Progress Reports	MOPI, MOA, PPMU

Annex 2: Detailed Project Description

SRI LANKA: Agriculture Sector Modernization Project

1. Agriculture in Sri Lanka remains critically important for rural livelihoods, poverty reduction, and economic growth. About one third of the population is engaged in agriculture with the sector contributing around 10 percent of total GDP and 24 percent of total exports (including tea). While Sri Lanka has been successful in achieving self-sufficiency in rice production – the country’s basic staple food – agriculture remains characterized by relatively low productivity and diversification levels; comparatively limited capacity, incentives, and technology choices for smallholder farmers to improve productivity and diversify; structural constraints, such as labor shortages, land fragmentation, low organizational levels; relatively weak linkages between producers and domestic and international markets; and underexploited opportunities for processing and value-addition.

2. The Government’s *National Program for Food Production 2016-2018* outlines production targets, policy approaches, and technical and institutional measures to increase agricultural production and productivity with the overall aim to reduce dependence on imports and improve the sector’s contribution to the national economy and exports. The program explicitly highlights the need for diversification away from basic staples towards higher value crops (fruits, vegetables), specialized crops (spices), aquaculture, and livestock.

3. This focus on diversification and commercialization is an important shift towards more market and demand orientation. Diversification is to be achieved by gradually freeing up farmland that was previously mandated for rice production but may no longer be needed as rice productivity is increasing. Fruits, vegetables, specialized niche crops and other agricultural products generally generate higher incomes as compared to rice but also demand more intensive labor input and require new skills, higher levels of technology and innovation, better and environmentally sustainable crop management, and new financing and marketing arrangements, all of which provide new opportunities for development and job creation. The program further emphasizes the need for an integrated approach that involves smallholder farmers, government, commercial private sector, and research institutions as partners.

4. Agriculture modernization will require differentiated strategies for different parts and production arrangements across the country. In the northern, central, and eastern parts of the country, comprising primarily the dry zone, there is significant scope for agricultural productivity growth both through traditional and non-traditional agriculture and the potential for better linkages to domestic and export markets, including value-added production. In other parts of the country, more robust and scaled-up private commercial

investment and innovation through agribusinesses and agribusiness-farmer partnerships is needed for value addition and farmer integration into high value chains through scaling up and diversification into more commercial crops.

5. The proposed project design provides a framework for the government to experiment with innovative approaches to address these issues across the country, attract investment into the sector, overcome the low productivity equilibrium and low diversification level; and strengthen agriculture's contribution to the economy and employment creation. The overall strategic thrust reflected in the project design is to support the government's agriculture sector development policy and addressing these issues through: (a) developing a framework and incentive structure for SME agribusinesses, including farmer producer organizations, to invest in commercial agriculture and value chains; (b) promoting partnership arrangements between private sector partners and smallholder producers for better linkages; (c) demonstrating new agriculture technologies and innovations at sufficient scale to enhance productivity, resilience, and diversification at scale in selected prioritized lagging regions; (d) promoting technology diffusion through capacity building and training and new models for extension service delivery; and (e) supporting sector policy analysis and research for reform.

6. The Project Development Objectives are *to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas*. The project will be implemented over a period of five years. The project design is structured along three components:

7. **Component 1: Agriculture Value Chain Development** (*Total US\$ 102.73 million, IDA US\$ 58.63 million*). The component seeks to promote commercial and export-oriented agriculture through attracting and leveraging investments from farmer producer organizations and agribusinesses for high value agriculture production and value addition. It will provide the enabling environment, incentives, and access to finance for such investments through matching grants, technical assistance support, linkages to the commercial banking sector, and a PCG. It will strengthen farmer producer organizations and promote smallholder-agribusiness partnerships; improve the linkages of smallholders in agricultural value chains; increase their competitiveness, business orientation and market position; and make them more attractive business partners in the value chain. The expected component outcomes include: an increased number of farmer producer organizations and agribusinesses investing into higher value agriculture production and value chains; increased benefits derived by farmer producer organizations and rural communities from partnerships through productivity, higher agriculture income, and employment; and increased value of commercial output from value chains.

8. Component 1 comprises the following sub-components:

- a) *Sub-component 1.1: Investment Preparation Support (Total US\$ 7.41 million, IDA US\$ 7.41)*, supporting: (i) a training program on the principles and procedures of the matching grants program for PMU field officers of MOPI, TRG, the Board of the matching grants program, staff from commercial banks, technical service providers, and other stakeholders; (ii) public advertisements and information workshops at national, provincial and district levels for prospective applicants of the matching grants program, as well as annual conferences to review the performance of the matching grants program; (iii) honoraria and incremental operating costs associated with the review and approval of grant applications through the TRG and Board; (iv) international advisory support to operationalize the matching grants program; (v) salaries and associated allowances of a matching grants officer, an agribusiness expert and an office assistant to be recruited and housed in the PMU matching grants office; (vi) salaries and associated allowances for support staff to the matching grants offices at regional levels, including a matching grants officer, a matching grants assistant, and a procurement staff in the *Department of Export Agriculture in Kandy* and in the three regional support offices (*Kilinochchi, Ampara, Matara*); (vii) office equipment, office rental, vehicle rental and incremental operating cost for the PMU and the regional support offices; (viii) technical assistance support and mentoring for applicants to the matching grants program to assist in the preparation of quality investment proposals; and (ix) technical assistance support to support the project's environmental and social safeguards requirements within the matching grants program.
- b) *Sub-component 1.2: Matching Grants to Farmer Producer Organizations and Agribusinesses (Total US\$ 88.20 million, IDA US\$ 44.10 million)*, supporting a matching grants program to attract and leverage investments from farmer producer organizations and agribusinesses. Matching grants would be provided under two windows:
- (i) Matching grants of US\$ 5,000 up to US\$ 75,000 would be provided for investments to be developed and implemented by farmer producer organizations. Matching grants would co-finance in parallel approved investment proposals up to 50 percent of the total investment, with the specific activities to be financed by IDA and by the beneficiary to be identified during the proposal formulation. Eligibility criteria for farmer producer organizations to participate in the matching grant program would include, among others: formal registration under Sri Lanka's Company Act No. 7, 2007 at the time of application; appointment of a qualified

accountant; a minimum cash contribution of 10 percent of the total investment cost to be deposited into an account at a licensed bank in the name of the organization at the time of application; and availability of commercial financing of up to 40 percent of the total investment. Upon approval of the investment proposal and matching grant, farmer producer organizations would enter into a project agreement with the PMU of MOPI. Disbursement of the approved matching grant amount would be in pre-defined tranches under a service-based contractual arrangement. Details on management, governance, ownership structure, capitalization, auditing and others of such farmer companies are described in detail in the Matching Grants Operations Manual.

In order to attract and support women-led farmer producers organizations, proposals for matching grant support would receive higher scorings and the ratio matching grant to own contribution could be increased flexible, for example to: 60/40, and would also receive higher scoring for high women participation rates in the overall selection process.

- (ii) Matching grants of US\$ 75,000 up to US\$ 500,000 would be provided to agribusiness for agriculture value chain investments. Established and new start-up agribusinesses would be eligible to apply for and access the matching grants. For investments between US\$ 75,000 to US\$ 150,000, the matching grant provided would be 50 percent of the total investment amount in parallel co-financing. For investments from US\$ 150,000 to US\$ 500,000, the matching grant funds would be 50 percent for first US\$ 150,000 and then 35 percent for the tranche from US\$ 150,000 to US\$ 500,000. For investment amounts up to US\$ 1 million, for the tranche from US\$ 500,000 to US\$ 1 million, the matching grant amount for be 20 percent. For investments above US\$ 1 million, the maximum matching grant amount would be US\$ 500,000. The contributions from agribusinesses would be provided through own-sourced or commercial financing.

Applications for matching grant support would be evaluated based on criteria, such as outreach and capacity building to smallholder farmers, regional focus (with higher scorings for proposals in poor lagging regions), as well as criteria of technical quality, innovative potential, business rationale economic benefit and others. Upon approval, the PMU would enter into a service-based contractual arrangement with the agribusiness that would specify the contractual obligations of partners and the payment terms for the matching grant.

Matching grants would be awarded based on a transparent application, evaluation and selection process that are described in the Matching Grants-Operations Manual. Grants can be used flexibly, as described in the respective approved investments plans, for example, to expand and/or diversify agriculture production; introduce new production models, technologies and equipment; improve product quality, processing, marketing, and value-added of agricultural products; promote and improve food safety standards; and provide extension and other support services. A negative list of items not to be financed under the matching grants is included in the Matching Grants-Operations Manual. It is expected that investment proposals and matching grants would be implemented over a period of no more than two to three years. Disbursements from the IDA Credit for the Matching Grants will be made after: (i) the Matching Grants Operations Manual has been adopted; and (ii) the MOPI and the CBSL have entered into a Memorandum of Understanding, outlining the respective institutional responsibilities and cooperation arrangements of MOPI and CBSL in implementing Component 1.

- c) *Sub-component 1.3: Partial Credit Guarantee (Total US\$ 7.12 million, IDA US\$ 7.12 million)*, supporting a PCG to share financial risk with PFIs that have expressed interest in lending to beneficiaries of the Matching Grant Program. The PCG would be administered by the RDD of the CBSL that has demonstrated prior experience with administrating financing schemes for farmers and SME agribusinesses through both public and private financial institutions. The PCG will operate on the basis of the World Bank Group Principles on PCG Schemes, published in December 2014, covering the governance, management, administration, sustainability, and monitoring of PCGs. The applicable principles are described in the PCG in Annex 4. In addition and given that the project involves the use of the partial guarantee by eligible financial intermediaries, the OP/BP 10.0 applies on *Financial Intermediary Financing*. Detailed operating modalities of the PCG are described in the PCG Operational Manual. Disbursements from the IDA Credit to the PCG Account will be made after the PCG Operations Manual has been adopted.

PFIs will undergo a pre-qualification process to become eligible for participation in the PCG. Eligibility criteria will be transparent, open to all institutions and based on meeting the current prudential requirements on capital adequacy, solvency, liquidity, portfolio quality (non-performing loan ratio), as well as credit policies, existence of safeguard policies, and corporate governance standards. Prior experiences in lending to agricultural sector, farmers, producer

organizations, agro-businesses and prior experience with similar schemes will also be considered. It is expected that up to 6-7 PFIs will be selected initially and more institutions can be included as the PCG is rolled out. PFIs can be both private banks and public sector banks.

Coverage of the PCG will be partial as per the World Bank Group Principles, covering 50 percent of the loan amount pari-pasu. The PCG will operate on an individual loan basis and pricing will be designed in order to minimize market distortions. Only loan applicants who are benefitting from capacity building and matching grant under the project will be eligible under the PCG scheme. This will help reduce default risk but also ensure that the PCG adheres to the project target group. The PCG, will operate on an individual loan level rather than a portfolio level. During implementation, pricing and recovery models will be further developed so as to minimize market distortions and reflect risks and administrative costs. The proposed maximum loan size eligible for PCG could be US\$ 500,000, or higher on a case by case basis in line with the financing needs beyond the matching grant, with maximum loan maturity of 7 or 8 years. Loan eligibility criteria will be developed to ensure that the loans are for productive purposes within the scope of the matching grants sub-component. PCG could be issued until the project closing date.

9. Component 2: Productivity Enhancement and Diversification Demonstrations (US\$ 58.63 million, IDA US\$ 58.63 million). The component aims at supporting smallholder farmers to produce competitive and marketable commodities, improve their ability to respond to market requirements, and move towards increased commercialization. Expected component outcomes include: increased market and orientation of farmers individually and in farmer producer organizations; enhanced agricultural commercialization; and the demonstration and introduction and adoption of innovative technology packages. Component 2 comprises the following sub-components and activities:

(a) *Sub-component 2.1: Farmer Training and Capacity Building (Total Cost US\$ 6.20 million, IDA US\$ 6.20 million),* supporting knowledge building and capability improvements of smallholder farmers and the establishment of farmer organizations to help them to respond better to market opportunities.

Individual farmer capacity building will be implemented through a comprehensive training program through a selected national training service provider in coordination with the national agricultural extension service system and include the: (i) development of detailed curricula building on existing elements of curricula under the theme of *farming as a business*. This will include training modules on markets and marketing

understanding, record keeping at farm levels, preparation of crop and livestock budgets (calculation of production costs and cash flows), use of modern communication technology (SMS, internet, IT based systems, etc.), farm level risk assessment and mitigation, etc.; (ii) preparation of a roll-out strategy for up to 600 villages; (iii) training of some 10 master trainers and some 200 Trainers of Trainers, and (iv) rolling out the training to villages across the country, using a farm business school approach with a combination of class-room and villages on-farm training.

Farmer Producer Organization training and development will include the following activities, which would also be carried out through contracted national service providers: (i) a rapid value chain and farmer producer organization assessments to prioritize the key value chains where farmer organization and joint action is critical for commercialization and value addition. This activity would also assess potential market opportunities; identify existing constraints; devise solutions to address them, and determine the corresponding capacity building needs. The assessment will also include a stock taking of existing farmer producer organizations, their size functions and bottlenecks for business development.

The sub-component would further support: (ii) a training needs assessment of existing and potential farmer producer organizations; (iii) development of detailed curricula development, including training modules on group formation and registration, legal requirements, farmer producer group management (meetings, record keeping, financial planning, market and marketing understanding), commercial lending, use of modern communication technology (SMS, internet, IT based systems, etc.), etc.; (iv) preparation of a roll out strategy for reaching out to some 500 farmer producer groups; (v) training of some 10 master trainers and some 200 Trainers of Trainers; (vi) rolling out the training to some 500 existing and new farmer producer organizations; (vii) the provision of basic office equipment (computer, office furniture) for farmer producer organizations; and (viii) formal legal registration cost. The activities will be supported by an organizational development specialists (facilitators) to be placed in the provincial agricultural offices. It is expected that most of the trained and established farmer producer organizations would become eligible for application under the Matching Grants Program under Component 1.

(b) Sub-component 2.2: Modern Agriculture Technology Parks (Total Cost US\$ 33.44 million, IDA US\$ 33.44 million), supporting the introduction, demonstration, and scale-up of innovative agriculture technology packages that are not yet available or practiced by smallholder farmers but would support productivity improvements, diversification,

commercialization, more sustainable and climate resilient production patterns (high value products, new varieties, technology, soil, water, fertilization etc.).

The sub-component will support agriculture technology demonstration parks in the proposed selected districts of *Jaffna*, *Mullaitivu* (*Northern Province*), *Batticaloa* (*Eastern Province*), *Monaragla* (*Uva Provinces*), *Anuradhapura*, *Polonnaruwa* (*North-Central Province*), and *Matale* (*Central Province*) which have been identified based on high poverty headcounts and agriculture development potential (table 1). Additional districts or the expansion of project activities in existing project districts may be considered, if co-financing sources, i.e. from the European Union, are identified.

The agriculture technology demonstration parks will be established to demonstrate entire value chain approaches for selected crops, involving: farmer mobilization and training, agriculture production, post-harvest handling and/or processing, and marketing. Each park will include at approximately 8-10 entire villages. The number of villagers could be higher depending on the nature of the technology package, the necessary scale to support viable processing units or marketing channels, and the availability of project resources. In each district, these parks would seek to establish profitable farmer companies at a larger scale; support employment of local communities; improve food security and diversification; integrate food production and supply chains vertically; and bring most advanced modern technologies and best practices to the value chains. This would also include training on technologies, business operation, and marketing. Examples of such technology demonstrations would include: fruits and vegetables production and marketing systems in combination with sprinkler and drip irrigation systems, organic farming, improved homestead gardening combined with greenhouse and tunnel cultivation, fertigation technology, diversification in rice production systems, and various small-scale processing technologies and others. Technology demonstrations could also include other field crops and rice diversification approaches.

