

CARIBBEAN DEVELOPMENT BANK
TWO HUNDRED AND EIGHTY-FIFTH MEETING OF THE BOARD OF DIRECTORS
TO BE HELD IN BARBADOS
MARCH 28, 2019

PAPER BD 3/19

NOTIFICATION OF APPROVAL BY THE PRESIDENT OF A GRANT
SOUTHERN PLAINS AGRICULTURAL DEVELOPMENT PROJECT – JAMAICA
(President's Recommendation No. 973)

In accordance with the authority delegated by the Board of Directors at its Two Hundred and Seventieth Meeting (Minute 270.32), the President approved a grant of sixteen million, seven hundred and ten thousand, three hundred and thirteen pounds sterling (£16,710,313) from the Special Funds Resources of the Caribbean Development Bank (CDB), allocated from funds provided by the United Kingdom through the Department for International Development to CDB under the United Kingdom Caribbean Infrastructure Partnership Fund, to assist the Government of Jamaica in financing an agricultural development project targeting the communities of Parnasus and Amity Hall in Jamaica, on the terms and conditions referred to in the attached Paper.

2. It is a condition that each project approved by the President and the terms and conditions thereof be reported to the Board at its first convenient scheduled Meeting after approval of the project.
3. The Board is therefore asked to note the approval by the President of the abovementioned project and the terms and conditions thereof.

PUBLIC DISCLOSURE AUTHORISED

CARIBBEAN DEVELOPMENT BANK



APPRAISAL REPORT

**SOUTHERN PLAINS AGRICULTURAL DEVELOPMENT PROJECT
JAMAICA**

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Notified at the Two Hundred and Eighty-Fifth Meeting
of the Board of Directors on March 28, 2019

**(BD3/19)
AR19/1 JAM**

Mr. Daniel Best	-	Director, Projects Department
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MARCH 2019

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CURRENCY EQUIVALENT¹

[Currency throughout refer to Pound Sterling (£) unless otherwise stated]

GBP1.00 = JMD159.8446

JMD1.00 = GBP0.00626

USD1.00 = GBP0.78

GBP1.00 = USD1.28

ABBREVIATIONS

ABDS	-	Agri-Business Development Specialist
AIC	-	Agro-Investment Corporation
AVC	-	Agricultural Value Chain
AWPB	-	Annual Work Programme and Budget
BDS	-	Business Development Specialist
BMC	-	Borrowing Member Countries
Bn	-	billion
CC	-	Climate Change
CCVA	-	Climate Change Vulnerability Assessment
CDB	-	Caribbean Development Bank
CSA	-	Climate Smart Agriculture
CSP	-	Country Strategy Paper
DA	-	Designated Account
DCFS	-	Department of Cooperatives and Friendly Societies
DFID	-	Department for International Development
EIA	-	Environmental Impact Assessment
ERR	-	Economic Rate of Return
EOI	-	Expressions of Interest
ESIA	-	Environmental and Social Impact Assessment
ESMP	-	Environmental and Social Management Plan
EVADP	-	Essex Valley Agriculture Development Project
FY	-	Financial Year
GBP	-	Great British Pound
GDP	-	Gross Domestic Product
G-GAP	-	GLOBAL G.A.P.
GGGR	-	Global Gender Gap Report
GIS	-	Geographical Information System
GOJ	-	Government of Jamaica
ha	-	hectares
HDI	-	Human Development Index
HDSU	-	Human Development Statistical Update
I&D	-	Irrigation and Drainage
IDB	-	Inter-American Development Bank
ISP	-	Implementation Support Plan
IP	-	Investment Plans
JAS	-	Jamaica Agricultural Society
JCPD	-	Jamaica Council for Persons with Disabilities
JMD	-	Jamaica Dollars

¹ Currency equivalent as November 20, 2018

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JNRWP	-	Jamaica Network of Rural Women Producers
JSIF	-	Jamaica Social Investment Fund
km	-	kilometers
LAC	-	Latin America and the Caribbean
NGO	-	Non-governmental Organisation
MCGES	-	Ministry of Culture, Gender, Entertainment and Sport
MEGJC	-	Ministry of Economic Growth and Job Creation
M&E	-	Monitoring and Evaluation
MGS	-	Matching Grant Scheme
MICAF	-	Ministry of Industry, Commerce, Agriculture and Fisheries
MOF	-	Ministry of Finance
mn	-	million
NEPA	-	National Environmental and Planning Agency
NIC	-	National Irrigation Commission Limited
NOW	-	Network of women for Food Security
NPV	-	Net Present Value
O&M	-	Operation and Maintenance
ORM	-	Office of Risk Management
OSF	-	Other Special Funds
OUR	-	Office of Utility Regulations
p.a.	-	per annum
PAS	-	Project Assessment System
PBL	-	Policy-based Loan
PEU	-	Project Execution Unit
PG	-	Producer Groups
PIOJ	-	Planning Institute of Jamaica
PLW	-	Project Launch Workshop
PM	-	Project Manager
PSC	-	Project Steering Committee
PWD	-	Persons with Disabilities
RADA	-	Rural Agricultural Development Authority
REDI	-	Rural Economic Development Initiative
RMF	-	Risk Management Framework
SC	-	Selection Committee
SCADA	-	Supervisory Control and Data Acquisition
SDC	-	Social Development Commission
SDGs	-	Sustainable Development Goals
SFR	-	Special Funds Resources
SGIA	-	Social and Gender Impact Assessment
SGS	-	Social and Gender Specialist
SPAD	-	Southern Plains Agricultural Development
TAG	-	Technical Advisory Group
TA	-	Technical Assistance
TBD	-	To be determined
TDD	-	Terminal Disbursement Date
TOR	-	Terms of Reference
UKCIF	-	United Kingdom Caribbean Infrastructure Partnership Fund
USD	-	United States Dollar
WRA	-	Water Resources Authority
WUA	-	Water Users Association

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COUNTRY DATA: JAMAICA
(JMD'000)

	2013/14	2014/15	2015/16	2016/17	2017/18
PER CAPITA					
GROSS DOMESTIC Product (GDP)					
(current market price)	526.9	567.3	600.0	630.0	660.0
GDP					
GDP at Current Market Prices (\$bn)	1,459.0	1,568.0	1,688.0	1,789.0	1,933.0
Sectoral Distribution of Current GDP (%)					
Agriculture	6.7	6.6	6.6	7.3	7.0
Mining & Quarrying	2.3	2.3	2.3	2.2	2.1
Manufacturing	8.5	8.4	8.5	8.5	8.6
Utilities	3.2	3.1	3.1	3.2	3.2
Construction	7.1	7.2	7.2	7.2	7.2
Transport & Communication	11.0	11.1	11.1	11.0	11.0
Hotels & Restaurants	5.6	5.7	5.8	5.8	6.0
Wholesale & Retail Trade Financial &	17.7	17.6	17.6	17.4	17.4
Business Services	11.1	11.1	11.0	11.1	1.2
Government Services	13.2	13.1	13.0	12.8	12.7
Other Services	6.9	7.0	7.0	7.0	7.0
Less Imputed Service Charge	4.0	4.0	4.0	4.0	4.0
GDP at Current Factor Cost (\$bn)					
GDP at Constant 2006 Prices (\$bn)	735.9	737.4	744.8	755.0	761.9
Annual Rate of Growth in GDP (%)	0.5	0.2	1.0	1.4	0.9
MONEY AND PRICES (\$bn)					
Consumer prices (avg. annual % change)	9.4	8.3	3.7	2.3	4.4
Money supply (M2; annual % change)	3.6	6.7	13.6	23.6	6.0
Total domestic credit (net)	426.7	496.1	482.4	522.8	563.2
Private sector (net)	318.9	339.5	376.0	493.9	552.0
Public sector (net)	132.8	188.4	206.5	116.6	179.2
Non-bank					
Financial Institutions (net)	(25.0)	(29.7)	(38.6)	(15.9)	6.7
Estimated Tourism Expenditure (USD mn)	2,113.0	2,314.0	2,444.0	2,566.0	2,876.0