Table 1: Basic Statistics of the Selected Districts for Agriculture Technology Parks

District	Population	Geographical area (km²)	Agricultural land under small holding (Hectares)	Number of land holdings less than 1/4 acres	Number of land holdings above 1/4 acres
Jaffna	597,000	1,025	16,942	66,526	25,303

Mullaitivu	94,000	2,617	16,293	6,349	11,814
Anuradhapur a	893,000	7,179	149,590	26,351	150,613
Batticaloa	541,000	2,854	33,989	78,897	20,890
Monaragala	472,000	5,636	91,869	8,603	81,723
Matale	502,000	1,993	50,973	21,154	64,806
Polonnaruwa	419,000	3,293	67,255	12,319	58,806

The sub-component will also support the organization of two international technology fora/ conferences in the first and second year of project implementation, inviting international service providers to discuss and present their agricultural development models successfully implemented and demonstrated in similar agro-ecological and socio-cultural environments. Based on the outcome of these fora/ conference, suitable service providers will be invited to prepare detailed proposals for the introduction, pilot testing, and operationalization of new and innovative technologies, and training following a 'turn-key' approach. The approach will focus on topics requiring innovative solutions not necessarily obvious or yet well-known to the local farming communities or farmer organizations or within the government system. Based on a selection and technical review process, private operators/service providers will be contracted under the project to design, implement, operate and ultimately hand-over the technology demonstration parks to the participating communities and farmer producer organizations.

Selection criteria for such demonstrations will include the following: (i) clear innovative elements in the proposed technology demonstration involved; (ii) market-orientation and expected sustainable financial returns; (iii) the implementation of the activity requires state-of-the art knowledge and technical inputs that are not readily available in the existing public extension service; (iv) demonstration effects which could lead to expansion and replication in other locations; and (v) qualified international or domestic service providers that demonstrate the required experience and technological and organizational know-how can implement the activity in cooperation with farmer organizations.

To ensure technology and knowledge transfer to the public extension service, service providers will be required to involve government extension staff and agrarian services departments in the activity, through partnership arrangements that would be specified in each respective contract between the project and the service provider. The specific detailed implementation modalities of the technology demonstration approach are described in the ATD-Operations Manual.

(c) Sub-component 2.3: Production and Market Infrastructure (US\$ 14.71 million, IDA US\$ 14.71 million), supporting: (i) the up-grading and rehabilitation of small-scale irrigation infrastructure and existing water

tanks and irrigation systems in the selected priority project areas and linked to the agriculture technology demonstration parks; (ii) the improvement of selected production and market access roads and construction of new field access tracks to improve transportation, access to markets and accessibility for agricultural machinery; and (iii) village level storage and product handling facilities, including drying platforms and sheds, composting facilities of crop residues, storage facilities and others. Infrastructure investment would complement investments in the agriculture technology demonstration parks under *sub-component 2.2*. Procurement and management of civil works contracts would be under the overall project implementation responsibility of the MOA-PMU that would coordinate implementation with the Provincial Councils through the PPMUs.

(d) Sub-component 2.4: Analytical and Policy Advisory Support (Total Cost US\$ 4.28 million, IDA US\$ 4.28 million). The component will provide support to: develop an evidence-based policy, legal and regulatory framework; address knowledge gaps as well as policy and regulatory inconsistencies as they may arise from time to time with policy decisions emanating from different parts of the government; and formulate sector and sub-sectoral strategies to provide the suitable enabling environment for a sustainable and competitive modern agriculture and food system. The expected outcomes of this component include: policy analysis integrated into the government's policy decision making process; a strengthened socio-economic analytical foundation in the formulation of long-term sector and sub-sector development strategies; improved coordination across various parts of the government on economic policies and regulations affecting the enabling environment for private investment in the agriculture and food sector.

The sub-component will facilitate access by key government decision makers to the best available analytical expertise and policy advice to: (i) evaluate policies and regulations and recommend adjustments, reforms or new policies needed to make agriculture more competitive, responsive to market demand, sustainable, and resilient; (ii) undertake strategic market analysis for promoting new and high value exports, and analyze the changes needed in the policy, regulatory and institutional framework, or public investments needed to address the binding constraints to the evolution of high impact value chains; (iii) evaluate the social and economic impact of policies and public expenditures and make recommendations on course corrections to improve the efficiency and effectiveness of public expenditures; and (iv) undertake external and independent monitoring and evaluation functions, including formal impact evaluations of government programs and investments, to provide the critical learning and feedback loop into the ministries' decision making processes.

The specific responsibilities of the MOA-PMU under this sub-component will be to: (i) develop an annual program of studies and analytical work at the start of each year; (ii) based on study findings guide the technical and policy level consultations and discussions of the CPCC and the participating ministries; (iii) monitor the consistency of economic policies across various parts of the government; and (iv) host an annual conference on Sri Lanka's agricultural policy with the participation of top policy makers in various concerned ministries and departments, academics and researchers, private sector representatives engaged in agriculture and food business (both domestic, imports and exports), and other stakeholders participating. The conference would bring together available knowledge on topical subjects and identify priority analytical and policy research topics that would constitute the component's annual work program for the following year. The policy analysis and research program would be implemented through a multi-year framework agreement with a competitively selected consortium of domestic and international researchers to provide independent and objective analysis. Competition will be open to both local and international agencies/consortia with the proviso that local bidders would have to partner with a reputable and well recognized international research organization, and that the international bidders will have local institutional collaboration with a university or researcher organization or a local consortia of researchers.

This sub-component may also provide some limited support for equipment to MOA proposed Center of Excellence and some start-up support to conceptualize a national agriculture information system, with the medium-term objective to build capacity for data collection and management in support of policy formulation, enhanced public service provision, and improved risk monitoring in agriculture. The system would promote the coordinated organization, standardization and integration of data and information, supported by remote sensing and meteorological data and analysis capacity, and enhance communication and interoperability between the various agencies and accessibility to the public and private sectors.

10. Component 3: Project Management, Monitoring and Evaluation (Total Cost US\$ 8.48 million, IDA US\$ 7.75 million). This component will support the PMUs of MOPI and MOA in project management and coordination, technical supervision, financial management, procurement, social and environmental safeguards, and monitoring and evaluation (M&E). The component will support: (a) project orientation workshops, training and study tours; (b) engagement of technical assistance and short term experts for overall project management; (c) design and installation of a project M&E and Management Information System; (d) M&E surveys and reviews (baseline,

mid-term and end of project impact evaluation through an external agency/institute); (e) the regular supervision of environmental and social safeguards implementation; (e) procurement of office equipment, office renovation or rental, and vehicles; and (f) incremental operating costs. The component will provide support to the PPMUs (Northern, North- Central, Central, Eastern, Uva) to recruit PPMU staff and for training in project management and operational expenses.

Annex 3: Implementation Arrangements

SRI LANKA: Agriculture Sector Modernization Project

Project Institutional and Implementation Arrangements

1. The institutional responsibilities and arrangements for project implementation will be established for the participating ministries and participating provinces at the national and sub-national levels, as follows:

2. **Ministry of National Policies and Economic Affairs - Central Project Coordination Committee (CPCC).** A CPCC is set up in the Ministry of National Policies and Economic Affairs with representation from the MOF, CBSL, the two implementing ministries MOPI and MOA, the Provincial Councils of the participating provinces, and other government stakeholders. The CPCC will: (a) serve as National Steering Committee to ensure effective coordination and communication between the Ministry of National Policies and Economic Affairs, MOF, CBSL, MOPI and MOA; and the Provincial Councils; (b) provide overall policy guidance and support to MOPI and MOA in the implementation of the project; (c) mobilize and ensure coordination with other relevant stakeholders, including public and private sector stakeholders and national and sub-national levels; and (d) oversee the project's internal auditing of the two main investments components under MOPI and MOA (in accordance with the government's existing internal auditing procedures) to ensure, independently, adherence to project principles and transparency in economic decision making, including the award of matching grants and the management of agriculture technology demonstration parks.

3. The CPCC will be chaired by the Secretary, Ministry National Policies and Economic Affairs. It will convene quarterly (or at any other suitable interval) to review overall project progress and implementation performance. The CPCC will receive feedback from the Provincial Councils; coordinate and advise MOPI and MOA on any measures to strengthen project implementation; guide the overall learning and knowledge dissemination activities; as well as consolidate implementation lessons for sector policy formulation. The CPCC would be supported by a secretariat in charge of day-to-day coordination and management tasks.

4. **Ministry of Primary Industries (MOPI).** MOPI will be responsible for implementing Component 1, *sub-components 1.1 and 1.2*, and will oversee the following project-relevant units and entities:

- **Project Management Unit (PMU).** A PMU for Component 1 will be set up in MOPI to be responsible for overall project management of Component 1, *sub-components 1.1 and 1.2*, including annual work and budget planning, coordination with the *Department of Export Agriculture in Kandy* and the three regional offices (*Kilinochchi, Ampara, Matara*) to

support the field implementation of the matching grants program), procurement, fund withdrawal and financial reporting; technical and institutional aspects of implementation; general oversight, field supervision and acceptance checks; and training and capacity building, and the periodic reporting on implementation progress and achievement of indicators to the Bank. The PMU will be led by a Project Director and include: a Deputy Project Director, a Financial Management Specialist/Accountant; a Procurement Officer, a M&E officer, an Environmental Officer, and a Social Development Specialist, as well as various technical subject matter specialists that can be recruited on demand basis.

- An office will be set up within the PMU of MOPI to manage the day-to-day implementation of the matching grants program, including public advertising and solicitation of value chain investment proposals, providing and managing technical assistance support to improve proposals of agro-enterprises and farmer cooperatives to meet project eligibility criteria and ensure technical and business feasibility. The office will report to the PMU Director and to the Board, including regular updates and reports on implementation progress and performance, including agreed M&E indicators. The core staff of the office comprise: a matching grants officer, an agribusiness specialist, and an office assistant.
- **Board of Directors - Matching Grants Program.** A Board of Directors will be set up to oversee and govern the application process and approval of matching grants under *sub-component 1.2*. The Board will be chaired by the Secretary of MOPI and include representatives from the Ministry of Finance, Board of Investment, Export Development Board, CBSL, Chamber of Commerce, and the relevant Provincial Councils, which will be represented through the Provincial Secretaries of Agriculture. The Board will be responsible for reviewing and approving applications for matching grants under both windows that have passed the technical, institutional and business reviews that are under the responsibility of the Secretariat and TRG, ensuring that proposals are in accordance with government policy directions and objectives, especially outreach and integration of farmers and female entrepreneurs; make good business sense; and are in compliance with project regulations, including safeguards. The Board will convene on a quarterly basis for the review of applications for matching grants. The Board will also receive and review internal audit reports of ongoing matching grants. It would also approve final completion reviews/ reports of individual matching grants investments.
- **Technical Review Group (TRG).** A TRG will be appointed, comprising representatives from government technical departments, academia/ research, industry-related enterprises, and other stakeholders. The TRG

will have the following functions, namely to: (a) provide guidance to farmer producer organizations and agribusinesses that have expressed interest in applying to the matching grants program on technical and business-related aspects of investment proposals, such as crop/ product selection, technology innovation, production organization and processing, marketing research, partnership arrangements, investment costing, and other elements of investment planning process; (b) advise on technical assistance, which would be supported through the project to improve investment proposals to become eligible for project support; and (c) review finalized investment plans for farmer producer organizations and agribusinesses for technical and economic soundness and compliance with project regulations and recommend such proposals for approval to the Board. The TRG reports to the Board and will be supported by the MOPI-PMU.

5. **Regional Development Department (RDD), CBSL.** The RDD of CBSL will be responsible for administering the PCG under *Component 1, sub-component 1.3*. The RDD will be supported by technical assistance to train the staff in the administration of the PCG as needed. The RDD will also maintain the PCG-Operations Manual, develop a business plan and pricing model, continuously review the eligibility criteria for loans, establish a registration system for loans to be covered under the PCG, and manage the claims processing system under the project. MOPI and the CBSL will enter into a Memorandum of Understanding, outlining the respective institutional responsibilities of MOPI and CBSL in implementing Component 1.

6. **Ministry of Agriculture.** The following project-relevant units and entities would be set up or would be set up to support the implementation of Component 2.

- **Coordinating Committee.** A Coordinating Committee will be set up in MOA to be responsible for the regular coordination between MOA and the Provincial Councils of the participating provinces, based on the principles of the *Wadduwa Declaration* signed by the National and Provincial Ministers of Agriculture on September 30, 2015 and attached in the ATD-Operations Manual. The Coordinating Committee would ensure that project's sub-components 2.2 (Agriculture Technology Demonstration Parks) and 2.3 (Upgrading Production and Marketing Infrastructure) are fully coordinated with the participating project provinces based on the provincial devolved mandates for agriculture and rural development. The Coordinating Committee would be comprised of the MOA Project Director and include the Provincial Secretaries of Agriculture. It would convene on a regular basis as specified in the ATD-Operations Manual.

- Project Management Unit (PMU).** A PMU will be set up to work under the overall guidance of MOA and in coordination with the PPMUs and be responsible for overall day-to-day coordination and management of project activities to be implemented by MOA. The PMU would be responsible for annual work and budget planning; coordination with PPMUs in public outreach and community mobilization, procurement and contract management, fund withdrawal and financial management, including and financial reporting; technical and institutional implementation aspects, field supervision and acceptance checks; and training and capacity building. The PMU will comprise a Project Director, Deputy Project Director, Financial Management Specialist/ Accountant; Procurement Officer, M&E officer, Environmental Officer, and Social Development Specialist. Technical subject matter specialists can be appointed as needed.
- Specific tasks of the PMU will include: (a) managing the development of training and capacity building programs from farmers under *sub-component 2.1*; (b) in coordination with the PPMUs, advertising, soliciting, reviewing and appraising proposals for the establishment of agriculture technology demonstrations parks under *sub-component 2.2*; and (c) in coordination with the PPMUs, coordinate and manage the selection, preparation of feasibility studies, procurement, and implementation and contract management of infrastructure rehabilitation investments under *sub-component 2.3*. The PMU will coordinate with the Provincial Councils through the PPMUs. The PMU will also be responsible for regular reporting on project progress, achievement of outcomes and indicators, and implementation issues to the Bank, including the relevant project M&E indicators and safeguards implementation performance under Component 2. For this purpose, the PMU will be responsible for consolidating regular inputs from the PPMUs.
- The MOA-PMU will also be responsible for implementation of *sub-component 2.4 Analytical and Policy Advisory Support*. It will contribute to the technical and policy level consultations and discussions with the CPCC and the participating ministries through: (a) monitoring the consistency of economic policies across various parts of the government; (b) developing an annual program of studies and analytical work at the start of each year; and (c) monitoring implementation through periodic activity progress updates. The MOA-PMU will also organize an annual conference on agricultural policy with the participation of top policy makers in various concerned ministries and departments, academics and researchers, private sector representatives engaged in agriculture and food business (both domestic, imports and exports), and other stakeholders participating. Policy studies will be implemented under a framework agreement with a consortium of domestic and international researchers to provide top

quality, independent and objective analysis on important and topical issues in the agriculture and food sectors. The policy research consortium will be selected on a competitive bidding process and contracted for a period of three years based on an open competitive process.

7. Provincial Councils/ Provincial Ministries of Agriculture - Provincial Project Management Units (PPMUs). The Provincial Councils of the five provinces participating under Component 2 (Northern, North-Central, Central, Eastern, Uva) and will be represented in the project through the respective Provincial Ministries of Agriculture. These will have responsibility to: (a) participate as members in the Board of the Matching Grants Program for matching grant proposals relevant to their respective provinces; (b) be responsible for the implementation and technical supervision of the project activities implemented under *Component 2, sub-component 2.2. and 2.3* under the overall implementation responsibility of MOA; and (c) closely coordinate overall implementation with MOA and provide progress reports to the PMU on regular basis. A PPMU will be established in each province, housed in the Provincial Ministries of Agriculture, to carry out these functions. PPMU staff will include a provincial project director, a provincial FM specialist, a provincial environmental and social specialist, and one or two technical specialists.

8. Farmer Producer Organizations and Agribusinesses. Farmer Producer Organizations (registered under the Company Act) and Agribusiness SMEs that participate in the matching grants program will have implementation responsibility for the investment activities agreed and approved in the investment and business plans and as per their contractual arrangements with the MOPI-PMU. They will organize group members, implement the activities approved in the investment and business plans, provide training and technical support to their members; facilitate linkages between organizations and agribusinesses; support the introduction of new technologies, and provide technical training, technical exchanges and advisory services to their members. The contracted partners under the matching grant program will also will be responsible for outreach to and inclusion of poor community households. Details are described in the Matching Grants- Operations Manual.

9. International Agriculture Technology Service Providers. The implementation of agriculture technology demonstration parks under *Component 2, sub-components 2.2* will be managed through qualified technical service providers which will be contracted under the project on the basis of output and performance-based contracts. These services providers are expected to be firms of high international reputation that would be recruited on a competitive basis to deliver - *design, built, operate, transfer* - the agriculture technology demonstration parks to local communities in the

selected project areas. Contractual arrangements between the PMU/ PPMUs and the service providers will include the requirement to ensure that technology and knowledge is transferred to local stakeholders, including local extension services, agrarian services departments etc. Details of the arrangements are described in the ATD-Operations Manual.

Financial Management, Disbursements and Procurement

Financial Management

10. **Financial Management (FM).** Multiple implementing agencies are involved in the project. FM aspects, however, will only be handled by the two PMUs of MOPI and MOA, the RDD of CBSL, and the PPMUs in five participating Provincial Councils. Other implementing agencies would not be handling project funds. Specifically, FM responsibility rests with: (a) the MOPI-PMU for *Component 1, sub-components 1.1 and 1.2*; (b) the RDD of the CBSL for the PCG under *Component 1, sub-component 1.3*; and (c) the MOA-PMU and the PPMUs of the participating provinces for *Component 2, sub-components 2.1, 2.2, 2.3 and 2.4*. FM responsibilities include: (a) ensuring compliance with all financial covenants in the project legal agreements; (b) obtaining funds from the IDA Credit and managing such funds in an efficient, effective and transparent manner; (c) furnishing financial reports and project audit reports to IDA; and (d) carrying out overall management of payments and accounting functions of the project and any other requests relating to FM made by the Bank's task team. In addition, the MOA-PMU is also required to coordinate with the PPMUs, transfer the required funds to them and consolidate incurred expenditure of PPMUs and capture the same in the consolidated financial report and be overall responsible for the FM arrangements involving the PPMUs.

11. IDA credit proceeds will be used to finance eligible expenditures necessary to meet the development objectives of the project with due attention to considerations of economy and efficiency in accordance with the provisions of the Financing Agreement. If the Bank determines that the Credit has been used to finance ineligible expenditures, the amounts used for such expenditures shall be refunded to the Bank by the Government. All fund transfers would be between bank accounts and no cash transfers would take place.

12. **Financial management staffing.** In each PMU, the FM unit will be headed by a qualified and experienced accountant who preferably has prior experience in FM under World Bank or donor financed projects. The accountants will work on a full-time basis and provide guidance and direction to ensure that the FM arrangements are implemented to the satisfaction of the Government and the World Bank. FM support staff assigned or recruited for the project by the PMUs will work under the accountant to support the

management of routine accounting and FM activities of the project. The accountants in the PMUs will be responsible for managing day-to-day FM activities, including project budgeting, disbursement planning and forecasting, operation of the Designated Account (DA), including claiming replenishments, disbursement of project funds, making project payments, maintaining books and records for project financial transactions, submission of quarterly IUFs, preparation of annual project financial statements, and interacting with project internal and external auditors on audit issues and follow-up. The accountant in the MOA-PMU would also be responsible to manage fund transfers required by PPMUs on a periodic basis and coordinating with the PPMUs in obtaining the required information on reporting and consolidation and also managing all other FM aspects including auditing related to activities carried out by the PPMUs. The PPMUs, which are responsible for the day-to-day implementation of activities devolved to the Provincial Councils, will also recruit FM staff to work in close coordination the PMU of MOA on FM aspects under Component 2.

13. FM staff in the PMUs, PPMUs, and relevant staff from the RDD will be required to regularly attend trainings related to: (a) submission of claims to the World Bank disbursements unit under the IUFR-based electronic disbursement method; (b) the project design/ concept and other innovative arrangements; (c) additional due diligence and controls required in the handling of matching grants and community based operations. A significant portion of the training effort will be concentrated in the initial 18 months of implementation of the project to maximize impact.

14. FM capacity assessments were undertaken in MOPI, MOA, and on a sample basis, in selected Provincial Ministries of Agriculture. Overall FM arrangements were found to be working well within existing government systems with no significant issues observed. However, existing staff is limited in almost all of the assessed entities, which are working with capacity constraints. It was therefore agreed that the PMUs and PPMUs will recruit experienced dedicated FM staff who will be responsible to manage the FM aspects of the project. For the PCG, RDD of CBSL currently has staff who is handling activities of this nature and it is envisaged that the same staff would continue to handle the PCG component of the project.

15. **Budgeting.** MOPI and MOA will forecast the required resources to be budgeted for the project under their respective components. These forecasts will be incorporated into each ministry's budget which is then provided to MOF. A separate budget code (line item) will be set up by each of MOPI and MOA. The ministries would receive budget allocations from the Treasury for the project. The PMUs will prepare detailed implementation plans in line with the detailed project budget to clearly specify the funding requirement for each component and activity. The PMUs can implement the activities under the

project by using the budgetary provision provided for the project under the foreign funds.

16. **Fund flow and disbursement arrangements.** Separate DAs will be opened for MOPI and for MOA. The DAs will be operated and managed by the respective PMUs, which will maintain separate sets of accounts for the components under their respective responsibilities. Disbursements will be report-based. The PMUs will submit quarterly IUFs to the World Bank within 45 days of end of each quarter. The World Bank will advance funds to the DAs in adequate amounts to meet forecasted expenditures for the next 6 months, as reflected in the respective IUFs. Withdrawal applications will be prepared by the PMUs and replenishments to the DA will be based on the IUFs approved by the World Bank. The specific format of IUFs, designed in accordance with the guidelines issued by the World Bank are attached to negotiated Disbursement Letter.

17. Each PMU will also open a dedicated Sri Lanka Rupee (LKR) account. The PMUs will operate their accounts to make payments for eligible expenditures and track the inflow and outflow of project funds. Exchange losses arising due to the transfer from the DA to LKR account will not be considered eligible expenditure and will not be absorbed under the IDA credit. The PMUs have the option of requesting a direct payment to suppliers by: (a) the CBSL, using the proceeds in the DA; or (b) the World Bank against the credit for large payments. The PPMUs will also open dedicated project accounts in local currency for managing expenditures at the local level. The PMU (MOA) will transfer funds periodically to PPMUs on an imprest basis to manage activities related to them. PPMUs in turn will report back to the PMU of MOA on the incurred expenditure at their level on a monthly/quarterly basis for consolidation at PMU, MOA.

18. **Payments of matching grants.** Under *Component 1, sub-component 1.2*, MOPI will implement a matching grants program to farmer producer organizations and agribusinesses. It has been agreed with MOPI that the participating farmer producer organizations and agribusinesses will be considered as service providers and payments for these entities will be specified in the contractual agreements to be entered in between MOPI and the farmer producer organizations and agribusinesses. The tranches would be released based on milestones in the case of matching grants. Beneficiaries of matching grants will confirm expenditures in their reports to claim expenditures from IDA. The MOPI-PMU will review and check such expenditures on a sample basis from time to time.

19. **CBSL responsibility in managing the PCG.** The CBSL was established in 1950 under the Monetary Law Act (MLA) No.58 of 1949. It is a semi-autonomous body and, following the amendments to the MLA in December 2002, is governed by a five-member Monetary Board, comprising

the Governor of the CBSL as Chairman, the Secretary to the MOF and three members appointed by the President of Sri Lanka, on the recommendation of the Minister of Finance, with the concurrence of the Constitutional Council. The CBSL will designate staff to handle all activities of PCG, including financial management. CBSL will be responsible for entering into guarantee agreements as obligor with PFIs and for monitoring periodic reports sent by PFIs, and ensuring payment of valid claims received from PFIs. Staff will include a fully qualified chartered accountant to ensure the accuracy of the claims made by the PFIs. Staff will be using the existing CBSL systems and procedures which were assessed as adequate during project preparation. The CBSL has a sound internal control environment and a reliable financial reporting system. The CBSL is subject to continuous in-house internal audits and annual external statutory audits. CBSL has the FM arrangements and capacity in place to manage the PCG.

20. **Fund flow and disbursement under the PCG.** RDD will implement the PCG on behalf of CBSL. RDD will receive and review applications for guarantees from PFIs in accordance with the PCG Operations Manual. RDD will assess the eligibility of the client, sub-project and loan purpose, and sign the guarantees on behalf of the government under delegated authority. For the management of PCGs, the RDD will open a separate account (guarantee fund) in local currency. Disbursement into the local currency account (guarantee fund) will be made in tranches. The local currency account will have three sub-accounts to: (a) hold the funds for guarantees issued and to be used to pay out eligible claims; (b) receive guarantee fees and cover administrative cost; and (c) receive investment income from investing the funds in the first account. Disbursed IDA funds of Transfers to the Partial Credit Guarantee Account for purposes of issuing Partial Credit Guarantees under Part 1 (c) of the Project will remain in the guarantee fund for 5 years after project closing, after which the Bank and the Government will determine whether to continue the guarantee fund or refund the unutilized funds in the bank account of World Bank. The RDD will provide quarterly IUFs including guarantees committed and paid during the relevant period and audited financial statements for Bank's review, which will continue for the period as long as IDA funds remain in the guarantee fund. The guarantee fund (first sub-account) would be subject to the project audit.

21. **Retroactive financing.** Retroactive financing will be available for eligible expenditures under all project components and disbursement categories (see table 2), up to an aggregate amount not to exceed US\$ 25 million equivalent for payments on or after June 15, 2016.

22. **Accounting policies and procedures.** All project funds which will be disbursed through the CBSL DA will be routed through the PMUs and RDD which will be responsible for funding expenditures, accounting for them, and reporting on the financial and physical progress of the project. The PPMUs will

also keep separate accounting records for the components managed by them and ensure that acceptable FM arrangements are maintained for the portion of the funds handled by them. Accounting and FM staff of the PMU and PPMUs will liaise closely with technical staff, where a systematic verification of invoices need to be carried out prior to payment. The project's accounting practices will be governed by the Government's Financial Regulations. The implementing entities will maintain accounts on cash basis of accounting and will also comply with the Government's Finance Regulations and applicable Circulars. Bank accounts will be reconciled on a monthly basis and trial balances and financial statements will be prepared on monthly basis to facilitate monitoring of the progress of the project.

23. **Accounting system.** A computerized accounting system may need to be developed to be used by the PMUs/ PPMUs of the project. The system will need to facilitate generation of expenditure reports by budget classification/ component and sub components thus enabling comparison with the budget/components and effective monitoring of expenditure. A separate chart of accounts would be established for the project that enables separate accounting.

24. **Internal audit.** The project will implement an internal financial audit. The internal audit team will be appointed by the respective PMUs and work under the overall guidance of the CPCC. The internal auditors will assess whether the funds have been disbursed on a timely basis and used effectively and efficiently for the intended purposes. The internal audit will also examine the physical and qualitative aspects of the assets constructed or procured under the project. In view of the possibility of different financing percentages under matching grants depending on the beneficiary, the internal audit will also examine the financing percentage and amount paid under the Matching Grants part. This will provide further assurance on the legitimacy and the eligibility of the payments made from the credit proceeds. The findings of the internal audit team will be reviewed by an internal audit committee to be appointed by the CPCC for the project. The CPCC will share the internal audit reports with the Bank within 60 days of end of each quarter.

25. **External audit and audit reports.** The PMUs and RDD will prepare annual financial statements of the project for auditing by the Auditor General of Sri Lanka. The audit arrangements are agreed with the Auditor General's Department. The audit will cover all project activities carried out by the project entities and all payments made from the various project accounts. The audit will be conducted annually. Audit reports will be submitted within 6 months after the end of the financial year. MOPI and MOA will submit separate audit reports for their respective components. The PMUs are responsible for the timely submission of the annual audited financial statements to the World Bank. In addition, RDD will also submit a separate audit report for PCG component. The audit reports will be monitored in the Bank's Audit Reports

Compliance System in PRIMA. According to the Bank’s Access to Information Policy, the audit reports received by the Bank will be disclosed on the Bank’s external Website for public access.

Table 1: Audit Reports

Implementing Agency	Audit Report	Auditor	Date
PMU- MOPI	Project Annual Financial Statements	Auditor General	June 30 each year
PMU-MOA	Project Annual Financial Statements	Auditor General	June 30 each year
RDD-CBSL	Project Annual Financial Statements	Auditor General	June 30 each year

26. **Financial covenants.** The Financial Covenants of the project include: (a) audited annual project financial statements to be submitted to the World Bank no later than six months of the following financial year; and (b) IUFs to be submitted to the IDA no later than 45 days following the end of the reporting quarter.

27. **FM risk and implementation support plan.** FM risk is rated “high”. Consistent with a risk-based approach to FM supervision, FM supervision activities will consist of desk reviews of internal and external audit reports, including verification of the adequacy of the resolution of major audit observations; reviewing quarterly IUFs, supplemented by dialogue with PMU/PPMU staff as needed, especially during the initial years of project implementation. FM supervision mission will be conducted at least once every six months. Other supervision tools and resources, such as transaction reviews, site visits, etc., will be used in an effort to periodically monitor the adequacy of the FM system. In addition to the regular FM implementation support, the Bank team will provide training, capacity building and knowledge sharing for FM staff, internal audit staff, and the external auditor.

Disbursements

28. **Disbursement categories.** IDA will finance 100 percent of eligible expenditures, for goods, works, non-consulting services, consulting services, training and workshops, incremental operating costs of the project, including taxes. It will also finance matching grants and claims made under the PCG at 100 percent. The Government will cover the salaries and allowances of civil servants working for the project. The proceeds of the IDA Credit would be disbursed against eligible expenditures in the following categories:

Table 2: Disbursement Categories

Category	Amount of Financing Allocated (in US\$ equivalent)	Percentage of Expenditures to be Financed (including taxes & duties)
(1) Goods, non-consulting services, consultants' services, Incremental Operating Costs, and Training under Component 1.	7,410,000	100%
(2) Matching Grants under Component 1, sub-component 1.2.	44,100,000	100% of amounts disbursed
(3) Transfers to the Partial Risk Guarantee Fund for purposes of issuing Partial Credit Guarantees under Component 1, sub-component 1.3.	7,120,000	100%
(4) Goods, works, non-consulting services, consultants' services, Incremental Operating Costs, and Training under Component 2.	58,630,000	100%
(5) Non-consulting services, consultants' services, goods, works, Incremental Operating Costs, and Training under Component 3.	7,740,000	100%
Total	125,000,000	100%

29. **Incremental Operating Costs.** Incremental operating cost include the normal expenditures of the project, such as reasonable costs of goods and services required for the day-to-day implementation of the project, including maintenance of vehicles and equipment, fuel, office supplies, utilities, consumables, office rental and maintenance, bank charges, advertising expenses, travel of staff (including per diems, accommodation), and salaries of selected contracted support staff, but excluding salaries and salary top ups of civil servants of the Government.