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	2013/14	2014/15	2015/16	2016/17	2017/18
CENTRAL GOVERNMENT FINANCES (\$ mn) /3					
Current Revenues	344,848.0	370,878.0	413,971.0	460,264.0	497,022.0
Current Grants	10,429.0	5,018.0	5,463.0	5,293.0	5,614.0
Current Expenditures	358,253.0	396,472.0	427,973.0	461,401.0	505,244.0
Current Account Surplus/(Deficit)	(13,405.0)	(25,594.0)	(14,002.0)	(1,137.0)	(8,222.0)
Capital Revenue and Grants	...	...	...	...	...
Expenditure and Net Lending	37,758.0	36,989.0	23,019.0	41,955.0	46,806.0
Overall Surplus/(Deficit)	1,740.0	(7,775.0)	(4,884.0)	(3,476.0)	8,723.0
BALANCE OF PAYMENTS (USD mn)					
Merchandise Exports (f.o.b)	1,490.0	1,412.0	1,179.0	1,231.0	1,388.0
Merchandise Imports (f.o.b)	5,293.0	5,053.0	4,270.0	4,423.0	5,281.0
Trade Balance	(3,803.0)	(3,641.0)	(3,091.0)	(3,192.0)	(3,893.0)
Net Balance on Services Account	627.0	790.0	970.0	1,018.0	1,194.0
Income (net)	(282.0)	(345.0)	(490.0)	(594.0)	(507.0)
Transfers (net)	2,258.0	2,229.0	2,328.0	2,396.0	2,396.0
Current Account Balance	(1,200.0)	(967.0)	(283.0)	(372.0)	(810.0)
TOTAL PUBLIC DEBT (\$ mn)					
Total Public Debt	18,711.6	18,066.2	17,384.5	16,762.0	16,139.5
Domestic Debt Outstanding	9,350.0	9,169.7	7416.05	6,748.3	6080.451153
Long term	...	...	...	...	...
Short term	...	...	...	...	...
External Debt Outstanding	8,409.7	8,577.5	10313.9	10,244.0	10,174.08
Debt Service	2,068.4	1,861.1	3,685.7	2,443.2	1,200.7
Amortisation	1,011.5	754.7	2,629.6	1,400.0	170.
Interest Payments	1,056.9	1,106.3	1,056.1	1,043.2	1,030.3
Total Debt Service as % of Current Revenue	62.4	56.7	106.0	69.9	33.8
AVERAGE EXCHANGE RATE					
Dollar(s) per USD	106.4	113.0	119.0	127.0	128.0

Sources: STATIN, Bank of Jamaica, IMF, Country Authorities
Data as at 11 November 2018

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	2013/14	2014/15	2015/16	2016/17	2017/18
POPULATION					
Mid-year					
Population ('000)	2,717.9	2,723.2	2,728.9	2,729	2,728.9
Population Growth Rate (%)	0.2	0.2	0.2	0.1	0
Crude Birth Rate ²	14.2	13.6	13.8	13.3	12.5
Crude Death Rate ²	6.4	7.2	6.5	7.3	6.9
Infant Mortality Rate ²					
Labour Force ('000)	1,308.5	1,307.5	1,316.6	1,353.7	1,360.3
Male	713.5	715	719	730.5	730.8
Female	595.1	592.5	597.6	624.1	629.5
Labour Force Participation Rate (%)	63	62.8	63.1	64.8	65.1
Male	70	70	70.3	71.2	71.3
Female	56.3	55.9	56.3	58.9	59.1
Total Employment ('000)	1,109.1	1,127.8	1,138.7	1,175.2	1,201.8
Male	633.4	642.9	647.8	662.4	669.1
Female	475.6	485	490.9	515.5	532.7
Total Unemployment Rate (%)	15.2	13.7	13.5	13.2	11.7
Male	11	10.1	9.9	9.3	8.4
Female	20	18.1	17.8	17.6	15.4

Sources: STATIN, Bank of Jamaica, IMF, Country Authorities

Data as at 11 November 2018

PROJECT SUMMARY

Financial Terms and Conditions	
Borrower	Government of Jamaica (GOJ)
Executing Agency	N/A
Implementing Agency	Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF)

Fund	Fund Source	Amount (000's)	Amortisation Period (years)	Grace Period (years)	Interest Rate (%)
OSF-GBP	UK CIF Resources	16,710			
Grant Total:		16,710			
Counterpart Total:		423			
Total Project Cost		17,133			
Office of Risk Management (ORM) Commentary:N/A					

Project Summary

Project Outcome and Description:

The project's outcome is increased productivity and access to markets in the intervention areas.

The proposed project consists of the following components:

- (a) Infrastructure Works
- (b) Engineering and construction-related services
- (c) Goods
- (d) Other Project Support Services
- (e) Capacity Building
- (f) Project Management

Exceptions to CDB Policies No exceptions to CDB policies are in place for this Project.

GENDER MARKER SUMMARY

Analysis	Design	Implementation	Monitoring & Evaluation	Score	Code
1.0	1.0	1.0	0.5	3.5	Gender Mainstreamed (GM)

STRATEGIC CONTEXT AND RATIONALE

REQUEST

1.1 Government of Jamaica (GOJ) has requested the support of the Caribbean Development Bank (CDB), through the United Kingdom Caribbean Infrastructure Partnership Fund (UKCIF), to assist in the implementation of an agricultural development project targeting the communities of Parnassus (Clarendon) and Amity Hall (St. Catherine). The proposed project seeks to build on interventions under the on-going CDB/UKCIF financed Essex Valley Agriculture Development Project (EVADP). An Overview of; (i) the EVADP; and (ii) the proposed project intervention sites in Parnassus and Amity Hall are presented at Appendices 1.2 and 1.3 respectively.

MACROECONOMIC CONTEXT

1.2 Jamaica's economic development in recent years has been steady, coinciding with the government's implementation of its Economic Reform Programme in 2013 tackling public finance management, revenue systems and the doing business environment. Living standards also improved with the unemployment rate reaching historic lows of 8.4% by July 2018 and the rate of poverty falling from 21% to 17% in 2016, driven mostly by a reduction of poverty in rural areas. The prudent management of government finances under the programme resulted in notable reductions in the public debt-to-GDP ratio and debt service, improved revenue collection and positive real GDP growth (0.2% in financial year (FY) 2013/14 to 0.9% in FY 2017/18) followed a four-year period during which real GDP contracted.

1.3 The tourism and construction sectors have led economic growth since 2013. Jamaica's improved competitiveness as a tourism destination - with significant investments in the hospitality sector - has generated increased demand for high-value agricultural products and contributed to stabilisation of agricultural sector output. The contribution of agriculture to GDP has been moderate and stable for the past five years, with a 7.0% share of GDP in 2017. Agriculture is an important source of income representing 16% of total employment and 46% of rural employment. However, agriculture displays inequities with women predominantly engaging as farming partners with spouses, hired labourers, marketing agents and other subsistence roles. In Jamaica, women tend to work in the 'Wholesale/Retail, Motor Vehicle Repairs/Equipment Industries, while males dominate in' Agriculture/Hunting/Forestry/Fishing'.

1.4 On average, the agricultural sector underperformed during the period 2013-2017 owing in part to recurrent weather shocks such as droughts and floods. For example, droughts and dry conditions in 2013 and 2014 caused a decline in agricultural value added, tempering the GDP growth recovery. Similarly, the above average rainfall island-wide in 2017 resulted in flooding and damage to crops and livestock. Compounding weak sector performance were structural issues such as poor road infrastructure and inadequate access to water.

1.5 GOJ has prioritised the agriculture sector as one of several growth drivers, with investments in critical infrastructure that are aimed at increasing productivity and market access. This has also helped strengthen linkages between the sector and the rest of the economy. It is envisaged that continued investments in rural road networks, irrigation, water delivery, and modernising farming practices would have large potential payoffs in activity, resilience, and reducing rural poverty. A detailed country economic review is presented in Appendix 1.1.

SOCIAL CONTEXT

1.6 Jamaica has registered positive trends in human development and living conditions over the past decade. The 2018 Human Development Statistical Update (HDSU) ranks Jamaica (97th of 189 countries) among the high human development countries. The Human Development Index (HDI), a measurement of long and healthy life, quality education and training, and a decent standard of living, improved from 0.712 in 2010 to 0.732 in 2017. Life expectancy at birth in 2017 was 76.1 years (78.5 years for females and 73.7 years for males). According to the 2018 HDSU, the expected years of schooling was 13.1 years per child with a marginal difference of 1.6 years between females (14.4 years) and males (12.8 years). Despite this progress, inequality, poverty and vulnerability remain unacceptably high and threaten the sustainable development of Jamaica. The Jamaica 2017 HDI value of 0.732 when adjusted for inequality registered a 17% loss of its value to 0.608. Poverty and other forms of socio-economic inequalities (income, gender, disabilities and geography) remain significant development challenges particularly for residents of rural communities, who are highly dependent on the agricultural sector for their livelihoods.

1.7 The settlements of Amity Hall (St. Catherine) and Parnassus (Clarendon) are located along Jamaica's southern coastal plains. The settlements, historically, were characterised by large scale sugar cane and banana cultivation. The demise of the sugar and banana industries has resulted in the under utilisation of large areas of arable lands within these two rural settlements. Agriculture remains one of the main contributors to the social wellbeing of households and persons living in these rural settlements. Most households are engaged in backyard planting of cash crops and the rearing of livestock (mainly poultry, pigs and goats). Though some women within the project areas are productively engaged as individual farmers, they are more likely to be farming partners with spouses as unpaid laborers, as temporary hired laborers, marketing agents, and subsistence farmers. Most female farmers work smallholdings (3.95 acres compared to 7.98 acres for male) for cash crop or subsistence production and are principally engaged in food production for domestic consumption. A minority group of small scale farmers (men, women and youth) in Parnassus also practice informal farming but are considerably constrained by inadequate markets, agricultural inputs, on farm irrigation equipment, credit and praedial larceny.

1.8 Landless small scale farmers (women, men, youth and Persons With Disabilities [PWDs]) are among those poor and vulnerable groups in Amity Hall and Parnassus, contributing to informal farming. Despite GOJ land lease programmes for agricultural development, women and youth continue to face barriers due to their lack of access to the collateral necessary for accessing these leases and/or securing financing for viable commercial agriculture. Women with disabilities, like other PWDs, are likely to fare worse due to stigma and discrimination. For example, small scale women farmers face multiple disadvantages such as accessing markets and moving up the value chain. These are major challenges for rural women in Jamaica (Chambers 2018).

1.9 PWDs, who represent 6.4% of Jamaica's population, experience multiple barriers to socioeconomic participation. This is evident in poorer education and employment outcomes for PWDs compared with their non-disabled peers. Sustainable investments in agriculture would yield profitable economic enterprises and positive human development outcomes through equitable access to resources and training for poor and vulnerable populations and groups.

SECTOR ISSUES

1.10 An on-going CDB financed study, 'The State of Agriculture in the Caribbean,' has revealed that the relative stagnation of the agricultural sector in Jamaica is caused by two closely interlinked factors: **low productivity and weak market linkages**. These factors prevent the sector from responding to

rapidly growing demand from high-value markets - tourism, processing, retail - both within and outside Jamaica. Within Jamaica the demand from these sectors is largely met by imports.

1.11 Low agricultural productivity is intractably linked to the sector's vulnerability to natural hazard events and inefficient production practices. Jamaica's agricultural sector is highly vulnerable to climate shocks, with **drought and seasonal flooding being the most important risks in terms of frequency and impacts**. The impact of droughts and flooding is particularly severe along the coastal plains - home to the island's most arable lands - in the parishes of St. Catherine, Clarendon and St. Elizabeth. Climate change related events - including short to medium-term rainfall deficits, periods of higher precipitation and an increase in frequency of extreme temperatures - will most likely continue to plague Jamaica's agriculture sector.

1.12 Weak market linkages are largely the result of the limited ability of the agricultural sector to supply high quality produce on a consistent and timely basis. This is a result of limited investment in climate smart agriculture practices, modern irrigation infrastructure and international food safety standards - increasingly a requirement for accessing high-value markets both domestic and export. Modern food safety standards seek to ensure strict adherence to total quality management. They cover all stages from pre-production to marketing, have a focus on product traceability, and are subject to external, independent inspection/certification. In addition to enhancing market access, adoption of those standards could provide a wide range of benefits including; positive farmer/worker health and welfare; and a reduction in negative environmental impacts stemming from more effective oversight of agro-chemical use and improved hygiene practices. On the other hand, those **standards impose severe restrictions for smallholder producers who generally lack the resources to meet compliance requirements** such as; investment in infrastructure and equipment - waste disposal and postharvest facilities; equipment; production inputs; testing services - e.g. soil and water, pesticide residue; and maintenance of record keeping systems.

1.13 To combat the impact of Climate Change, address low productivity levels and compliance with modern food safety standards, GOJ has been actively promoting investments in the expansion, rehabilitation/modernisation of irrigation and drainage systems; and promoting farmer adoption of climate smart agriculture (CSA) and the international food safety standard G-GAP. Those efforts have been concentrated on agro-parks - contiguous parcels of arable lands equipped with the requisite infrastructure and systems critical to farmer adoption of CSA practices and GAP. Success of those efforts have been limited due to a combination of factors, including; high irrigation and drainage (I&D) system cost - both capital and operations and maintenance (O&M); and limited capacity of farmers - particularly small scale male, female, youth & PWD farmers - to invest in on-farm irrigation systems and related production enhancing technologies and/or market access systems.

1.14 Irrigation sector related challenges have been exacerbated by GOJ's policy of subsidising irrigation system O&M costs. Operationalising this policy has proven problematic on two fronts. Firstly, the use of subsidies results in farmers receiving water at artificially low prices which serves as a disincentive to adopting efficient water-saving on-farm irrigation technology. Secondly, due to GOJ fiscal constraints subsidy payments are often delayed, insufficient or not forthcoming, thereby reducing the capacity of the National Irrigation Commission (NIC) to provide efficient services.

1.15 GOJ has a well-established institutional framework for the provision of support services to the agricultural sector. Primary responsibility for the sector resides within the Ministry of Industry, Commerce, Agriculture and Fisheries (MICAFA). MICAFA discharges its responsibilities either directly or through associated agencies and Statutory Boards including: NIC - managing, operating, maintaining and expanding existing and future irrigation schemes/systems; Agro-Investment Corporation AIC - implementation of marketing infrastructure in agro-parks and provision of marketing support; Rural

Agriculture Development Agency (RADA); and Agricultural Marketing Information Division (AMID) - responsible for the delivery of extension/farmer training services, statistical data on agriculture; and providing policy and planning information to guide improvements in production, productivity, value-added and marketing in the agricultural sector. Regulatory agencies include; Water Resource Agency (WRA) - charged with the duty to “regulate, allocate, conserve and otherwise manage the water resources of Jamaica; and Office of Utility Regulation (OUR) - responsible for setting tariffs and regulating service standards, recommending licenses, providing policy advice and dispute resolution within the applicable sector.

1.16 Key institutional challenges that need to be addressed include the limited capacity of; (i) MICAF and its support agencies to deliver the full range of farmer advisory services in support of; farmer adoption of CSA and compliance with modern food safety standards; and (ii) AIC to support the management/operations of agro-parks and farmer access to markets.

1.17 GOJ is currently receiving support through the CDB UKCIF financed EVADP to address agricultural development constraints in Essex Valley St. Elizabeth, and institutional related challenges within NIC and RADA. Considerable additional investment across the Southern Plains will be required to realise the potential of the sector.

COUNTRY SECTOR STRATEGY

1.18 The overall objective of GOJ Vision 2030 for agriculture, as defined in the Agriculture Sector Business Plan 2016-2019, is to increase productivity and cost efficiency of agricultural enterprises. One of the strategies to achieve these objectives is the development of specified zones and/or agro-parks. A common goal of GOJ’s Agro Park interventions is to address economic development challenges by focusing on: diversifying production; producing a high quality product; increasing productivity and competitiveness; attracting private sector investment in the agricultural sector; actively facilitating the participation of youth and women; and making agricultural communities vibrant.

1.19 The southern coastal plains - parishes of St. Catherine, Clarendon and St. Elizabeth - are focus areas for GOJ's agricultural intensification efforts. Following the demise of the sugar and banana industries large areas of arable - GOJ owned - land are currently underutilised. Through the agro-park expansion initiative GOJ is actively engaged in the implementation of measures to ensure the productive utilisation of those lands. GOJ also aims to assist in commercialising the agricultural sector through supporting small-scale farmers - males, females, youth and PWDs - to 'step-up'. The strategy favours the development of alliances between small-scale farmers and large scale farmers/commercial operators (agro-processors, supermarkets, hotels etc.); and the provision of support to help mitigate the access to capital constraints that characterise the small farm sub-sector.

1.20 GOJ’s policy and legislative commitments have given cross-cutting attention to socioeconomic hardships disproportionately borne by females versus males, rural dwellers, PWDs, youth, among other poor and vulnerable groups. The National Policy for Gender Equality (2011), National Youth Policy 2015-2030; National Policy for Persons with Disabilities (2000), Disability Act (2014), among other commitments, provide a critical platform for action. Such inclusive approaches will contribute to sustainable poverty reduction, and the realisation of the *Vision 2030* and the Sustainable Development Goals (SDGs).

LINKAGE OF PROJECT TO CDB'S COUNTRY AND SECTOR STRATEGY AND POVERTY GOALS

1.21 The CDB GOJ Country Strategy Paper (CSP) 2017-2021 is aligned with the GOJ's *Vision 2030*. The Strategy rests on four pillars including; (a) Increasing Inclusive Economic Growth; and (b) Strengthening Environmental Sustainability. CSP outcomes include; (a) increasing competitiveness and productivity; and (b) reducing vulnerability to natural disasters. The CSP notes that enhancements in agricultural productivity, especially through investments in irrigation, are expected to generate direct and indirect increases in incomes and poverty reduction in Jamaica.