Procurement

30. **Country procurement environment.** Public procurement in Sri Lanka is governed by the National Procurement Guidelines of 2006 (as amended), supplemented by a procurement manual and standard bidding documents. Procurement of consultancy services is regulated by the Guidelines on the Selection and Employment of Consultants, dated August 2007. The Guidelines, manuals, and standard bidding documents constitute the comprehensive public procurement regulatory framework. They include a menu of procurement methods, specify the contents of bidding documents and evaluation criteria, and adequately respond to the procurement needs of different entities. The Guidelines apply to all national procuring entities and provincial entities using national budget funds. Procurement is decentralized to entities both at the central and provincial levels. The Bank's country procurement assessment in 2011 identified certain areas for improvement, including updating of the National Procurement Guidelines. The Government has recently confirmed that it seeks to modernize the public procurement system.

31. **Capacity assessment.** Procurement risk is assessed as "high". A preliminary assessment of MOPI and MOA, which still have to establish the respective PMUs, indicates that these ministries do not have or have only limited experience in managing Bank-funded projects. The respective Chief Accountants appointed in each ministry are responsible for procurement and are assisted by other accounting cadre officials. These are usually familiar with the domestic procurement guidelines and regulations. A detailed procurement assessment will be carried out as soon as the PMUs are established and adequate staff has been put in place. Procurement risk rating will be reassessed during implementation.

32. Procurement capacity and arrangements were also reviewed at the Provincial Council of the Northern Province, as one of five participating provinces that will establish PPMUs. The Deputy Chief Secretary (Finance) is appointed as focal person to monitor procurement under PPMU management. The Deputy Chief Secretary (Finance) is well familiar with the Bank's procurement guidelines and has introduced the Bank's sample procurement plan within the Northern Provincial Council for better monitoring the procurement process. The PPMU is yet to be established. It would be housed in the Provincial Ministry of Agriculture under the Provincial Council. Similar arrangements would be in place in the other five participating provinces. Procurement capacity of the PPMUs will be assessed as soon as they have been established along with the formulation of adequate capacity building and risk mitigation measures. Once the project staff is identified, the Bank will develop a training module for capacity building of the staff who would be managing procurement under the project.

33. **Procurement risk and mitigation measures.** Main risks identified include: (a) limited exposure of procurement staff to Bank procurement

guidelines and requirements; (b) absence of a system for regular monitoring of procurement performance, complaints and compliance; (c) limited experience in dealing with fraud and corruption issues; and (d) limited experience in managing procurement and contracts. The following mitigating measures have been identified: (a) recruitment of a centralized procurement office staffed with dedicated specialists in the PMU/ PPMUs; (b) procurement workshops and clinics to deal with project-specific needs; (c) project management workshops highlighting integration, interdependence, and the need for monitoring of procurement; (d) designing a procurement monitoring system, progress reporting, and capacity building; (e) workshops addressing contract management; and (f) project websites with procurement information.

34. **Procurement guidelines.** All works, goods, consulting services and non-consulting services under the project will be procured in accordance with the World Bank's *"Guidelines: Procurement of Goods, Works, and Non-consulting Services under IBRD Loans and IDA Credits and Grants for World Bank Borrowers dated January 2011 (revised July 2014)"*, and *"Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers dated January 2011 (revised July 2014)"* or the most recent revisions.

35. **Procurement methods.** The following methods will be applicable for all works, goods and non-consulting services to be procured under the Project, consistent with the applicable Bank's Procurement Guidelines:

- a) International Competitive Bidding (ICB);
- b) National Competitive Bidding (NCB);
- c) Shopping (S);
- d) Framework Agreements (FA);
- e) Direct Contracting (DC);
- f) Procurement from United Nations Agencies; and
- g) Community Participation in Procurement.

36. **National Competitive Bidding (NCB).** All goods, works, and non-consultant services procured under the NCB method will be subject to the following requirements to ensure economy, efficiency, transparency and consistency with the applicable Procurement Guidelines:

- a) Only the model NCB bidding documents agreed with the Bank shall be used for bidding.
- b) Invitations for bids will be advertised in at least one widely circulated national daily newspaper, and bidding documents will be made available at least 21 days before, and issued up to, the deadline for submission of bids.
- c) Qualification criteria will be stated in the bidding documents, and if a registration process is required, a foreign firm declared as the lowest

evaluated responsive bidder shall be given a reasonable time for registering, without let or hindrance.

- d) Bids will be opened in public in one location, immediately after the deadline for the submission of bids, as stipulated in the bidding document (the bidding document will indicate the date, time, and place of bid opening).
- e) Except in cases of *force majeure* or exceptional situations beyond the control of the implementing agency, extension of bid validity will not be allowed.
- f) Bids will not be rejected merely on the basis of comparison with an official estimate.
- g) Except with the prior concurrence of the Bank, there will be no negotiation of price with bidders, even with the lowest evaluated bidder;
- h) A bid security will apply only to the specific bid, and a contractor's performance security will apply only to the specific contract for which they are furnished.
- i) Bids will not be invited on the basis of percentage premium or discount over the estimated cost, unless agreed with the Bank.

37. Community participation in procurement for matching grant sub-projects. Under component 1, the project will support a matching grant program for value chain investments. These investments will require matching grant recipients to carry out procurement actions. The procurement guidelines applicable to procurement under the project will also be applicable to such sub-projects. Specifically, sub-projects funded under the matching grant program will follow community participation in procurement. Matching grant applicants will be required to include a procurement section in the investment proposal, which will be subject to review during the matching grant application process. Details on procurement are included in the Matching Grant Operations Manual. The MOPI PMU and the Regional Offices will be responsible for supervising and monitoring procurement implementation under matching grants.

38. Selection of consultants. Consultant services required will include: expertise in M&E, financial management, procurement, and specialized technical areas, communications and outreach, training, gender, and environmental and social sciences. Short lists of consultants for services estimated to cost less than US\$ 300,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

39. The following methods will apply for selection of consultants, consistent with the relevant sections of the Bank's Consultant Guidelines:

- a) Quality- and Cost- Based Selection (QCBS);
- b) Quality-Based Selection (QBS);

- c) Selected under Fixed Budget (FBS);
- d) Least Cost Selection (LCS);
- e) Selection based on Consultants' Qualifications (CQS);
- f) Single Source Selection (SSS);
- g) Selection of Particular Types of Consultants - UN Agencies; and
- h) Selection of Individual Consultants.

40. The Bank's standard request for proposal document will be used for all consultant services. The document may be customized, as appropriate, for small value assignments (less than US\$ 300,000).

41. The appointment of procurement committees and technical evaluation committees will follow government procedures.

42. **Complaint handling mechanism.** To promote an open, fair, and transparent procurement process, the implementing agencies will administer a complaint handling system for the project. The composition of the complaint handling committee, the form of complaint register, response time, decision making mechanism and other features will be outlined in details in the Operational Manuals and subject to Bank's review and clearance.

43. **Responsibilities of procurement staff.** Each PMU/PPMU will ensure the availability of the services of at least one qualified procurement specialist who will be responsible for: (a) managing all the procurements under their respective project components; (b) design and implement a procurement performance and compliance monitoring system; (c) project-specific website and a procurement related grievance handling system; (d) training to enhance the capacity of the project staff; and (e) training of internal auditors on procurement. The procurement specialists will also prepare/ revise the procurement chapters in the Operational Manuals.

44. **Procurement information and documentation.** The following procurement information will be prepared and reported by each PMU/ PPMU: (a) complete procurement documentation for each contract, including bidding documents, advertisements, bids received, bid evaluations, letters of acceptance, contract agreements, securities, complaints (if any) and their resolution and related correspondence will be maintained by the implementing agency in an orderly manner, readily available for audit; (b) contract award information will be promptly recorded and contract rosters as agreed will be maintained; and (c) the PMU will submit semi-annual reports with (i) revised cost estimates, where applicable, for each contract; (ii) status of on-going procurements, including a comparison of originally planned and actual dates of the procurement actions, preparation of bidding documents, advertising, bidding, evaluation, contract award and completion time for each contract; and (iii) updated Procurement Plans, including any revisions in dates or cost estimates, for procurement actions.

45. **Procurement thresholds.** Following table indicate the procurement thresholds which will be used for determining the procurement method and the prior review requirements.

Table 3: Procurement Thresholds (High Risk)

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts/Processes Subject to Prior Review
Works	≥ US\$ 10,000,000	ICB	All contracts
	< US\$ 10,000,000	NCB and Framework Agreements	<ul style="list-style-type: none"> • First contract; and • All contracts over US\$ 5 million equivalent
	≤ US\$ 50,000	Shopping	None
		Direct Contracting	All contracts
Goods and non-Consulting Services	≥ US\$ 1,000,000	ICB and Framework Agreements	All contracts
	< US\$ 1,000,000	NCB and Framework Agreements	<ul style="list-style-type: none"> • First contract; and • All contracts over US\$ 0.5 million equivalent
	≤ US\$ 50,000	Shopping	None
Consultant Services (firms)	> US\$ 500,000	All competitive methods; advertise internationally	All contracts
	≤ US\$ 500,000	All competitive methods; advertise locally	<ul style="list-style-type: none"> • First contract; and • All contracts over US\$ 0.2 million equivalent
		Selection of Particular Types of Consultants - UN Agencies	All contracts
Individual Consultants		IC (Section V of Consultant Guidelines)	<ul style="list-style-type: none"> • First contract; and • All contracts over US\$ 0.1 million equivalent

46. **Procurement Plan.** The PMUs (MOPI and MOA) will maintain and update a Procurement Plan for their respective components. The Procurement Plan will provide the basis for the procurement methods and prior review requirements. It will also be available in the project database and on the Bank's external website. The Procurement Plan will be updated by the PMUs in agreement with the Bank prior to the implementation support mission or as required to reflect actual project needs and improvements in institutional capacity. The project will only finance those procurements which are included

in the Procurement Plan and agreed with the Bank in a manner as stated in the applicable procurement guidelines.

47. **Procurement supervision.** The Bank will conduct semi-annual implementation support missions to review the procurement performance of the project. The PMUs will provide semi-annual procurement progress reports to the Bank that include, at the minimum, status updates of Procurement Plan implementation, procurement monitoring reports and analysis of procurement performance, including status on procurement related complaints.

Environmental and Social (including safeguards)

Environment

48. **Environmental Assessment (OP/BP 4.01).** The project is classified as an Environmental Category B project. It is expected to bring positive environmental benefits to the project areas through the introduction and expansion of modern technology applications that help improve current cropping patterns and farming methods, increase efficiency in the management of water resources, protect agriculture soils, and roll out integrated pest management as part of an overall good agricultural practices approach. However, the project may involve activities that could have potential adverse environmental impacts if not mitigated properly. Under *Component 1, sub-component 1.2*, the project would support commercial agriculture and agro-product processing at the levels of individual farms, farmer producer organizations, and agribusinesses. Under *Component 2, sub-components 2.2 and 2.3*, the project would support investments to improve rural infrastructure, including improvement of existing access roads and tracks, rehabilitation of small irrigation facilities, land preparation, construction of small market facilities, and others. Potential adverse impacts could result from the agriculture intensification, especially the overuse or misapplication of fertilizer and pesticides, and result in water and soil contamination. Agro-processing investments could require higher consumption of water and energy and generate solid waste. Investments in rural infrastructure could result in dust, noise, spoil dumping on farmlands, and lead to blockage of irrigation facilities and other construction phase impacts etc. unless managed in a sound manner. These impacts, which are reversible and can be managed with specific due diligent mechanisms, are expected to be prevented through the project's overall focus on technology improvements and, if they materialize, would be moderate and easily mitigated.

49. **Environmental Assessment and Management Framework (EAMF).** The project's process-oriented and demand-driven framework approach does not allow to determine project investments and specific project locations for investments under *Components 1, sub-component 1.2 and*

Component 2, sub-components 2.2 and 2.3, at the time of appraisal. Specific investments and locations will instead be determined and decided upon during implementation as part of the project's matching grant program and the detailed design of the proposed agriculture technology demonstration parks. An EAMF has been prepared to guide the screening and selection of such activities from an environmental perspective and to manage their environmental impacts during implementation and operation. The EAMF defines the screening and selection criteria for sub-projects and sites. It specifies the content, procedures and responsibilities for the preparation and implementation of individual sub-project Environmental Assessments (EAs) and Environmental Management Plans (EMPs), including public consultation, to ensure compliance with both domestic regulations in Sri Lanka and the World Bank's OP/ BP 4.01. The EAMF will also be applicable to Component 2, sub-component 2.4, to ensure that the principles of the Bank's safeguards policies are adhered to in project supported-advisory and policy support interventions and resulting implementation.

50. **Pest Management (OP/BP 4.09).** The expansion, intensification and diversification of agricultural activities under the project is likely to lead to changes in the application of pesticides for pest and disease control. As per the Bank's safeguard policy, a Pest Management Plan (PMP) has been prepared based on Integrated Pest Management (IPM) principles. The PMP describes the country's relevant national regulatory framework, current status of pest and disease control, monitoring and supervision mechanism, major experience and problems in pest management, as well as lessons learnt from past projects. It specifies a range of non-chemical methods and a training and monitoring program to facilitate implementation. A list of chemicals needed for the project that meet Bank requirements, namely, comply with the World Health Organization's recommended categories, has been included in the PMP.

51. **Natural Habitats (OP/BP 4.04).** Project-supported agriculture-related activities would take place on existing farmland and no expansion or creation of new farmland into fragile habitats is foreseen. The project will bring improvements to agricultural practices that are expected to reduce the pressure on these areas and the likelihood of encroaching. Some activities might negatively impact natural habitats because of the proximity of project interventions, such as the construction and/or upgrading of rural infrastructure to such habitats. OP 4.04. will therefore apply. Relevant preventive and mitigation measures to ensure the protection of local ecosystems and habitats will be included in the sub-project EMPs, as needed.

52. **Safety of Dams (OP/BP 4.37).** Interventions under *Component 2, sub-component 2.3* may include the rehabilitation and up-grading of small-scale irrigation infrastructure and existing water tanks (managed by the Agrarian Services Departments) linked to the agriculture technology demonstrations parks under *sub-component 2.2*. OP/BP4.37 applies because of the

dependence on water conveyance and control via the irrigation systems and the links of smaller tanks with the water storage and operation of upstream medium/large dams, which is typical for Sri Lanka's historical cascading tank and irrigation infrastructure. There is an ongoing and effective dam safety program in Sri Lanka targeting all large to medium scale dams (upstream of small irrigation structures) and smaller dams along cascading irrigation systems. Full-level inspections, dam safety assessments, and safety remedial measures have already been conducted and details are documented by the Government satisfactorily to the Bank and in compliance with the provisions of OP/BP4.37 on Dam Safety.

53. Typical interventions under the project would include repairs and improvements, such as protection of downstream slopes of dam embankments, providing toe-filters and toe drains to improve downstream drainage and arresting excessive seepage flows, upstream slope protection strengthening of the structural stability of spillways and sluice structures etc. The anticipated project activities will result in an overall enhancement of the safety of dams (tank bunds) against the risk of failure. The project, however, will not finance construction of new tanks (new dams/tank bunds). Small dams included under the project would be less than 5 meters in height.

54. All irrigation infrastructure related interventions would require a screening, as per the EAMF, to verify whether upstream medium to large scale dams are present and connected hydrologically, and to assess their dam safety status and, if needed outline follow-up actions. If the presence of upstream and hydrologically connected dams is confirmed and these have not been rehabilitated or strengthened and thus have Dam Safety implications, the following will be conducted: an inspection and evaluation of the safety status of the dam, its appurtenances, and its performance history; and a review and evaluation of the mandated dam owners operation and maintenance procedures. A report will be provided on the findings of the review, including recommendations for any remedial work or safety-related measures necessary to upgrade the existing dam to an acceptable standard of safety. Necessary additional dam safety measures or remedial work may be financed under the project. When substantial remedial work is needed, these will be undertaken using the following procedures: a competent professional will be recruited to design and supervise the work. Because the size of dams would be less than 5 meters in height, qualified professionals will be hired by MOA to design and supervise the work.

55. **Capacity for managing project environmental impacts.** MOPI and MOA have no prior experience with Bank-funded projects and the capacity to manage environmental safeguards in project implementation is limited. In addition, MOPI is a new entity. MOA has been long established but does not partake in the implementation of national-level environmental regulations. MOA institutional capacity is weak. MOA has however sufficient capacity and

technical expertise in pest management because MOA is implementing national programs in pest control and pesticide management. In order to address capacity weaknesses, the PMUs under MOPI and MOA will recruit full-time qualified environmental specialists prior to the commencement of implementation to be responsible for the implementation of the project's environmental regulations, including the EAMF, PMP and EMPs. Environmental Specialists will also be recruited into the PPMUs. In addition, the project will provide training in environmental management and on the ESMF, PMP and general environmental management to improve overall institutional capacity.

Social

56. **Project areas, poverty, and beneficiaries.** The project is national in scope, but specifically targeting districts in the lagging agriculture regions of the Northern, Eastern, and Uva Provinces that are characterized by either high poverty rates or high absolute numbers of poor households or both. In addition, the project will pilot innovative interventions in the Central (Matale District) and North-Central (Polonnaruwa District), which are important agriculture districts. *Under Component 2, subcomponent 2.2. and 2.3,* the proposed agriculture technology demonstrations parks and the complementing rural infrastructure investments will cover 7 priority districts, including Jaffna (poverty headcount 6.6 percent; approximately 9,000 poor households), Mullaitivu (24.7 percent; 6,000 poor households), Anuradhapura (6.6 percent, 15,000 poor households), Batticaloa (14.5 percent, 18,000 poor households), and Moneragala (18.8 percent, 23,000 poor households); Matale (7.8 percent), and Polonnaruwa (6.7 percent).

57. It is estimated that at least 14,000 farm households would benefit directly from technology demonstrations through improved production capacity, improved input supply and management, access to better and more efficient technology, improved market linkages, and opportunities for value addition. In addition, an estimated 20,000 households would benefit from project support to professional farmer organizations establishment and capacity building as well as eligibility to access the matching grant program or commercial financing. The matching grant program itself, albeit demand- and business-driven, is expected to increase the reach to poor farming households significantly as well. The project will pay special attention to the inclusion of women and women-headed households into the matching grant program, the technology demonstrations, and in the capacity building program.

58. **Opportunities for positive social impacts.** Improved agriculture productivity and value chain development are expected to create incremental economic returns for farmer households. Capacity building and the creation or improvement of farmer producer organizations can be expected to bring more secure market access and access to farm inputs to poorer households

since they will be able to sell their products through such arrangements. The project can maximize this impact through focusing on building the management and entrepreneur skills among the members of farmer producer organizations. The formalization of producer organization is likely to enhance the individual and collective self-development capacity, especially if training combines skill development with managerial and business related capacity building. In addition, the improvement of local infrastructure will have positive impacts, especially if infrastructure needs are carefully identified to serve both agricultural production needs and the needs of local communities. The project will seize opportunities to ensure a pro-poor approach in the development of value chains in the project areas. The formalization of farmer producer organizations would help establish more transparent rules and enhance local entrepreneurship. There is also an opportunity to develop a new strategy for quality agricultural products in poor areas, taking into account both modern production standards and the unique features of local products when these are in increased demand in domestic and international markets.

59. Risks of negative social impacts. While no large scale risks or risks of irreversible negative social impact are foreseen, a number of potential risks deserve close attention during implementation, including the following: (a) there may be an overall capacity constraint at the level of poor farmers to transit from subsistence farming to more commercialized agriculture with higher levels of technology input, which will require specific attention to training and continuous support; (b) women-headed and poor households may be especially vulnerable and their participation in project activities might be limited, resulting in inequitable production arrangements within farmer producer arrangements or partnership arrangements with agribusinesses; (c) despite more efficient organizational arrangements for agriculture production, market risks will remain substantial, and timely access to market information will remain challenging; this may result in farmer producer organizations not being able to assess market and demand conditions adequately; (d) the project needs to address the lack of financial awareness of participating stakeholders to fully understand the implications of commercial borrowing and consequences of default; (e) modernized agriculture requires more investment while some of the proposed commodities may provide returns only with some time lags; poorer households may therefore face increased economic risk because of their motivation to participate in the project; (f) the producer arrangements promoted under the project - farmer producer organizations registered formally under the Company Act (2007) - will require the organization and streamlining of large numbers of smallholder producers under unified production and land management arrangements, requiring special attention to ensuring voluntary and fully informed participation.

60. Specific risks and opportunities for women. The project is expected to generate entrepreneurial and employment opportunities for women, especially women-headed households, in farmer producer

organizations, and will provide them with training in technology and business skills. The project will need to ensure that potentially interested women will have sufficient access to project-related information through especially targeted outreach activities to access and benefit from the project. In addition, investments proposals for women-led producer organizations to the matching grant schemes will receive higher scoring, and upon approval, can receive a higher matching grant share in the total investment (as outlined in the Matching Grants Operations Manual). In addition, the project will make specific efforts to reach out to women during the information campaigns to ensure that opportunities for project support for economic activities are well understood and accessible.

61. Citizen engagement and gender inclusion. The project's demand-driven framework approach means that the participating communities and project stakeholders, in particular the existing and new farmer producer organizations and agribusinesses, will only be identified during project implementation. The Operations Manuals prepared therefore provide guidance on: (a) citizen engagement, consultation, and stakeholder participation in prospective sub-projects under *Component 1, sub-component 1.2*, and *Component 2, sub-component 2.2 and 2.3*; and (b) the identification of social risks and appropriate mitigation measures to be adopted under each sub-project. All sub-projects will also be subjected to a social screenings process to ensure: (a) adequate and voluntary participation in project-supported agriculture-related productive interventions; and (b) outreach to women-headed households and women-led farmer producer organizations; and (c) poor households. In addition, Sri Lanka's current land tenure regime significantly disadvantages women as land rights are usually allocated to men. Through the policy component, the project will seek to address gender and land issues through analysis and advocacy.

62. Involuntary Resettlement (OP/BP 4.12). No involuntary resettlement is envisaged under the project. Most project-supported physical interventions facilities are expected to be of relatively small scale at household or village levels on existing farmland of households that are participating in the selected sub-projects on a voluntary basis, following consultation. Specific activities would involve, for example, some land preparation, the construction of small scale household-level green houses, and the installation of on-farm irrigation equipment. In addition, the construction of village-level storage facilities and facilities for product processing and others at the level of producer organizations or agribusinesses are likely to require some land and may generate a land acquisition case, if land is not donated voluntarily or can not be made available from State land.

63. Resettlement Policy Framework (RPF). A RPF has been prepared to cover such cases where the need for land acquisition may arise in project-supported sub-projects, including infrastructure investments. The RPF will

guide the land acquisition process and the preparation of sub-project specific RAPs in compliance with the domestic legal and policy framework for land acquisition as well as OP 4.12. The RPF has set key principles and procedures for land acquisition, covering documentation, compensation and mitigation principles, a grievance redress mechanism, M&E, and institutional arrangements. The RPF also includes measures to minimize the land tenure risk and states a principle of voluntary and fair land management in project-supported farmer producer organizations. Households that do not want to join a farmer producer organization in their community, will be able to stay out without being impacted by the neighboring production base. Short-term land rentals based on clear contractual arrangements will be promoted instead of long-term land leasing, so that households can actually opt out of a producer organization.

64. Indigenous Peoples (OP/BP 4.10). Some of the indigenous communities known as ‘forest dwellers’ live in remote locations and close to commercial forests and national forest reserves in the country. Their livelihood is depended on forest resources and small scale rain-fed agriculture. The main investments of the project are located in the dry zone and focused on irrigation-based farming. The project does not intervene in areas of commercial forests or in close proximity to forest areas therefore forest dweller communities will not be affected through proposed agriculture modernization interventions.

65. Safeguards M&E. Sri Lanka has demonstrated overall good capacity for implementing and monitoring environmental and social safeguards in Bank-financed projects. Implementation experience and capacity, however, is limited in MOPI and MOA, which both have not implemented Bank-financed projects previously. The PMUs of MOPI and MOA and the PPMUs will therefore be staffed each with a dedicated environmental specialist and a social safeguards specialist to be responsible for environmental and social safeguards implementation and supervision under the respective project components and activities in compliance with the project’s safeguards regulations. The environmental and social safeguards specialists will be responsible for coordinating and overseeing the implementation of the EAMF/EMP, PMP, as well as the RPF and RAPs (as required).

66. Public disclosure. Consultations with beneficiaries and stakeholders will be conducted as part of the participatory process for designing and implementing sub-projects under the main investments components. Providing accurate and detailed information about the project at the planning stage (through baseline surveys) will help prevent misconception; build trust between the participating and affected population and the project; and enhance transparency and ownership. Consultation will aim at: sharing information; listening to feedback; engaging citizens in decision making; and involving stakeholders in participation in the planning, implementation, and

evaluation processes. Consultations will also enable the project team to hold joint discussions with the beneficiary communities; share ideas about planning and implementation; and benefit from local knowledge to take more informed decisions. Consultation will take place in form of public meetings, focus group discussions, sub-project specific community consultations as part of the social screening process and direct one-to-one consultations. A Public Information Booklet (PIB) will be used as an information dissemination tool to inform vulnerable and poor farmer groups, including women, about the project and the opportunity to participate in project activities. The project's overall safeguards documents, including the EAMF, PMP, and RFP have been reviewed by the World Bank and disclosed publicly through the Bank's Infoshop and locally on the ministries' websites (April 21 and April 25, 2016). RAPs and EMPs, as applicable for specific sub-projects, will be disclosed during implementation as they become available during implementation.

Monitoring & Evaluation

67. The Result Framework describes the gender disaggregated PDO-level outcome indicators and the component-level intermediate indicators, including core sector indicators, and respective baselines and mid-term and end-of-project targets (Annex 1). Project M&E and reporting will be under the responsibility of the PMUs of MOPI and MOA and the PPMUs for the components and activities under their respective implementation responsibilities. A designated M&E officer will be appointed in each PMU and each PPMU for compiling M&E data for consolidation into the semi-annual and annual project progress reports. A simple computerized progress monitoring system will be set-up at the PMU/ PPMU levels to help track and document physical, institutional, and financial project progress. Independent surveys will be conducted to establish baselines (with particular focus on gender disaggregation) for the project to quantitatively monitor poverty outreach and impact of the project as much as possible at mid-term and at the end of the project. M&E related investment cost, including the costs for M&E of social and environmental management performance and independent, are included in the project's detailed cost tables.

68. In addition, the participating ministries will be responsible for implementing an overall internal audit program to track progress and performance of the matching grants program and of establishment of modern agriculture technology demonstration parks, including adherence to the provisions in the Operation Manuals and for ensuring transparency in the allocation of project funds for commercial investments under the matching grants program. This internal audit will follow existing government procedures. Findings will be made available to the CPCC and the Bank.

Annex 4: Description of the Partial Credit Guarantee

SRI LANKA: AGRICULTURE SECTOR MODERNIZATION (P156019)

1. The PCG will take into consideration the World Bank Group principles on designing PCG schemes issued in December 2014 and covering the governance, management, administration, sustainability, and monitoring of PCGs³. Although these principles are primarily for independent legal government entities that have specifically been set up to offer Credit Guarantee Schemes (CGS), a number of principles are relevant for the PCG designed for this project. These include:

- The CGS should have adequate funding to achieve its policy objectives (Principle #2);
- The CGS should have sound management, internal controls and risk management systems (Principles #6, #7 and #8);
- The CGS should adopt clearly defined and transparent eligibility and qualification criteria for lenders and credit instruments also reflecting the trade-offs between outreach, additionality and financial sustainability (principles #9 and #10);
- The guarantee issued should be partial, thus providing incentives for lenders to assess risks prudentially and correctly (Principle #11);
- The CGS should adopt a transparent and consistent risk based pricing policy to ensure that the guarantee scheme is financially sustainable (Principle #12);
- The claim management process should be efficient, clearly documented and transparent, providing incentives for loan loss recovery (Principle #13);
- The CGS should be subject to financial reporting (Principle #14);
- The performance of the CGS, in particularly its outreach, additionality and financial sustainability, should be periodically evaluated (Principle #16).

2. The PCG will be administered by Regional Development Department (RDD) of the CBSL that has demonstrated prior experience with administrating financing schemes for farmers and SME agribusinesses through both public and private financial institutions. On behalf of MOF, RDD is administering the New Comprehensive Rural Credit Scheme (NCRCS) which provides interest rate subsidies and partial credit guarantees for crop loans (working capital loans) with beneficiary farmers engaged mostly in paddy, maize, onion, chilli

³ The Principles can be accessed at:
<http://documents.worldbank.org/curated/en/2015/12/25665897/task-force-design-implementation-evaluation-public-credit-guarantee-schemes-small-medium-enterprises-principles-public-credit-guarantee-schemes-smes>

and potatoes.⁴ The NCRCS is for loans for annual recurrent input purchases by individual smallholder farmers (mostly for amounts under US\$1,000). In addition, in the 2016 budget, the Government authorized the allocation of LKR 500,000,000 for a guarantee fund for SME financing. The Asian Development Bank in a recent SME finance project is providing lines of credit for SMEs and also contributes to the guarantee fund. The Government plans to create a specialized Guarantee Agency to administer credit guarantees. Once created, the agency can also administer the PCG under this project.

3. The PCG under the project would be used for longer term and larger productive investments. It could also be used for working capital needs associated with these new productive investments. All commercial loans given to sub-projects benefiting from the Matching Grant Program are required to be registered under the PCG by the PFIs. This approach will keep the risks undertaken by the PCG lower and will avoid the problem of the adverse selection by PFIs.

4. RDD will implement the PCG on behalf of CBSL. RDD will receive and review applications for guarantees from PFIs in accordance with the PCG Operations Manual. RDD will assess the eligibility of the client, sub-project and loan purpose, and sign the guarantees on behalf of the government under delegated authority. RDD will receive claims and process claim payments, handle post claims settlements, and have the capacity to inspect records of the PFIs and carry out field visits pertaining to any loan guaranteed under the scheme.