1.22 The proposed project is consistent with the purpose and objectives of the UKCIF, in that it: (i) supports economic growth and has a high rate of economic return; (ii) supports greater climate resilience [(through irrigation and use of energy efficiency/renewable energy (EE/RE)); and (iii) promotes poverty reduction and strong positive social impact, including gender equality.

1.23 This project is consistent with the following of CDB's strategic objectives:

- Supporting Inclusive and Sustainable Growth and Development

1.24 This project is consistent with the following of CDB's corporate priorities:

- Support Agriculture and Rural Development

1.25 This project is expected to contribute to the following Sustainable Development Goals:

- SDG 1. End poverty
- SDG 2. Zero hunger
- SDG 5. Gender equality
- SDG 8. Decent work and economic growth

1.26 This Project is consistent with the following of CDB's Sector and Thematic Policies:

- Agriculture Policy and Strategy
- Poverty Reduction Strategy
- Gender Equality Policy and Strategy
- Environmental and Social Review Procedures
- Climate Resilience Strategy

RATIONALE

1.27 GOJ recognises the critical role that the agricultural sector can play in driving economic growth, moderating the country's debt burden, reducing poverty and inequality, and improving the living standards of its citizens, particularly the poor and vulnerable in rural areas. Successive administrations have embarked on a process to transform the sector from one which has traditionally been dependent on production/export of a narrow range of commodities, to one that is internationally-competitive and positioned to capitalise on opportunities in both the domestic (including agro-processing, hospitality and retail/supermarket sector) and export markets. Although agricultural policies and strategic frameworks are in place, a number of factors prevent GOJ from achieving this objective. Large sections of the country's most productive lands - the southern plains - are underutilised, increasingly being impacted by irregular rainfall patterns and more intense/prolonged droughts possibly as a result of CC. Meanwhile investments in irrigation infrastructure are limited and several irrigation systems are approaching the end of their useful life having been established in the 1940/50s to serve the sugar and banana industries.

1.28 GOJ has recognised the need to evolve from a focus on supply side response (increasing water supply) to a demand side management approach (improving overall water use efficiency and favouring the most productive uses of water). Improvement in demand side management would be derived from a combination of: (i) physical upgrades to existing irrigation systems; (ii) improved efficiency of NIC operations; (iii) support to farmers to improve on-farm water management and produce higher value crops; support to the adoption of CSA practices; and, (v) instituting a system of cost recovery with a view to charging farmers and agricultural water users the full O&M costs.

1.29 GOJ also recognises the need for parallel investments to ensure compliance with modern food safety standards, an essential requirement for maintaining access to, and strengthening the linkages between, the agricultural sector and high-value markets. GOJ is also pursuing strategies to address the limited capacity of small-scale farmers - including poor and vulnerable groups (women, youth, and persons with insecurity of tenure) - to access financing in order to invest in cost-effective production and marketing infrastructure. The proposed project establishes linkages with the recent CDB UKCIF financed EVADP, and builds on previous irrigation and agricultural development projects in Jamaica financed by GOJ, CDB, other Multilateral Development Banks and the European Union.

2. PROJECT DESCRIPTION

PROJECT OUTCOME

2.1 The project's outcome is increased productivity and access to markets in the intervention areas.

PROJECT COMPONENTS

2.2 The selected intervention areas of Amity Hall (St Catherine) and Parnassus (Clarendon) located along Jamaica's southern coastal plains possess highly favourable agricultural production characteristics. The designated areas are all owned by the GOJ. Lands will be leased to commercially oriented farmers (large and small-scale including women and youth). Specific mechanisms have been built into the project to facilitate the participation of poor and vulnerable groups - women and youth. A detailed description is presented at Appendix 2.1.

1. **Infrastructure Works:** Improved Irrigation, Drainage, Farm Roads and Flood Control Systems Incorporating Climate Resilience Measures - renovating, enclosing and expanding water channels; well development; rehabilitating and expanding pressurised transmission and distribution networks, drainage and flood control systems, and feeder roads; installing Supervisory Control and Data Acquisition (SCADA) systems; and

Enhanced Agricultural Production and Marketing Systems - construction of pack houses and G-GAP structures that incorporate renewable energy and energy efficiency measures.
2. **Engineering and Construction Services:** Consulting services for the supervision of infrastructure works.
3. **Goods:** The supply of equipment for the pack houses and G-GAP structures; goods and equipment in support of farmers/Producer Groups (PGs) capacity building in CSA and G- GAP; vehicles, office and GIS equipment for the Project Execution Unit (PEU); and irrigation security, monitoring and control systems. The provision of on-farm irrigation (and other goods/equipment, inputs) to eligible small-scale farmers/PGs - including women and youth - in project area through a Matching Grant Scheme (MGS).

4. **Other Project Support Services:** Provision of financing to complement that available under the EVADP for Development of Gender-responsive: National Advocacy and Awareness Raising Campaign on Inclusive Career Pathways in Agriculture; Guidelines for Mainstreaming Economic Inclusion of Poor and Vulnerable Groups in Agriculture; and Training Manual for Producers' Groups to Strengthen their Organisational Capacity and Sustainability. The consultants will be engaged under the EVADP.
5. **Capacity Building:** The provision of training and advisory services to project stakeholders including small- scale poor and vulnerable male and female farmers/PGs to: improve adoption/compliance with G-GAP and CSA; and enhance their capacity to establish business linkages with commercial producers/high-value markets. The development of the G-GAP and CSA training programme/materials will be financed under the EVADP. SPAD will meet the cost associated with the delivery of G-GAP and CSA capacity-building initiatives in Parnassus and Amity Hall.
6. **Project Management:** Support MICAF in the management of Project implementation through the restructuring and expansion of the EVADP Project Execution Unit (PEU); undertaking annual financial audits of the project's Designated Account (DA); implementation monitoring and reporting. See details on Project Management at para 6.03.

RESULTS FRAMEWORK

Project Impact				
Increased farm incomes in Amity Hall and Parnassus.				
Outcome	Indicator	Baseline	Target	Data Sources, Reporting Mechanisms and Report Frequency
1 Increased productivity and access to markets in the project areas.	1.1 Increase in average yield of major crops (%)	0; 12/31/2018	50; 12/31/2025	AIC/RADA
	1.2 Irrigation tariff collection rate (%)	0; 12/31/2018	90; 12/31/2023	NIC
	1.3 Irrigation System O&M cost recovery (%)	0; 12/31/2018	75; 6/30/2025	NIC
	1.4 Percentage of farmers/PGs working through formalised market linkages. (%)	0; 12/31/2018	50; 12/31/2025	AIC
Assumptions for Achieving Outcomes				
GOJ implements an effective strategy for the allocation of land leases. Project infrastructure is effectively maintained and efficiently operated. The market for the identified crops remains visible/stable Where appropriate, indicators will be disaggregated by sex and age – project reporting will ensure this.				

Output	Indicator	Baseline	Target	Data Sources, Reporting Mechanisms and Report Frequency
1. Climate resilient roads	1.1 Farm roads built or upgraded - Amity Hall (Km)	0; 12/31/2018	25; 6/30/2023	PEU
	1.2 Primary, secondary and other roads built or upgraded (Km)	0;	40; 6/30/2023	PEU
	1.3 Farm roads built/upgraded - Parnassus (Km)	0; 12/31/2018	15; 6/30/2023	PEU
2. Increased leasehold area	2.1 Land leased to youth - Parnassus (Hectares)	0; 12/31/2018	35; 12/31/2021	AIC
	2.2 Land leased to youth - Amity Hall (Hectares)	0; 12/31/2018	45; 12/31/2021	AIC
	2.3 Land leased to female farmers - Parnassus (Hectares)	0; 12/31/2018	50; 12/31/2021	AIC
	2.4 Land leased to female farmers - Amity Hall (Hectares)	0; 12/31/2018	70; 12/31/2022	AIC
3. Improved off-farm irrigation system	3.1 Land improved through irrigation, drainage and/or flood management (Hectares)	0; 12/31/2018	795; 6/30/2022	NIC
	3.2 Land with access to irrigation, drainage, flood control systems and roads - Amity Hall (Hectares)	0; 12/31/2018	480; 6/30/2023	PEU
	3.3 Land with access to irrigation, drainage, flood control systems and roads - Panassus (Hectares)	0; 12/31/2018	315; 6/30/2023	PEU
	3.4 Wells Rehabilitated/Developed - Parnassus (#)	0; 12/31/2018	3; 12/31/2020	PEU
	3.5 Off-farm irrigation pipelines - Amity Hall (Km)	0; 12/31/2018	23; 12/31/2022	PEU
	3.6 Off-farm irrigation pipelines – Parnassus (Km)	0; 12/31/2018	13.6; 12/31/2022	PEU