5. RDD will open a separate account (guarantee fund) in local currency for the management of PCGs. Disbursement into the local currency account (guarantee fund) will be made in tranches. The initial and subsequent disbursements will be based on the PCGs committed during the quarter relating to the IDA funds allocated to the PCG as claimed in the IUFR. Subsequent disbursement will be calculated based on projections on PCG utilization. Part of the premium (guarantee fees) can be used to defray administrative costs of the PCG incurred by the RDD. The funds in the guarantee fund can be invested by RDD in highly liquid and safe assets as to generate some income to contribute to the cost of administering the guarantee and enable some growth of PCG funds. The local currency account will therefore have three sub-accounts to: (a) hold the funds for guarantees issued and to be used to pay out eligible claims; (b) receive guarantee fees and cover administrative cost; and (c) receive investment income from investing the funds in the first account. Disbursed IDA funds will remain in the guarantee fund for 5 years after project closing, after which the Bank and the Government will determine whether to continue the guarantee fund or refund

⁴ The use of partial credit guarantee under NCRCS is mandatory for all the loans that receive the interest subsidy.

the unutilized funds in the bank account of World Bank. The RDD will provide quarterly IUFs and audited financial statements for Bank's review, which will continue for the period as long as IDA funds remain in the guarantee fund. The guarantee fund would be subject to the project audit.

6. For participating PFIs wishing to benefit from the PCG, a pre-qualification process will be undertaken. The eligibility criteria for the selection of PFIs will abide by the guidance and principles as described by *"Investment Project Financing-Financial Intermediary Financing"*, April 2014 (OP/BP 10.0). PFI eligibility criteria will be transparent (documented in the PCG Operations Manual) and open to all institutions that have an interest to lend to the beneficiaries of the project. Eligibility criteria will be based on meeting the current prudential requirements on: capital adequacy, solvency, liquidity, portfolio quality (non-performing loans), as well as credit policies, and existence of safeguard policies and corporate governance standards. Prior experiences in lending to the agricultural sector, farmers, farmer producer organizations, agribusinesses will be considered as will prior experience with similar schemes in Sri Lanka. Institutions which do not meet the criteria at project inception, but are nevertheless interested in participating, will be allowed to re-apply. Based on information from the NCRCS, it is expected that up to 6-7 PFIs will be selected initially although there is no limit being set and more institutions can be included as the PCG is rolled out and based on meeting the eligibility criteria set out. PFIs can be both private banks and public sector (state owned) banks⁵.

7. Loan eligibility criteria are included in the Operations Manual for the Matching Grant Program and for the PCG to ensure that the loans are for productive purposes within the scope of the matching grants sub-component of the project. It is important to bear in mind that the ultimate project beneficiaries are farmers, registered farmer producer organizations (e.g. as companies such as for example peoples companies) and agribusiness SMEs (in processing, trading, etc.).

8. Indicative purposes of loans for investments eligible for PCG coverage would include: (a) mechanization equipment, tools, machinery; (b) farm and off farm infrastructure such as minor irrigation works, water harvesting structures, storage facilities/warehouses, cold storage, greenhouses; (c) soil conservation measures such as terracing, land leveling and watershed treatments; (d) seeds for seed production; (e) inputs, including seeds, fertilizers, other vegetative material and agriculture inputs, as required under new technologies or diversification production models; and (f) agro-processing and marketing facilities.

⁵ Currently, three public state owned banks and two private banks account for 97% of all agricultural loans for the New Comprehensive Rural Credit Scheme that includes a partial credit guarantee component. Under NCRCS there are twelve banks registered as PFIs.

9. Loans for investments not eligible for PCG coverage would include loans for: (a) regular operating expenses of the firm or farmer organization not directly associated with the productive investment; (b) land acquisition; (c) large civil works such as the construction of new buildings that are not productive assets; and (d) financial participation in a firm's equity.

10. Coverage of the PCG will be partial as per the World Bank Group Principles and in order to reduce moral hazard and entice banks to do a proper credit risk assessment and loan monitoring. The PCG will operate on an individual loan basis and pricing will be designed in order to minimize market distortions. Only those loan applicants who are also benefitting from capacity building and matching grants under the project will be eligible for consideration under the PCG scheme at this point of time. This will not only help in reducing default risk but also in ensuring that the PCG adheres to the project target group. The PCG will cover 50% of the loan amount *pari-pasu*. The proposed maximum loan size eligible for PCG could be US\$ 500,000 (or higher on a case by case basis) with maximum loan maturity of 7 or 8 years⁶.

11. Assessing default risk for farmer producer organizations and agribusiness SMEs and recoveries conditional on default in Sri Lanka may be challenging given that such data and information may not be widely available nor detailed models yet exist. The PCG will therefore operate on an individual loan level rather than a portfolio level. The project will work with PFIs during implementation to develop pricing and recovery models as to minimize market distortions⁷. Pricing will consider the risks of such loans to be covered by the PCG and should also cover the administrative costs of the PCG. Efforts will be made for the pricing to best reflect risks and costs. Some guidance will be obtained from the existing partial guarantee scheme under the NCRCS that provides for 60 percent partial credit guarantee for working capital crop loans (under a year duration) and for average loan size of LKR 78,844 (or US\$ 560). The beneficiaries though of NCRCS are farmers for short term small crop loans and not producer organizations of agricultural SMEs for larger investments and longer loan terms.

12. The cost of the guarantee will be provided in the PCG Operational Manual and is expected to be between 1% to maximum 1.5% p.a. of the value of the loan (premium paid on an annual basis calculated on the outstanding balance of the loan)⁸. The PCG will have an efficient and timely claim

⁶ This is consistent with the financing needs of projects receiving up to the maximum of US\$ 500,000 in matching grants. As a reference, from a survey of MENA guarantee schemes for SMEs, on average, the maximum loan size was US\$ 360,000 and the typical average maturity between 5-7 years.

⁷ Consistent with the principles for Pricing Mechanisms in *Financial Intermediary Financing*, April 2014.

⁸ Based on a review of credit guarantee schemes in MENA that also includes comparators from Asia, LAC and Europe, most guarantee fees clustered around 1% to 1.5% (on a p.a basis of

management process that balances the need for prompt disbursement and at the same time provide incentives for loan loss recovery. Post guarantee claim recoveries will be subject to 50-50 sharing of the proceeds between the bank and the RDD.

13. The details on triggering of payments to banks by the PCG, administration of claims and recovery will be provided in the PCG Operational Manual. It is more common to find guarantee schemes that have rules that allow payment of claims before legal procedures are exhausted.⁹ Typically, banks need to show efforts/evidence that they have contacted the borrower that defaulted, they have transferred the file from the business unit to the collection unit, they have increased provisions, they have reported the defaulted client to the credit information bureau or credit registry (if these exist), and it may also be the case that the banks have initiated legal procedures. The documentation and process required for making claims will be described in detail in the PCG Operations Manual. The PCG operations and financial status, including claims processing, will be audited by an external auditor as part of the overall annual external project audit.

14. It should be noted that an Implementation Completion Report on a previous PCG scheme for SME lending in Sri Lanka concluded that one of the reasons the PCG was not utilized was due to the very slow claim settlement process and difficulties to trigger the guarantee. In addition borrower SMEs were not willing to pay for the cost of the guarantee (100 bps) to back their loans in exchange for a lower quality/value collateral. In the proposed project, the triggers and payment of claims is simplified. A claim request can be made in full when a defaulted loan becomes eligible as per the criteria in the Operations Manual of the PCG. The description of the triggers and claim payment timelines will be described in detail in the Operations Manual of the PCG aiming to speed up processes (timeliness of triggers and claim payments) in response to previous experiences with the SME PCG scheme.

15. PCGs often have some leverage. For mature markets (e.g. in OECD countries), with long experiences in PCG schemes, a 20-1 leverage could be possible (for every \$20 loan the guarantee agency sets aside US\$ 1 to back it up). This leverage comes down when the beneficiaries are new clients, for relatively new activities, etc. and it is difficult to estimate the leverage in such

the loan amount guaranteed). The cost of the partial guarantee for NCRCS loans is currently 0.5% on the value of the loan.

⁹ The current guarantee scheme administered by CBSL for agriculture (NCRCS) prescribes that guarantee payments are paid in two installments: the first amounting to 75% of the claim will be paid on application and the balance of 25% will be paid after the PFI has taken legal action and notified the Court Case number to the RDD of CBSL. If the PFI fails to initiate legal action and furnish the Court Case number then it need to return the first guarantee payment it has received.

cases given that there is no history or prior experiences. The project will therefore initially take a rather conservative approach and allocate US\$ 1 of PCG funds to back US\$ 2.5 of loans issued backed by the PCG. This assumes that the guarantee could cover up to 40 percent in loan losses.¹⁰ Given the new/innovative types of activities that the project will be sponsoring, the type of newly bankable clients, and the concentration of activities in few geographic areas which expose loans to systemic weather risks (floods and droughts), there is a merit to be conservative. Based on project experience at mid-term review, the leverage may be increased. At least twelve (12) months prior to the project closing date, the Government will review and describe its intent to use any undisbursed remaining funds in the PCG for other project purposes and discuss with the Bank if any reallocation is required.

16. The CBSL will be approached to investigate whether and how capital relief can be formulated for this PCG scheme. In jurisdictions that follow the Basel II rules, guarantees are treated as credit protection and may decrease the risk weight applicable to the covered exposures. Thus the value of risk-weighted assets used in calculating the capital adequacy ratio also change. The regulatory treatment of PCGs is an important issue for financial institutions, in particular the regulatory capital relief obtained for the use of guarantees can be an important incentive for financial institutions to use the PCG.

17. The project will provide if needed, some selected technical assistance to the RDD for training the staff to administer the PCG, to maintain the PCG Operational Manual, to come up with business plan and pricing models, eligibility criteria for loans, a registration system for loans to be covered under the PCG, and a claims processing system, particular to the PCG for the proposed project. The PCG will have a M&E framework that will include good baseline information. The PCG needs to support the expansion of bank lending to new activities and new clients, or expand credit limits or credit maturities to existing clients. In the context of the activities promoted by the project, PFIs need to broaden agri-lending businesses to new clients and activities and deepen it when it comes to existing clients. This is the additionality expected from the PCG.

18. The project will hold training sessions for loan officers, risk officers and management to enhance their ability to lend to farmers/farmer organizations and agribusiness SMEs and raise the awareness and provide details on the modalities/use of the PCG scheme by PFIs. It will also work on business development services for farmers/farmer organizations and agribusiness

¹⁰ A recently designed PCG scheme for Caribbean SMEs, in a risky economic and financial environment, targets a 1 to 3.33 leverage ratio, meaning the guarantee funds cover up to 30 percent loan losses. Typical leverages for SME type clients in emerging markets range from (1 to 3) to (1 to 6).

SMEs, including the preparation of business plans and projections for projects seeking loans to finance the part of the cost beyond the matching grant component. Such preparations will be needed for the banks to consider such projects for financing and use of the PCG. In other words, the business development services provide by the Project will help prepare clients (farmer organizations and agribusiness SMEs) to present bankable projects that can access the PCG and the matching grant.

Annex 5: Project Economic and Financial Analysis

SRI LANKA: Agriculture Sector Modernization Project

Project Benefits.

1. The project's development impact is expected to be: increased smallholder returns from agriculture through improved productivity and higher agricultural output of selected field crops, increased value-addition, and new market opportunities, fostering increased incomes and employment opportunities. These benefits would result from: (a) new organizational production and management arrangements and associated advantages from economies of scale; (b) the adoption of new production technology packages; (c) improved water and soil resources management; (d) improved product processing, packaging, and marketing; (e) higher product quality and reduced post-harvest losses; (f) better access to services, markets, and information; (g) better market differentiation through product certification and branding. Indirect project benefits are expected to include: (a) strengthened capacity and organizational levels of producers and marketing groups, including strengthened capacity of female farmer entrepreneurs; (b) improved quality and reduced costs of forward and backward linkages of farmers to markets and higher-up value chain operators; (c) increased awareness of technology, climate-smart agriculture, and resources management; (d) new models of small producers and private sector enterprises working together; (e) improved nutrition through diversification of agriculture and increased production of nutrient rich product, in particular fruits and vegetables, and (f) improved institutional capacity of key ministries and agencies to evaluate and formulate sector policies.

Rationale for public sector provision/financing

2. The project will provide investments in public infrastructure and provision of public services needed to address multiple market failures faced by smallholder farmers in the project areas: *First*, underdeveloped organizational structures prevent smallholders from achieving economies of scale and from participating effectively in agricultural value chains. The project will assist small farmers to organize themselves in form of economically viable cooperative and farmer-owned shareholder companies to aggregate and coordinate production, provide services and access to market information, and more effectively link to commercial value chains. *Second*, smallholder farmers suffer from limited access to new technologies and knowledge. The project will support the public and private sectors to deliver knowledge and technology services. Unlike the public extension system in Sri Lanka, which has been assessed as supply-driven and rather ineffective in delivering new technologies, private sector and demand-driven technology innovation is often more relevant as it is directly market and business related. *Third*, high up-front investment, high transaction costs and risks can prevent

smallholders from investing in new ventures such as value addition or agro-processing, and achieving certain product quality standards required in high value markets. Smallholder farmers may require certification and support to guarantee that each individual producer meets the required production standards to access the market. The project will support matching grants, along with credit guarantees, for investing in enhancing product standards, certification, quality assurance, brand naming, etc. to overcome some of the constraints and help smallholders to access such markets.

Value added of World Bank support

3. The World Bank's value added through the project includes: support to more effective coordination across multiple government agencies to tackle agriculture modernization challenges; promoting technological and institutional innovation that would be unlikely to materialize without project support; and introducing and strengthening value chains and value addition through targeted investments in public and private production infrastructure critical for smallholder activities. The World Bank will also be able to trigger policy reforms, providing more certainty to the private sector that the enabling environment for private sector activity is changing and mobilizing long-term private sector financing. World Bank involvement will also be important to help integrate poor small-holder farmers, including women farmers, into competitive agricultural value chains. World Bank value added will be supported through the large amount of analytical work to understand the role of private businesses in becoming a partner in development.

Quantification of Project Benefits and Main Assumptions

4. **Crop and Activity Models.** Under Component 1, the project's matching grant program is expected to support at least 350 existing and newly established farmer producer organizations and 50 agribusinesses. The matching grants are designed to finance sub-projects that are locally identified through open call-for-proposals during project implementation. Given the demand-driven nature of project engagement, this analysis does not lend itself easily to detailed ex-ante cost-benefit analysis. The expected benefits from agribusinesses supported by the matching grants are difficult to anticipate and quantify, and as such are not attempted in the present economic and financial analysis. The individual economic justification of these sub-projects will be assessed and confirmed as part of the matching grant selection process during implementation, with the requirement that all proposals for subproject investments include an economic analysis (see Matching Grants Operations Manual). Each sub-project is expected to meet the criteria of economic viability with a threshold Economic Rate of Return (ERR) of 6 percent. For Component 2, indicative net benefits of potential crop production opportunities are used, using detailed crop enterprise budgets from the Socio-Economics and Planning Centre, Department of Agriculture, for five project districts (*Jaffna, Mullaitivu, Anuradhapura, Batticaloa, and Moneragala*) selected for the analysis. The analysis is indicative and focuses on typical farming activities that support diversification and modernization of agriculture.

5. The financial analysis aims at assessing the profitability of various activities. The crops included in the analysis for import substitution include: *rice, maize, red onion, big onion, chili, and potato*; for horticulture/ high-value agriculture: *kurakka, green gram, black gram, soybean, groundnut, sweet*

potato, manioc, brinjal, okra, beet toot, cabbage, gingelly carrot, tomato, leeks, luffa, raddish, knol khol, bitter gourd, pumpkin and bean; and for traditional exports: *pepper, coffee, cocoa, cardamom, clove, arecanut, vanilla, cinnamon, and nutmeg*. The analysis assumes that current cropping patterns and practices continue and rice is the dominant crop commanding the largest share of area in all districts. Current cropping patterns (and returns) represent the baseline “without-project” scenario. In the “with-project” scenario, diversification is introduced with the incremental area under the high-value or diversified crops being reallocated from rice, under the assumption that a reduction of the current rice yield gap (approximately 50 percent) will allow releasing land from rice without any reduction in total rice production. The net financial benefits are calculated for the annual crops while financial rate of returns are computed for perennials, using enterprise budget data.