Output	Indicator	Baseline	Target	Data Sources, Reporting Mechanisms and Report Frequency
4. Gender-responsive and inclusive capacity building	4.1 Stakeholders trained in improved production technology (#)	0 12/31/2018	700 6/30/2023	RADA
	4.2 Gender-Responsive Guidelines for Mainstreaming Economic Inclusion of Poor and Vulnerable Groups in Agriculture approved (Yes/No)	0 12/31/2018	1 6/30/2022	PEU
	4.3 Gender-Responsive Training Manual for Farmers' Groups approved and training delivered (Yes/No)	0 12/31/2018	1 6/30/2022	PEU
	4.4 Matching Grant Scheme (MGS) established (Yes/No)	0 12/31/2018	1 6/30/2021	AIC
	4.5 National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture developed and launched (Yes/No)	0 12/31/2018	1 6/30/2021	PEU
Assumptions for achieving outputs				
<p>No major adverse weather conditions impacting construction and/or effective stakeholder engagement for capacity building activities.</p> <p>Timely delivery of irrigation and related infrastructure engineering designs.</p> <p>Timely clearance of procurement packages by GOJ.</p> <p>Where appropriate, indicators will be disaggregated by sex and age – project reporting will ensure this.</p>				

LESSONS LEARNT

Description	Project Response
Timely and efficient maintenance of I&D systems is critical to sustainability.	GOJ has agreed to implement measures to ensure that farmers and other users are charged the full cost of the I&D system O&M in keeping with the recommendations emerging from a Tariff Study for the NIC which is being implemented under EVADP.
Ensuring that farmers and investors have the requisite skills in GAP/GG and CSA will be critical if the proposed productivity levels and market access is to be achieved. Implementing farmer advisory services in those areas should take place as early as possible if success is to be achieved.	The proposed project will support farmer compliance with internationally-recognised food safety standards by building their capacity toward meeting GAP/GG certification. The project will also help facilitate implementation of a plan which seeks to support farmer adoption of appropriate CSA practices.

3. FINANCING PLAN

FINANCING STRUCTURE AND COSTS

3.1 CDB signed a ‘Memorandum of Understanding’ with the Government of the United Kingdom, acting through the Department of International Development (DfID) in March 2016, for the purpose of financing the UKCIF programme [up to three hundred million pounds sterling (£300 mn) by way of a grant]. The programme’s main activity is the establishment of a fund that will provide grants to build economic infrastructure in DfID’s Overseas Development Administration-eligible countries in the Caribbean, of which Jamaica is eligible.

3.2 The project cost is estimated at seventeen million, one hundred and thirty-three thousand, four hundred and ninety-two pounds sterling (£17,133,492), which will be financed with resources from the UKCIF managed by CDB. The project’s cost estimates are based on the findings of a CDB/Food and Agricultural Organisation (FAO) scoping study, as well as feasibility level/preliminary cost estimate studies conducted by independent consultants in the third quarter of 2018. The proposed design and cost estimates reflect best practice in the sector and GOJ experience in the implementation of similar projects.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank’s Information Disclosure Policy.

3.3 CDB staff are satisfied that the cost estimates and all corresponding contingencies provide an adequate basis for appraisal. A summary of the project cost is presented in Table 3.1 below. Further details are given in the Project Cost, Phasing and Financing Plan, which is presented at Appendix 3.1.

TABLE 3.1: SUMMARY OF PROJECT COSTS AND FINANCING

Components	TOTALS				
	OSF-GBP	Total	COUNTERPART		Total
	UK CIF Resources		MICAF/NIC	OTHER	
1. Infrastructure Works	13,645,960	13,645,960	390,000		14,035,960
2. Engineering and Construction-related Services					
3. Goods					
4. Other Project Support Services					
5. Project Management					
8. Capacity Building					
Base Cost					
6. Physical Contingency	3,064,353	3,064,353	33,179		3,097,532
7. Price Contingency					
Total Project Cost	16,710,313	16,710,313	423,179		17,133,492
Total Financing	16,710,313	16,710,313	423,179		17,133,492
Percentage Financing	98%	98%	2%	0%	100%

3.1 The proposed project will be financed by:

- a grant to GOJ of an amount not exceeding the equivalent of sixteen million, seven hundred and ten thousand, three hundred and thirteen pounds sterling (£16,710,313), representing 98% of the project cost; and
- counterpart funding of an amount not exceeding the equivalent of four hundred and twenty-three thousand, one hundred and seventy-nine pounds sterling (£423,179) (JMD67,642,878), which will finance project management related costs, including PEU staff office facilities; and NIC/AIC technical, administrative and accounting support. GOJ has provided assurances that adequate budgetary allocations have been made for funding of its counterpart contribution, which represents 2% of the project cost.

3.2 The cost estimates are based on exchange rates prevailing on November 20, 2018.

4. PROJECT VIABILITY

TECHNICAL ANALYSIS

4.1 **FEASIBILITY AND DESIGN STUDY** - The feasibility studies, preliminary design and cost estimates which informed preparation and appraisal of the proposed project were facilitated by a, 'Scoping Study,' conducted by FAO and consultants engaged by the GOJ. The detailed designs, including the conduct of a CVA and ESIA, will be facilitated by consultants, financed under a CDB/UKCIF Technical Assistance Grant. GOJ is currently negotiating with the first ranked consultant following the launch of a tender process earlier this year.

4.2 **IRRIGATION SYSTEMS** - Amity Hall and Parnassus, are currently served by irrigation systems - built in the 1940s to serve large scale sugar and banana plantations. No application for new water allocations at these locations will be necessary, as the WRA has given the assurances that water resources are adequate to meet the estimated demand. For the Amity Hall development, an existing open canal, supplied by the Rio Cobre, traverses a populated community and is subject to contamination - this will be enclosed in sections to minimise this risk. The present system configuration/design on both sites are not suited to the provision of efficient irrigation services to several small farm holdings (approximately 2 ha each), involved in the production of a wide range of crops with varied production characteristics and schedules. Accordingly, the systems will be redesigned/replaced, and equipped with variable speed pumps. SCADA systems will be incorporated to facilitate effective and efficient management/monitoring of water production, individual farm water consumption, and billing efficiency. The proposed new designs will utilise the latest industry standards and practice, resulting in improved efficiencies, reduced energy consumption/operating costs, and the necessary flexibility to adjust to varying cropping patterns.

4.3 **FARM ROADS** - This will involve the rehabilitation and expansion of existing farm roads. The farm designs are based on the "Guidelines and Minimum Specifications for Construction and Maintenance for Gravel and Farm Roads by the Federal Highway Administration, U.S. Department of Transportation, August 2015" - with additional safeguards to deal with flood/drainage risk and load bearing.

4.4 **DRAINAGE SYSTEMS** - Due to existing site conditions, drainage of farm roads and installation of on-farm drainage systems will be necessary in some sections of the project area. Preliminary designs/cost estimates for flooding potential are based on rainfall intensity calculations obtained from the Meteorological Office of Jamaica for a return period of ten years. This will be subjected to further analysis under the planned CVA.

4.5 **G-G.A.P STRUCTURES AND PACK HOUSES** - Pack houses and G-G.A.P structures, for small-scale farmers, will incorporate climate resilience and energy efficiency measures. The detailed design of these structures will be guided by established building codes and international design standards/requirements. Structures will be designed to mitigate hazards such as floods, earthquakes and hurricanes. Buildings will be designed for hurricane resistance, using the Caribbean Uniform Building Code, and earthquake resistance using the Structural Engineers Association of California code. Recommendations of the International Building Code with regard to plumbing, sanitary and other facilities will be followed.

4.6 **MATCHING GRANT SCHEME** - Management will be delegated to AIC. Funds have been included under the project to support the preparation of an Operations Manual (OM) including the definition of guidelines and criteria for accessing the MGS. The OM shall include a framework to encourage/support the participation of poor and vulnerable groups including women and youth. AIC will establish a MGS Steering Committee (SC) for the purpose of approving the OM and considering/approving requests under the MGS. No disbursement shall be made under the MGS prior to; establishment of the MGS SC; MGS SC approval of the OM; and CDB no-objection of the OM and MGS-SC.

FINANCIAL ANALYSIS

4.7 The objective of the financial analysis is to assess the viability and potential for increased profitability of the crops/models to be supported by the project. As such, the potential for productivity improvements resulting from investments in irrigation infrastructure and related production and marketing systems/farmer capacity enhancement have been taken into consideration. Indicative crop and activity budgets for “with” and “without” project scenarios were developed, net of self-consumption by family members. In the “without” project scenario, it is expected that the farmers would utilise low-input production systems, with associated low yields and limited market linkages. Weather related challenges - too much and/or too little water - would also limit cropping intensity and result in seasonal production under the "without" project scenario.