6. The economic analysis aims at assessing the economic performance of the project from the country point of view. Financial prices are converted into economic values that reflect the real economic costs and benefits after removal of any price distortions. In the case of import substitution crops and vegetables, the domestic market is protected against imports, which are subject to high import duties ranging from 24 percent for rice to 74 percent for *brinjal*. Fertilizer, which is heavily subsidized, is considered the only tradable input that is subject to distortion. The average subsidy borne by government on a 50 kg bag of fertilizer is around 88 percent of the market price. This rate was applied in the analysis. The labor market is assumed to function smoothly and current market wages reflect the opportunity cost of labor.

7. Net economic benefits are calculated for the annual crops while economic rate of returns are computed for perennials. In addition, four scenarios are developed to assess the economic profitability of the selected crops. About 60 percent of total cultivated land area is allocated to rice production ranging from 37 percent in *Moneragala* to nearly 90 percent in *Batticaloa*. Based on current land distribution and cropping patterns, four typical agricultural models based on a mix of the profitable crops mainly produced in the districts are developed (Table 1), including: (a) import substitution crops; (b) high value vegetables and potentially emerging export crops production; (c) traditional export crops production; and (d) a mixed model of the former three settings. Each model assumes a 25 percent increase in output over a period of 25 years as a result of expansion of current area under cultivation at recommended practices. The incremental area could be obtained from improving rice productivity by closing rice yield gaps to free up land or from cultivable fallow land.

Table 1. Selected main crops per scenario per district

Scenario	Import Substitution	Emerging exports	Traditional export
Jaffna	red onion, big onion, chili	kurakkan, manioc	arecanut
Mullaitivu	red onion, chili	green gram, black gram, cowpea, groundnut, manioc	arecanut
Batticolao	Chili	manioc, groundnut, cowpea	arecanut
Anuradhapura	big onion, chili	soybean, manioc pumpkin	arecanut
Moneragala	chili	green gram, cowpea, groundnut, manioc, pumpkin	arecanut, pepper, cloves

Notes: The selected crops are representative of the main crops currently cultivated in each district.

Only profitable crops in economic terms were retained in the scenario analysis.

8. Economic costs also include investment costs not included in the cropping models. These costs include half of the matching grants costs allocated to farmer organizations, matching funds to be provided by beneficiaries; productivity enhancement, diversification; and commercialization costs and half of project management, monitoring and evaluation costs, in total about 71 percent of overall project costs. These are considered necessary for the realization of project benefits and are added to the aggregated cash flow.

9. The ERR is calculated over 25 years, along with the Net Present Value (NPV), assuming a 6 percent annual discount rate. A break-even analysis is conducted to determine the minimum production increase (i.e., incremental area) that would justify the project investment for each scenario.

10. **Financial Returns.** All crops display strong positive financial returns and provide attractive income opportunities for farmers and their organizations. *Big onions* and *carrots* are the most profitable annual crops with financial net benefits over US\$ 7,000 per ha. Among perennials, *pepper* presents the largest returns with IRR of 41 percent and NPV at US\$ 81,000 calculated over 40 years, followed by *vanilla*, *cinnamon*, and *clove*.

11. **Economic Returns.** When prices distortions are corrected, *rice* (under current practices) along with *maize*, *brinjal*, *okra*, *beet root*, *gingelly*, *luffa*, and *snacke gourd* are no longer profitable (Table 2). Profitability of most crops is reduced by at least 2 folds. *Big onion* and *carrots* remain the most profitable annual crops. All perennial crops, however, remain profitable. The ERR range from 10 to 40 percent with *pepper*, *vanilla* and *cinnamon* exhibiting the highest returns. There are also limited distortion in *arecanut*, which is the main export crops in the selected districts. Economic returns remains high with ERR at 22 percent (compared to IRR of 24 percent).

12. **Scenario Analysis.** All scenarios, except import substitution are economically viable, assuming a 25 percent increase in output at recommended practices for each scenario. More specifically, an overall ERR

has been calculated: at -2.8 percent with a NPV of -US\$ 70.74 million (using a 6 percent annual discount rate) for the import substitution scenario; at 9.3 percent with NPV of US\$ 38.12 million for emerging exports; at 12.1 percent with NPV of US\$ 104.6 million for traditional exports; and at 20.2 percent with NPV of US\$ 264.3 million for the mixed model. Those returns could be higher if some of the area planted to higher value crop come from available cultivable fallow land. In districts where cultivable fallow land availability is limited, such as *Jaffna* and *Batticaloa*, the implementation of a diversification strategy would hinge on the ability to reduce the current rice yield gap by about 30 percent so as not to jeopardize food security in those regions.

13. **Sensitivity Analysis.** A break-even analysis has been conducted to determine the minimum incremental area and associated reduction in rice yield gap that are needed to justify the overall project investment. The detailed results of the analysis are presented in Table 3. Breaking even at the project level under the emerging exports scenario would require the area currently allocated to fruits and vegetables to increase by 7 percent in *Jaffna*, by 29 percent in *Mullaitivu*, by 278 percent in *Batticaloa*, by 19 percent in *Anuradhapura*, and by 2 percent in *Moneragala*, which represent about 4.6 percent of the total agricultural cultivated land in these districts overall. The import substitution scenario would require about 2.4 percent of total cultivated land while the traditional export and mixed model would require 1.5 and 2.9 percent, respectively. The mixed model, which assumes higher levels of reduction in rice yield gaps, seems to offer the best economic returns for all scenarios. Focusing on emerging exports appear to be a preferred alternative in all districts but *Moneragala*, where traditional exports are preferred. This also indicates that quick wins would require regional specialization along agro-ecological production conditions, as reflected in historical production patterns. The next (second) best options are import substitution for *Jaffna*, *Mullaitivu* and *Anuradhapura*; traditional exports for *Batticaloa*; and emerging exports in *Moneragala*.

Table 2: Economic and Financial Profitability of Selected Cereals, Vegetables and Export Crops

Crop / Activity	Project life (Years)	Annual labor (Md)	Financial		Economic	
			NPV (US\$,@6%)	IRR (%)	NPV (US\$,@6%)	ERR (%)
Pepper	40	428	80,987	41%	74,224	37%
Coffee	25	438	9,507	15%	4,767	10%
Cardamom	30	312	6,277	18%	3,293	13%
Clove	40	402	37,607	26%	35,103	25%
Arecanut	25	276	21,114	24%	19,066	22%
Vanilla	40	453	25,249	41%	24,848	40%
Cinnamon	40	237	52,263	35%	51,885	35%
Nutmeg	60	431	9,191	12%	6,780	10%

		Yield	Financial	Economic	Total			Yield	Financial	Economic	Total
		kg/ha	benefits	benefits	labor			kg/h	benefits	benefits	labor
			US\$/ha	US\$/ha	Md/ha			a	US\$/ha	US\$/ha	Md/h
								a			a
WO						W		21,0			
P	Rice*	3,341	173	-24	52	P	Brinjal	04	1,640	-663	324
WP	Rice	5,683	694	83	59		Okra	12,3	587	-614	213
	Maize	6,425	604	-7	79		Beet Root	14,8	975	-1,111	340
	Red	11,86					Cabbage	26	4,602	1,010	372
	Onions	1	2,406	374	202		Gingelly	37	459	-39	74
	Big	24,71					Carrot	1,05	7,703	2,834	337
	Onions	1	7,648	3,667	442			22,2			
	Chilli	8,649	3,545	1,890	259			40			

Potato	19,76 8	5,910	1,885	231	Tomato	19,7 68	5,347	2,640	309
Kurakkan	2,471	748	307	119	Leeks	23,7 22	2,879	601	337
Green					Luffa	14,8 26	724	-872	333
Gram	1,483	554	102	116	Raddish	39,5 37	2,733	966	250
Black					Knol Khol	19,7 68	1,127	-280	315
Gram	1,359	714	297	73	Bitter	19,7			
Soya Bean	2,965	832	165	128	Gourd	68	5,284	2,108	345
Cowpea	1,631	601	76	101	Snacke	21,0			
Ground					Gourd	04	1,160	-494	348
Nut	2,471	1,615	699	131	Pumpkin	14,8 26	1,728	626	153
Sweet	17,79				Bean	14,8 26	5,013	2,397	242
Potato	2	1,917	728	222					
	24,71								
Manioc	1	4,568	2,168	96					

Table 3. Economic Analysis: Indicative models for Agriculture Sector Modernization for selected crops

	Total Cultivated Land	Total Cultivable Fallow Land	Cultivated Area per Scenario	@ 25% Increase in Output			@ 6%ERR - Break-Even			
				Target	Economic	Net	Break-Even Increase in Area			Break-Even
				increase in Area @ rec. practices	Rate of Return	Present Value (@ 6%)	Incremental Area	Increase in Share of Cultivated Area per Scenario	Increase in Share of Total Cultivated Land	Reduction in Rice Yield Gap
	Ha	Ha	Ha	Ha	(%)	Million US\$	Ha	(%)	(%)	(%)
JAFFNA										
Import Substitution	23,076	75	1,017	254	4.5%	-0.65	296	29%	1.3%	20.5%
Emerging Exports			6,332	1,583	29.9%	13.37	422	7%	1.8%	27.7%
Traditional Exports			123	31	-2.3%	-2.93	282	229%	1.2%	22.0%
Mixed Model			7,473	1,868	39.9%	19.70	483	6%	2.1%	23.4%
MULLATIVU										
Import Substitution	23,905	6,563	290	72	-4.8%	-4.94	877	303%	3.7%	29.3%
Emerging Exports			5,456	1,364	3.9%	-1.39	1,570	29%	6.6%	35.4%
Traditional Exports			67	17	-2.3%	-4.03	410	612%	1.7%	20.0%
Mixed Model			5,812	1,453	5.8%	-0.17	1,483	26%	6.2%	38.1%
BATTICALOA										
Import Substitution	93,827	1,946	280	70	-2.4%	-22.46	2,608	933%	2.8%	21.2%
Emerging Exports			2,122	530	-5.5%	-29.55	5,895	278%	6.3%	31.8%
Traditional Exports			757	189	-2.4%	-23.98	2,332	308%	2.5%	20.0%
Mixed Model			3,175	794	-3.5%	-27.56	4,124	130%	4.4%	26.6%
ANURADHAPURA										
Import Substitution	160,097	21,719	2,111	528	-3.1%	-4,340.52	3,220	153%	2.0%	21.5%
Emerging Exports			37,855	9,464	10.7%	3,405.73	7,033	19%	4.4%	31.7%
Traditional Exports			1,213	303	-2.3%	-4,221.19	2,800	231%	1.7%	20.0%
Mixed Model			41,179	10,295	13.4%	5,807.71	6,489	16%	4.1%	30.5%
MONARAGALA										
Import Substitution	97,431	5,147	822	206	-5.5%	-12.75	2,677	326%	2.7%	28%
Emerging Exports			31,368	7,842	22.6%	32.20	3,516	11%	3.6%	37%
Traditional Exports			6,739	1,685	29.7%	164.66	117	2%	0.1%	7%
Mixed Model			38,929	9,732	44.5%	232.32	801	2%	0.8%	18%
PROJECT										
Import Substitution	398,336	35,450	4,519	1,130	-2.8%	-70.74	9,678	214%	2.4%	24%
Emerging Exports			83,133	20,783	9.3%	38.12	18,436	22%	4.6%	63%
Traditional Exports			8,899	2,225	12.1%	104.62	5,941	67%	1.5%	12%
Mixed Model			96,568	24,142	20.2%	264.34	13,380	14%	3.4%	29%
Notes:	<div style="display: flex; align-items: center; gap: 10px;"> <div style="width: 20px; height: 10px; background-color: #90EE90; border: 1px solid black;"></div> Best Bet <div style="width: 20px; height: 10px; background-color: #FFFF00; border: 1px solid black;"></div> Next Best </div>									

Annex 6: Greenhouse Gas Accounting Analysis

SRI LANKA: Agriculture Sector Modernization Project

1. The quantification of GHG emissions from a project is an important step in managing and ultimately reducing GHG emission, and is becoming a common practice for many international financial institutions. To estimate the impact of the World Bank's agriculture investment lending on GHG emission and carbon sequestration, the Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), which was developed by the Food and Agriculture Organization of the United Nations (FAO) in 2010. EX-ACT allows the assessment of a project's net carbon-balance, defined as the net balance of CO₂ equivalent GHG that were emitted or sequestered as a result of project implementation compared to a without project scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO₂ per hectare and year. EX-ACT has been applied to the project.

2. **Project boundaries and basic assumptions.** Sri Lanka has warm temperate climate with dry moisture regime. The project's agriculture technology demonstrations parks and the complementing production infrastructure investments will cover at least the 7 priority districts of *Jaffna, Mullaitivu, Anuradhapura, Batticaloa, Matale, Polonnaruwa* and *Moneragala*. The project's matching grant approach is national in scope. Dominant soil type are high activity clay soils. The project implementation phase is five years and the capitalization phase is assumed to be 25 years, which indicates the longevity of the on-farm irrigation infrastructure. The 30 years implementation period is standard in the use of EX-ACT. The "without project scenario" is assumed not to differ from the "initial scenario". This default assumption is deemed reasonable as changes in agriculture activity crucially depend on the technology available, which is one of the main contributions of the project. The analysis further assumes the dynamics of change to be linear over the duration of the project. Existing irrigation techniques are assumed to be replaced by drip irrigation in the project area, which are likely be scaled up by other farmers as well.

3. **Crop production.** About 48,300 hectares of cultivated land is under annual crops and about 2,225 hectares of the crop land in the project areas is estimated to be under fruit crops. The adoption of technology packages of drip irrigation allows the adoption of "improved water management" and "improved nutrient management", which are accounted for in EX-ACT. With the introduction of drip irrigation, a change in cropping patterns and an increase in cropping intensity is assumed. Whenever cropland is more intensely used, EX-ACT indicates that additionally "improved agronomic practices" are employed. All management options are available in the EX-ACT module "Crop production". The introduction of drip irrigation is expected to influence the evolution of area under annual crops differently in each sector.

4. **Agricultural inputs.** As the amount of fertilizer can be more precisely tuned to the needs of the crop with drip irrigation, the quantity of fertilizer applied is expected to decrease. On the other hand, the increase in cropping intensity could imply an increased use in nitrogen fertilizer. There is no precise data that validates either effect, fertilizer and pesticide consumption. However, the project has planned for development and on farm validation of improved package of practices for each crop tailored to its location and altitude. Community irrigation would continue to operate with tube wells using water pumps requiring electricity. Road networks would be rehabilitated while storage facilities would be built wherever needed.

5. **Net carbon balance.** The expected GHG fluxes from project activities are summarized in Table 1. The net carbon balance quantifies GHGs emitted or sequestered as a result of the project compared to the without project scenario. Over a period of 30 years, the project is estimated to constitute a carbon sink of 1,912,735 ton of CO₂-equivalents per year. The improved practices will lead to a carbon sink and the planting of perennials will add to the sink. This would be largely due to the improvements in crop management as consequence of the adoption of drip irrigation, good agriculture practices, targeted fertilization, pesticide use energy efficient cooling systems and recyclable steel buildings. Per hectare, the project provides a sink of 1,189 t-CO₂-equivalent, which is 39.6 t-CO₂-equivalent per hectare per year.

Table 1: Greenhouse gas fluxes from the project interventions

	Gross fluxes		GHG Balance in tCO ₂ eq	
	Without project	With project		
	GHG in tCO ₂ eq			
	Positive = source / negative = sink			
1. Land use changes	0	1,644,778		1,644,778
2. Agriculture			0	
Annual	-674,920	-674,920	411,180	
Perennial	-14,685	-425,865	-	
Rice	2,281,583	190,132	2,091,451	
				-1,680,271
3. Inputs and investments	227,153,156	170,628,958		-
				56,524,198
Grand total (1+ 2 + 3)	228,745,134	171,363,083		-
				57,382,051
Per hectare	4,738	3,550		-1,189
Per hectare per year	157.9	118.3		-39.6

Annex 7: Implementation Support Plan

SRI LANKA: Agriculture Sector Modernization Project

Strategy and Approach for Implementation Support

1. The project will require intensive implementation support and a continuous dialogue with the various client agencies and stakeholders at national/ central and provincial levels because the demand-driven framework approach of the project, its relatively complex institutional set-up, and its innovative design in the context of Sri Lanka involves substantial testing, piloting, and learning, and adjusting. The strategy for implementation support reflects the nature and complexity as well as the risk profile of the project. It also seeks to make implementation support to the client efficient while remaining focused on implementation of the risk mitigation measures identified in the SORT. This strategy is flexible and will be adjusted during implementation, as required.

2. Project supervision will support the following areas: (a) fiduciary capacity to promote the establishment of adequate internal control systems and overall governance; (b) technical and business reviews and implementation support and performance monitoring of investment/ business proposals to be financed under the under matching grants program; (c) mitigation of potential political interference to maintain strong technical and economic/ business rationale of individual sub-project investments and alignment with project objectives and due diligence; (d) adequate prioritized opportunities for women participation in all project interventions; (e) free, prior, and informed consultations with all stakeholders; (f) management of environmental and social factors and critical natural habitats without compromising the wellbeing of the local population; (g) communication campaigns to maintain stakeholders informed and engaged; and (h) monitoring of project implementation, including results indicators and regular monitoring. The Bank will: (a) provide implementation support and training; (b) focus on adherence to the principles and procedures laid out in the Operations Manuals of the main components; (c) provide hands-on guidance on the Bank's FM and Procurement Guidelines; review procurement documents; and help monitor procurement progress against the Procurement Plan; and (d) emphasize opportunities for social development, in particular for women, and environmental sustainability provided by the project, as well as adequate attention to gender equity. Implementation support will be supported through a communications strategy to strengthen the consultative and accountability processes, including the grievance redress mechanism.

Implementation Support Plan

3. The Implementation Support Plan below describes Bank support for the implementation of risk mitigation measures (identified in the SORT) and

provides the technical advice necessary to facilitate achieving the PDO (linked to results/outcomes identified in the result framework). The plan also takes into account the requirements to meet the Bank's fiduciary and safeguards obligations. Bank key team members are based in the Sri Lanka Country Office ensuring timely, efficient, and effective support to the client. Formal supervision and field visits will be semiannual, with more frequent technical support missions during the first two years of the project.

4. The main focus of implementation support is summarized below:

Table 1: Staff Level of Effort for Project Implementation Support

Time	Focus	Skills Needed	Resource Estimate (annual)	Partner Role
1-18 months	<p><i>General.</i> Assure that all PMUs are familiar with the project approach and that the Operations Manuals are being followed. Familiarize the PMUs with all relevant administrative and operational aspects of project implementation. Provide consistent and on-going support on operational and technical implementation issues.</p> <p><i>Technical.</i> Review and comment on investment proposals.</p> <p><i>Procurement.</i> Provide training to PMU staff; review procurement documents and provide timely feedback; provide detailed guidance on Bank Procurement Guidelines; monitor procurement progress against the detailed Procurement Plan; and (e) conduct procurement post review assessments once a year.</p> <p><i>Financial Management.</i> Provide training to PMU staff; assess the project's FM system, including but not limited to, accounting, reporting and internal controls; Review the project's FM reports on a regular basis; and review annual audit reports.</p> <p><i>Gender.</i> Review of adequate project opportunity and support for women participation in all commercially oriented activities.</p> <p><i>Environment and Social Safeguards.</i> Ensure that the related safeguard documents are well understood and the provisions are implemented.</p>	<p>TTL,</p> <p>Agricultural Economist</p> <p>Agri-business Specialist</p> <p>Financial Sector / Credit Guarantee Specialist</p> <p>Procurement</p> <p>FMS</p> <p>Gender Specialist</p> <p>Environmental Safeguards</p> <p>Social Safeguards</p>	US\$ 125,000 per year	NA

18-48 months	<p><i>General.</i> Review and understand all implementation processes and remove implementation obstacles.</p> <p>Refine and revise Operations Manuals as needed. Move focus towards dialogue and capturing lessons. Prepare for and carry out mid-term review.</p> <p><i>Technical.</i> Visit on-going project investments and provide feedback; continue prior and/or post review of Investment Proposals and provide comments.</p> <p><i>Gender.</i> Review of adequate project opportunity and support for women participation in all commercially oriented activities.</p> <p><i>Procurement.</i> Review procurement documents and providing timely feedback; monitor procurement progress against Procurement Plan; conduct procurement post reviews at least once a year.</p> <p><i>Financial Management.</i> Implementation support will include: (a) review the implementation of Project's financial management system, including but not limited to, accounting, reporting and internal controls; (b) reviewing the project's financial management reports on a regular basis; and (c) reviewing the annual audit reports.</p>	<p>TTL, Agricultural Economist Agri-business Specialist Procurement FMS Financial Sector / Credit Guarantee Specialist Gender Specialist Environmental Safeguards Social Safeguards</p>	US\$ 125,000 per year	NA
48-60 months	<p><i>General.</i> Understand failure and success parameters in close dialogue with the implementing agencies. Facilitate exchange among government agencies, producer organizations and agribusinesses to learn from each other. Prepare detailed learning and analysis framework and prepare for end-project evaluation.</p> <p><i>Technical.</i> Visit on-going project investments and provide feedback. Support technical and financial analysis of project investments. Post review Investment Proposals and provide comments.</p> <p><i>Procurement.</i> Review procurement documents and providing timely feedback; monitor procurement progress against Procurement Plan; conduct procurement post review at least once a year.</p> <p><i>Financial Management.</i> Review implementation of FM system, including accounting, reporting and internal controls; review FM reports on a regular basis; review annual audit reports.</p> <p><i>Gender.</i> Review of adequate project opportunity and support for women participation in all commercially oriented activities.</p>	<p>TTL, Agricultural Economist Agri-business Specialist Financial Sector / Credit Guarantee Specialist Procurement FMS Gender Specialist Environmental Safeguards Social Safeguards</p>	US\$ 125,000 per year	NA

	<i>Environment and Social Safeguards.</i> Review environmental and social impact and extract lessons. Provide guidance to the social and environmental impact assessment.			
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Table 2: Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	15 SWs in year 1 12 SWs in subsequent years	Minimum 4 field trips annually	Country Office (CO) based
Agriculture Finance / Matching Grants Specialist	10 SWs annually	Minimum 4 field trips annually	Staff based in CO
Agriculture Policy Specialist/ Sector Economist	6 SWs annually	Minimum of two visits annually	Staff based in DC
Agribusiness Specialist	6 SWs annually	Minimum of one visit annually	Consultant based abroad
Procurement Specialist	4 SWs annually	Minimum 2 field trips annually	CO based specialist
Financial Sector Specialist	4 SWs annually	Minimum 2 field trips annually	CO based specialist
Financial Management Specialist	4 SWs annually	Minimum 2 field trips annually	CO based specialist
Gender Specialist	4 SW annually	Minimum 2 field trips annually	Staff based in DC
Environmental Specialist	4 SWs annually	Minimum of 4 field trips annually	Consultant based in Sri Lanka
Social Development Specialist	4 SWs annually	Minimum of 4 field trips annually	Consultant based in Sri Lanka
Operational Support Specialist	6 SWs annually	Minimum of 4 field trips annually	Consultant based in Sri Lanka
Communication Specialist	4 SWs in year 1; 3 SWs in subsequent years	Minimum 2 field trips annually	CO based specialist

PROGRAMME Sri Lanka - Sri Lanka Agriculture Sector Modernization Project
TITLE Sri Lanka
Donor Information South's Regional Office of the United Nations Development Programme
Project ID UN036101
Donor Code UNDP-SRI
Start Date 2003/01/01
End Date 2012/12/31
Reporting Agency UNDP/SRI/2012/001

Transaction	No	Description	Business	Period	Start	End	Budget	Actual	Type	Status	Balance	2011		2012		2013		2014		Total
												Commitment	Disbursement	Commitment	Disbursement	Commitment	Disbursement	Commitment	Disbursement	
UNDP/SRI/2012/001	1	...																		
UNDP/SRI/2012/001	2	...																		
UNDP/SRI/2012/001																		
UNDP/SRI/2012/001																		

№ п/п	№ документа	Дата документа	Инициатор документа	Исполнитель документа	Содержание документа	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ	Ссылка на документ
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№ п/п	№ документа	Дата документа	Инициатор документа	Исполнитель документа	Содержание документа	Ссылка на документ		Ссылка на документ		Ссылка на документ		Ссылка на документ		Ссылка на документ		Ссылка на документ		Ссылка на документ		Ссылка на документ	
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Economic Indicators		GDP		GDP per capita		GDP growth		GDP composition		GDP structure		GDP trends		GDP projections	
Indicator	Year	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit
GDP	2010	120000	USD	120000	USD	100	%	100	%	100	%	100	%	100	%
GDP	2011	125000	USD	125000	USD	105	%	105	%	105	%	105	%	105	%
GDP	2012	130000	USD	130000	USD	110	%	110	%	110	%	110	%	110	%
GDP	2013	135000	USD	135000	USD	115	%	115	%	115	%	115	%	115	%
GDP	2014	140000	USD	140000	USD	120	%	120	%	120	%	120	%	120	%
GDP	2015	145000	USD	145000	USD	125	%	125	%	125	%	125	%	125	%
GDP	2016	150000	USD	150000	USD	130	%	130	%	130	%	130	%	130	%
GDP	2017	155000	USD	155000	USD	135	%	135	%	135	%	135	%	135	%
GDP	2018	160000	USD	160000	USD	140	%	140	%	140	%	140	%	140	%
GDP	2019	165000	USD	165000	USD	145	%	145	%	145	%	145	%	145	%
GDP	2020	170000	USD	170000	USD	150	%	150	%	150	%	150	%	150	%
GDP	2021	175000	USD	175000	USD	155	%	155	%	155	%	155	%	155	%
GDP	2022	180000	USD	180000	USD	160	%	160	%	160	%	160	%	160	%
GDP	2023	185000	USD	185000	USD	165	%	165	%	165	%	165	%	165	%
GDP	2024	190000	USD	190000	USD	170	%	170	%	170	%	170	%	170	%
GDP	2025	195000	USD	195000	USD	175	%	175	%	175	%	175	%	175	%
GDP	2026	200000	USD	200000	USD	180	%	180	%	180	%	180	%	180	%
GDP	2027	205000	USD	205000	USD	185	%	185	%	185	%	185	%	185	%
GDP	2028	210000	USD	210000	USD	190	%	190	%	190	%	190	%	190	%
GDP	2029	215000	USD	215000	USD	195	%	195	%	195	%	195	%	195	%
GDP	2030	220000	USD	220000	USD	200	%	200	%	200	%	200	%	200	%

Kategorie	Titel	Autor	Jahr	Verlag	ISBN	Beschreibung	Sammelgebiete												Anzahl											
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
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INSTRUMENTO DE EVALUACIÓN DE LA GESTIÓN DE LA CALIDAD		CATEGORÍA		SUBCATEGORÍA		INDICADOR		DESCRIPCIÓN		UNIDAD DE MEDIDA		VALOR OBJETIVO		VALOR REAL		VALOR RELATIVO		VALOR CUALITATIVO		VALOR CUANTITATIVO		VALOR TOTAL	
NOMBRE DEL INSTRUMENTO		CÓDIGO		CÓDIGO		CÓDIGO		DESCRIPCIÓN		UNIDAD DE MEDIDA		VALOR OBJETIVO		VALOR REAL		VALOR RELATIVO		VALOR CUALITATIVO		VALOR CUANTITATIVO		VALOR TOTAL	
[Detailed grid of data points for quality management evaluation, including various indicators and their corresponding values]																							

№	Имя	Фамилия	Инициалы	Дата рождения	Место рождения	Стаж	Средний балл	Средний балл по предметам	Средний балл по дисциплинам	Средний балл по курсам	Средний балл по семестрам	Средний балл по годам	Средний балл по факультетам	Средний балл по институтам	Средний балл по вузам	Средний балл по странам	Средний балл по континентам	Средний балл по планетам	Средний балл по звездам	Средний балл по галактикам	Средний балл по вселенной
1	Иванов	Иван	И.И.	1990-01-01	Москва	10	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
2	Петров	Петр	П.П.	1991-02-02	Санкт-Петербург	11	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
3	Сидоров	Сидор	С.С.	1992-03-03	Новосибирск	12	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
4	Климов	Климов	К.К.	1993-04-04	Казань	13	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
5	Васильев	Василий	В.В.	1994-05-05	Самара	14	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
6	Попов	Попов	П.П.	1995-06-06	Екатеринбург	15	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
7	Смирнов	Смирнов	С.С.	1996-07-07	Иркутск	16	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
8	Морозов	Морозов	М.М.	1997-08-08	Хабаровск	17	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
9	Куликов	Куликов	К.К.	1998-09-09	Владивосток	18	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
10	Левин	Левин	Л.Л.	1999-10-10	Красноярск	19	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
11	Зайцев	Зайцев	З.З.	2000-11-11	Омск	20	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
12	Иванов	Иван	И.И.	2001-12-12	Сургут	21	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
13	Петров	Петр	П.П.	2002-01-13	Тюмень	22	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
14	Сидоров	Сидор	С.С.	2003-02-14	Якутск	23	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
15	Климов	Климов	К.К.	2004-03-15	Иркутск	24	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
16	Васильев	Василий	В.В.	2005-04-16	Хабаровск	25	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
17	Попов	Попов	П.П.	2006-05-17	Владивосток	26	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
18	Смирнов	Смирнов	С.С.	2007-06-18	Красноярск	27	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
19	Морозов	Морозов	М.М.	2008-07-19	Омск	28	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
20	Куликов	Куликов	К.К.	2009-08-20	Сургут	29	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
21	Левин	Левин	Л.Л.	2010-09-21	Тюмень	30	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
22	Зайцев	Зайцев	З.З.	2011-10-22	Якутск	31	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
23	Иванов	Иван	И.И.	2012-11-23	Иркутск	32	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
24	Петров	Петр	П.П.	2013-12-24	Хабаровск	33	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
25	Сидоров	Сидор	С.С.	2014-01-25	Владивосток	34	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
26	Климов	Климов	К.К.	2015-02-26	Красноярск	35	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
27	Васильев	Василий	В.В.	2016-03-27	Омск	36	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
28	Попов	Попов	П.П.	2017-04-28	Сургут	37	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
29	Смирнов	Смирнов	С.С.	2018-05-29	Тюмень	38	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
30	Морозов	Морозов	М.М.	2019-06-30	Якутск	39	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
31	Куликов	Куликов	К.К.	2020-07-31	Иркутск	40	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
32	Левин	Левин	Л.Л.	2021-08-31	Хабаровск	41	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
33	Зайцев	Зайцев	З.З.	2022-09-30	Владивосток	42	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
34	Иванов	Иван	И.И.	2023-10-31	Красноярск	43	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
35	Петров	Петр	П.П.	2024-11-30	Омск	44	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
36	Сидоров	Сидор	С.С.	2025-12-31	Сургут	45	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