4.8 Assumptions to the financial analysis, including (i) a summary of the representative crop financial results and (ii) the detailed crop budgets, are presented in Appendix 4.1. It is anticipated that at the end of the year 2023 (project year 4), the marketable yield per ha under the “with” project scenario will amount to 284.30 tonnes, compared to 148.60 tonnes under a “without” project scenario. Similarly, the net profit per ha with the project is estimated at £175,260 over the same period, compared to £66,470 without the project. This demonstrates the financial viability of the crops supported by the project, as well as their potential to result in improvements in the profitability of the target beneficiaries of the project.

ECONOMIC ANALYSIS

4.9 The economic analysis of the project was conducted over a projected period of 20 years, in order to assess its viability and efficiency. While all of the potential economic benefits of the project have not been included, key benefits are as follows:

- increased crop yields and productivity due to enhanced water management systems and farmer capacity;
- an increased proportion of marketed farm produce;

- reduced losses during production, processing and transportation of produce through innovative technology and improved rural infrastructures;
- improved quality of products, thus attracting higher prices as a result of the demand by processors for more reliable inputs/outputs;
- increased employment either for hired or family labour for both on-farm and off-farm activities; and
- tax revenues as a result of increased volume of taxable production.

4.10 The economic benefits to farmers/PGs will be influenced by their application of the improved technologies, which the project will promote directly. Income increases will also rely on infrastructure rehabilitation, which will improve production yields and market access. This in turn will support marketing linkages and private sector development, generally creating a favourable economic environment that encourages farmers/PGs to produce more competitive products. Finally, as the country is currently importing fruits and vegetable products, it is reasonable to expect reduced imports, resulting in foreign exchange savings.

4.11 The economic rate of return (ERR) of the project is estimated at 22.2%, with a net present value (NPV) of £15.1 million on capital investment of £19.4 million. These results indicate that, on the basis of an opportunity cost of capital of 12%, the project shows a satisfactory ERR and NPV and therefore is economically viable. Details of the incremental economic analysis and the assumptions used are provided at Appendix 4.2.

4.12 Sensitivity Analysis - The results of the sensitivity analysis, presented in Appendix 4.2, demonstrate that the economic viability of the project is robust to adverse changes in project costs, increases in capital and recurrent costs and delays of benefits due to implementation issues.

4.13 The switching value analysis demonstrates that in addition to changes in prices and benefits, the project is able to withstand changes in the adoption rate by smallholder farmers, where the adoption rate refers to the likelihood of the farmers/PGs adopting the proposed technologies. The adoption rate is the most sensitive of the above variables, given that a low adoption rate presents a risk to achieving the outcomes of the project. However, the risk associated with the adoption rate is mitigated by project resources that encourage critical stakeholders, such as the farmers/PGs, NIC and AIC to adopt improved technologies, while strengthening market linkages and supporting the development of the private sector.

4.14 Fiscal Impact - It is expected that the project will have a substantial positive fiscal impact in the medium to long-term, primarily as a result of (a) increased output, income, and employment, leading to improvements in tax revenues; and (b) multiplier effects due to increased economic activities in the targeted area. It is anticipated that this will result in an increase in demand for goods and services, which will generate additional income and employment effects. Furthermore, substantial foreign exchange earnings/savings are expected, resulting from a reduction in imports of produced crops.

MACROECONOMIC IMPACT

4.15 Empirical studies on Jamaica's agriculture sector found a positive relationship between agriculture and the other sectors of the economy, suggestive of dynamic forward and backward linkages. For example, pre-global financial crisis (1994-2007), the elasticity of agriculture with the rest of the economy was 1.3%. In other words, a 1% increase in the value added of agriculture was estimated to have a positive effect of 1.3% on the rest of the economy. Consequently, it is expected that the post-implementation effect of the project over the medium-term will have a positive macroeconomic impact via channels multiple channels: (a) increased output, income, and employment, resulting in increased tax revenues; and (b) multiplier effects

due to increased economic activities in the targeted area, resulting in increased demand for goods and services, which is expected to generate additional income and employment effects. Furthermore, substantial foreign exchange earnings/savings can be expected, resulting from a reduction in imports of produced crops.

SOCIAL AND GENDER IMPACT ASSESSMENT

4.16 The proposed project offers direct social and gender benefits for small and medium sized commercial agricultural enterprises through improved access to agricultural resources; technical expertise; organisational strengthening and female and male farmers' capacity building in the rural communities of Amity Hall (St. Catherine) and Parnassus (Clarendon). By tackling the barriers to participation of poor and vulnerable farmers, through facilitating access to training, land, irrigation, other productive inputs and financing the Project will contribute to the continued recovery of the rural economic sector, food security, social inclusion and gender equality, while significantly addressing the environmental risks.

4.17 Since a major proportion of the rural population depends on agriculture as the primary economic and income-generating activity, the Project offers new fertile agricultural lands, farm access roads, climate smart irrigation facilities, and a MGS (for small-scale male, female, youth, PWD farmers and PGs), to support the ongoing recovery of commercial agriculture. The Project will build upon and/or strengthen the knowledge, capabilities and practices of local farmers and their organisations, utilising social and gender responsive approaches. For example, small scale farmers will benefit from the MGS and build sustainable livelihood strategies through viable commercial agriculture. Through the engagement and services of a Social and Gender Specialist and an Agri-Business Development Specialist, the capabilities of male and female farmers as well as PGs will be strengthened for evidence-based decision making. This component will also help deliver positive outcomes for social inclusion, gender equality and greater opportunities for both women's leadership and resource mobilisation in agriculture. As a result, the Project will contribute to a greater share of resources that address the needs for, and access to, training for poor and vulnerable farmers, including small landless farmers.

4.18 The investment in on-farm climate smart irrigation equipment and training for poor and vulnerable farmers is intended to contribute to building resilience to adverse weather events and improving food security within rural communities. The Project will also provide access to: (i) land, inputs and technical services in CSA and GAP; (ii) financing for small-scale farmers through an MGS; (iii) market arrangements through the establishment of both horizontal and vertical linkages between rural farmers/PGs and larger commercial farms, agro-processors, distributors and exporters; and, (iv) training in the good use, operations and maintenance of investments in on farm irrigation equipment and facilities. This multi-faceted approach will enhance both the sustainability and profitability of commercial farming while boosting social equity and safeguarding against environmental degradation.

4.19 The Project in its design and appraisal stages engaged government agencies, small farmers and farmers' associations in meaningful consultative processes. The consultations gained the voices and identified the priorities of local male and female farmers, rural women farmers and their organisations, young farmers and PWDs. It is envisaged that these engagements will establish the foundation for organisational strengthening and partnership building at the local and national levels. The integration of social and gender equality principles and youth responsive approaches in the Project components will be essential ingredients to ensuring equitable access to the resources and benefits for the small scale landless farmers and producers' groups. The Programme is rated as gender mainstreamed with a score of 3.5 on the Gender Marker (Appendix 4.2).

GENDER MARKER SCORE

Analysis	Design	Implementation	Monitoring & Evaluation	Score	Code
1.0	1.0	1.0	0.5	3.5	Gender Mainstreamed (GM)

ENVIRONMENTAL ASSESSMENT

4.20 The project is categorised as “B” based on CDB’s Environment and Social Review Procedures (ESRP). Potential adverse environmental and social impacts are readily identifiable, short term, and can be mitigated by employing industry best practices. In keeping with Jamaica regulations, and CDB's ESRP, an ESIA will be prepared as a condition precedent to the commencement of capital works.

4.21 Project activities include: (i) irrigation development; and (ii) agricultural support for improving compliance with global environmental standards, at two sub-project areas, Amity Hall in Southern St. Catherine (Rio Cobre Hydrological Basin) and Parnassus in Southern Clarendon (Rio Minho Hydrological Basin). Both sub-project locations are former sugar cane estates, comprise flat and gently sloping terrain, and are water stressed and climate sensitive. Poor drainage is also a feature of Amity Hall, due largely to the topography, soil type and vulnerability to intense rainfall. The site at Amity Hall is in close proximity to a wetland area, which part of the Portland Bight Protected Area and a natural crocodile habitat. Water for the proposed irrigation systems will be provided via channel from the Rio Cobre River.

4.22 Construction: Temporary and site specific impacts include noise nuisance, deterioration of air quality (dust and vehicular emissions), vegetation clearing, traffic disruption, soil erosion, waste accumulation, and water and soil contamination. These can be addressed by employing best environmental management practices for construction. Construction activities may directly or indirectly affect the health and safety of workers and residents close to project sites. The Contractor will prepare an Occupational Health and Safety Plan, including providing personal protective equipment for workers; and training construction workers in good safety practices; and emergency preparedness and response.

4.23 There is the potential for workers to be exposed to asbestos fibres in old asbestos cement pipes at Parnassus. NEPA has clear guidelines and requirements for managing Asbestos Containing Materials, including a designated area for the safe disposal of asbestos at the Riverton Waste Disposal Facility in Kingston.

4.24 Operations: A major benefit of the project will be the integration of G-GAP practices at the farm and pack house levels, which will help mitigate potentially harmful impacts of agricultural production on the environment through, among other things, (a) improved management of agrochemicals; and (b) reduced contamination of water and soils.

4.25 Disposal of household and other types of waste in open canals may increase the level of canal pollution and become a source of disease, and spread of epidemics. This risk will be mitigated by covering canals located near settlements. Improved access to water may result in more intense cropping patterns, and the possibility of greater agro-chemical use, however, proposed capacity building interventions in CSA and G-GAP will help reduce this risk.

4.26 Increased demand for water from the irrigation systems could reduce aquifer volumes due to the compound effect of over abstraction and anticipated changes in climate variables. The project will benefit from on-going water monitoring by the NIC and WRA - the provision of support to enhance the capacity of both organisations is included under the project.

4.27 Environmental monitoring during construction will be undertaken by the supervising engineering consultants, consistent with mitigation measures in the Environmental and Social Management Plan (ESMP). The costs/budget for mitigation measures have been included in the project's design and construction costs estimates. The supervising engineering consultants will be required to approve and monitor the ESMP, and submit routine reports to CDB on the contractors' operations for compliance with mitigation measures stipulated in the ESMP.

CLIMATE CHANGE VULNERABILITY ASSESSMENT (CCVA)

4.28 Changes in climate variables can significantly impact on the ability of irrigation infrastructure to meet water needs. Observed trends in CC in Jamaica over the last 50 years indicate generally higher temperatures, with mean temperatures increasing at a rate of 0.16°C/decade; variable rainfall, with increased intensity and occurrence of extreme rainfall events; and increased frequency of hurricanes since 1995 (including a notable increase in Category 4 and 5 hurricanes).

4.29 Projected changes by 2050 suggest:

- An increase in average annual temperature of 1.0-1.4°C.
- An increase in the number of "hot" days and nights of about 52-59 percent.
- A decrease in average annual rainfall of 4.8-7.2 percent.
- An increase in the number of consecutive dry days of 3.6-15 percent.
- An increase in extreme rainfall days-14 percent.

4.30 An assessment of water resources in the sub-project areas indicate that there is sufficient water to satisfy the estimated crop water demand of 10.5 m³/day, which is well within the present surplus of the basins. However, based on the climate projections, agriculture in the project areas is likely to experience challenges from: higher crop water requirements, seasonal shifts in growing seasons; reduced run-off to surface water sources due to higher evapo-transpiration rates; reduced precipitation; higher flooding risks due to projected extremes in daily rainfall; declining groundwater levels; and increased proliferation of pest and diseases. A detailed CRVA will be conducted to, among other things, make recommendations on measures to improve resilience to present climate variability and projected climate change with measures for improving water use efficiencies, aquifer production, and drainage works in project design. Appropriate return periods will be incorporated in detailed designs and good quality construction used to ensure resilience of irrigation infrastructure, farm roads and drains to flood flows.

4.31 The low lying nature of sections of the project area, soil type, and projected increases in the intensity of rainfall increases the risk of flooding. The project will support rehabilitation and expansion of primary and secondary drainage networks at Amity Hall. The design and construction of farm roads and associated drainage systems will also take into consideration the likely impact of rainfall events.

PAS GENERAL COMMENTARY

4.32 In accordance with CDB's Performance Assessment Systems (PAS), the proposed project has achieved a score of 3.75 - Highly Satisfactory. This indicates that the Project's outputs are expected to be of a high standard and delivered in a timely and cost-effective manner.

PAS TABLE

Criteria	Score	Justification
Relevance	Highly Satisfactory	GOJ recognises the critical role of the agriculture sector in driving economic growth, moderating the country's debt burden and reducing poverty and inequality. The project is consistent with CDB's Strategic Objectives of fostering the economic growth of its BMCs, reducing poverty and fostering inclusive social development. It is also consistent with the Strategic Objectives of the UKCIF – supporting economic growth, climate resilience, poverty reduction and gender equality.
Effectiveness	Highly Satisfactory	The project adopts a multi-faceted approach to addressing the challenges – low productivity and weak market linkages – faced by the agricultural sector in Jamaica. Investments in irrigation, drainage and road infrastructure, and capacity building in CSA will facilitate year-round production of high-value crops. The MGS scheme will enhance the ability of small-scale farmers and vulnerable groups to invest in modern production technologies and systems. Meanwhile, facilities and systems in support of the adoption of the GLOBALG.A.P standard, and market related support will facilitate greater linkages between farmers and high-value markets.
Efficiency	Highly Satisfactory	Careful consideration was given to the design of the project to ensure that cost-effective options were selected. The project's economic rate of return (ERR) is estimated at 22.2%, which is above CDB's cut-off rate of 12%.
Sustainability	Satisfactory	The investments in variable speed pumps and SCADA will reduce overall O&M costs which, in conjunction with improvement in farmer's financial returns as a result of increased productivity, should allow a greater contribution by farmers to O&M costs and a reduction in dependency on GOJ subsidies. Enhancement of WRA equipment will support monitoring of the water resources in the area will reduce the likelihood of over abstraction. Interventions in CSA and GG will enhance the sustainability of both agricultural production and marketing systems. The provision on on-farm equipment to vulnerable groups will have the positive effect of speeding-up on-farm operations and enhancing their ability to meet leasehold payments. Through the collection of leasehold payments AIC will be better equipped to meet the cost associated with the management of the agro-parks. Capacity building in CSA and G-GAP will be facilitated through RADA and tertiary education institutions in Jamaica.
Overall Score	Highly Satisfactory	

5. RISK ASSESSMENT AND MITIGATION

RISK JUSTIFICATION

5.1 The project is subject to a number of risks which can be summarised under the headings of Implementation and Operational. The project design includes various measures, as detailed in Table 5.1, to mitigate those risks.

TABLE 5.1: SUMMARY OF RISKS ASSESSMENT AND MITIGATION MEASURES

Risk Category	Risk Type	Description of Risk	Mitigation Measures
Operational	Procurement/Fiduciary	Lengthy national procurement process	A Procurement Specialist will be engaged as part of the PEU. CDB will also engage a Consultant to provide specialist support to the PEU. Evaluation of bids will be via specifically convened Evaluation Committees, appointed in advance of the stated deadline for submission of EOI and proposals. The Evaluation Committee will be required to convene and complete the shortlisting of consultants/firms, and Evaluation Reports for proposals over a 2 to 3 day period. CDB staff are in dialogue with authorities in Jamaica with a view to agreeing on a framework for speedy approval of UKCIF financed contracts by national approving bodies.
Financial	Budgetary/Local counterpart funds	Delays in drawdown of grant resources from	GOJ has assigned an officer within the MOF to monitor,

Risk Category	Risk Type	Description of Risk	Mitigation Measures
		CDB due to conflict with GOJ fiscal management targets, and/or a failure of the Implementing Agency to adequately respond to GOJ Budget Calls.	and make the necessary interventions to ensure that the project budgets and cash flow requirements are in line with GOJ fiscal management rules.
Operational		Delays in the completion of design studies.	The detailed design for the project will be undertaken by consultants engaged/financed under the CDB UKCIF financed Technical Assistance project, 'Feasibility and Design Study - St. Catherine and Clarendon Agricultural Development Project' approved by CDB/UK CIF in March 2018. NIC will closely monitor the work of the consultant.

6. IMPLEMENTATION AND PROJECT MANAGEMENT

BORROWER

6.1 The grantee is the GOJ.

IMPLEMENTING AGENCY ANALYSIS

6.2 MICAF will be the Implementing Agency and will maintain overall responsibility for project implementation and administrative oversight. An overview of MICAF is presented at Chapter 1. The PSC and the Technical Advisory Group (TAG) on the ongoing CDB UKCIF financed EVADP will assume responsibility for the provision of general implementation oversight to the implementation of the Project.

PROJECT MANAGEMENT

6.3 To maximise synergies between SPAD and EVADP, improve the efficiency of resource utilisation, and ensure that the experience of NIC in the implementation of irrigation projects in Jamaica is more effectively utilised, the current reporting arrangements for EVADP will be restructured/merged with SPAD. Technical oversight to the restructured PEU will be provided by NIC - through the Officer of the Director of Projects. For the duration of project implementation, the PEU will consist of two Project Managers - one each for SPAD and EVADP. Current staff of EVADP will be augmented by an Accounting Officer and a Procurement Specialist. An Agri-Business Specialist, a Construction Supervisor and two Clerk of Works will be engaged on a periodic basis - an estimated thirty-six months each - in keeping with the requirements of the projects. An engineering firm, engaged under the EVADP will provide shorter-term support - Civil, Engineer, Mechanical/ Electrical engineering, Hydro- geologist and Environmental Specialist. The PEU will be responsible for coordination and management of both projects in conformity with the standards and requirements agreed upon with CDB; and in accordance with the respective Grant Agreements, Project Appraisal Documents, and CDB procurement guidelines. Key activities will include, inter alia; annual work and budget planning; procurement, contract management, financial management and reporting; supervision of RADA and AIC implemented activities; and reporting on project progress, finances, achievement of outcomes and M&E indicators. CDB will also provide institutional support during project implementation. NIC will enter into two Service Contracts, one each with RADA and AIC. RADA will be engaged to implement all CSA and G-G.A.P related capacity building components under SPAD and EVADP. The specific delivery modalities for both CSA and G-G.A.P will be defined by consultants - procurement of those services has commenced under the EVADP. AIC's responsibilities related to MGS will be defined in the MGS OM.

IMPLEMENTATION

6.4 The project will be implemented over a period of fifty-four months after CDB/UKCIF approval. A Provisional Implementation Schedule is presented at Appendix 6.4.

PARTICIPATION OF BENEFICIARIES AND STAKEHOLDERS

6.5 Preparation and appraisal of the project involved consultation with a diversity of stakeholders including senior Government officials - MICAF, PIOJ, NIC; male, female and youth farmers; and, PGs/farmers associations; in the project areas. These consultations yielded feedback on stakeholder's experience, knowledge and challenges related to: crop production practices; the impact of weather on cropping practices/output; organisational capacity of PGs; differential roles and needs of women, men, and youth farmers; and, their perceptions of the proposed project.

6.6 The project is committed to active stakeholder engagement. The participatory approach will be defined by the outputs of the Feasibility and Design Study's ESIA including the ESMP, Stakeholder Engagement Plan (SEP) and Grievance Response Mechanism (GRM). Specific stakeholder groups will be targeted including existing and/or new small male, female and youth farmers, and poor and vulnerable PGs/farmer's organisations. The Project will engage with stakeholders by: providing on-farm advisory services and specialised training; conducting regular monitoring and reporting on the inclusiveness of project activities/outcomes; enabling market linkages; and, facilitating access to financial support through the MGS. The PEU will host semi-annual meetings at each project site to update and obtain feedback from stakeholders on project implementation and to resolve outstanding issues. Aligned with GOJ's commitment to transparency, key project related data including details of the project's scope, approved budget, results and implementation status, and the ESIA will be publicly available. As appropriate, data will be shared on GOJ's Open Data portal (e.g. the Agricultural Business Information System and the quarterly contracts awards database).

DISBURSEMENT

6.7 Disbursement of the Grant will be made in accordance with CDB's procedures for the withdrawal of funds. It is expected that the first disbursement from the Grant will be made by August 31, 2019 and that the Grant shall be fully disbursed by June 30, 2023. An estimated quarterly grant disbursement schedule is presented at Appendix 6.2.

DESIGNATED ACCOUNT

6.8 The Beneficiary may open and maintain a foreign currency Designated Account (DA) in a Financial Institution acceptable to CDB. The DA shall be used exclusively for CDB's share of eligible operating expenses of the PEU. All other project activities will be financed via direct payment or reimbursement. The DA will be maintained by GOJ and operated in accordance with the terms and conditions for the operation of DA set out at Appendix 6.10. The maximum advance to the DA will be the equivalent of three months PEU expenditure, in keeping with the respective Annual Work Plan and Budget of the proposed project. The DA will be subject to external audit.

PROCUREMENT

6.9 Procurement of goods, works and non-consultancy services will be in accordance with CDB's Guidelines for Procurement (January 2006). The procurement of consulting services will be in accordance with CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011). Services related to the provision of: civil, mechanical and electrical engineering; and hydro-geologist will be provided by an Engineering Firm, competitively procured under the EVADP. A Procurement Plan is presented at Appendix 6.3.

MONITORING AND REPORTING

6.10 It will be a condition of the Grant that PM shall furnish or cause to be furnished to CDB, the reports listed in Appendix 6.5 to this Report, in such form or forms as CDB may require, not later than the times specified therein. CDB, in collaboration with GOJ, will organise a Project Launch Workshop (PLW) after signing of the Grant Agreement and establishment of the PSC and TAG. The PLW will focus on project implementation arrangements, including the application of CDB's policies and procedures and the establishment of a framework for the definition and monitoring of risks. CDB staff, assisted by contracted service providers, will provide implementation support to GOJ and PEU over the life of the project. Details of CDB support are provided in the Implementation Support Plan (ISP) at Appendix 6.6. The ISP will be reviewed annually to ensure that it continues to be relevant to the needs of the project.

7. **TERMS AND CONDITIONS**

Terms and Conditions of the Grant

No	Subject	Terms and Conditions of the Grant
1	Parties	<p><u>Bank</u>: Caribbean Development Bank</p> <p><u>Beneficiary</u>: Government of Jamaica</p> <p><u>Implementing Agency</u>: MICAF</p>
2	Amount of Grant	<p>The Bank agrees to make available to the Beneficiary by way of grant an amount of sixteen million seven hundred and ten thousand three hundred and thirteen Pounds Sterling (£16,710,313) (the Grant) comprising:</p> <p><u>Special Funds Resources (SFR)</u>:</p> <p><i>GBP16,710,313UKCIF Resources.</i></p>
3	Purpose	<p>The purpose for which the Grant is being made is to assist the Beneficiary in financing the development of (i) improved irrigation, drainage, farm roads and flood control systems; and (ii) enhanced agricultural production and marketing systems for approximately 795 ha of arable land in the Amity Hall and Panassus areas located along the Project Country's southern coastal plains (the Project).</p>
4	Payment of Grant	<p>Except as CDB may otherwise agree, disbursement of the Grant shall be used to finance the components of the Project allocated for financing by CDB as shown in the Project Cost Phasing and Financing Plan for the Project up to the respective limits specified therein.</p> <p>Except as the Bank may otherwise agree, total disbursements shall not exceed in the aggregate ninety-eight per cent (98%) of the cost of the Project.</p> <p>The Grant shall not be used to finance, directly or indirectly, any part of the cost of the Project which consists of identifiable taxes imposed under the laws of the Project Country.</p>
5	Period of Disbursement	<p>The first disbursement of the Grant shall be made by <i>August 31, 2019</i>, or such later date as the Bank may specify in writing.</p> <p>The amount of the Grant may be disbursed up to <i>June 30, 2023</i> or such later date as may be specified in writing by the Bank.</p>

No	Subject	Terms and Conditions of the Grant
6	Procurement	<p>Procurement of goods, works and services to be financed from the Grant shall be in accordance with the following procedures or such other procedures as the Bank may from time to time specify in writing:</p> <p><i>The Bank's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011)</i></p> <p><i>The Bank's Guidelines for Procurement (January 2006)</i></p> <p>The Beneficiary shall comply with the procurement requirements set out in the Procurement Plan. Any revisions to the Procurement Plan shall require the Bank's prior approval in writing.</p>
7	Condition Precedent to First Disbursement	<p>The Beneficiary shall, by the 60th day after the date of the Grant Agreement, or such later date as the Bank may agree, provide the Bank with evidence acceptable to the Bank, that the following condition has/ been satisfied:</p> <p>(a) the PM for SPAD Project has been engaged.</p>
8	Conditions Precedent to Disbursement under the MGS	<p>The Bank shall not be obliged to disburse any amount of the Grant in respect of the MGS, until the Beneficiary has furnished or caused to be furnished to the Bank evidence acceptable to the Bank that the following condition/s has/have been satisfied:</p> <p>(a) the MGS SC has been established as set out in paragraph 4.06 and Appendix 2.1; and</p> <p>(b) the MGS SC has approved the MGS OM.</p>
9	Condition Precedent to Disbursement in each of the Infrastructure Works Contracts	<p>The Bank shall not be obliged to disburse any amount in respect of each of the Infrastructure Works Contract until the Beneficiary has furnished or caused to be furnished to the Bank, evidence acceptable to the Bank that the following condition/s has/have been satisfied:</p> <p>The Beneficiary has received all requisite statutory, planning, building and environmental permits, licenses and/or other approvals in respect of the respective Infrastructure Works Contract.</p>

No	Subject	Terms and Conditions of the Grant
10	Project Implementation	<p>Except as the Bank may otherwise agree, the Beneficiary shall:</p> <ul style="list-style-type: none"> (a) implement the Project through the Implementing Agency; (b) carry out the Project at all times with due diligence and efficiency, with management personnel whose qualifications and experience are acceptable to the Bank and in accordance with sound technical, environmental, administrative, financial and managerial standards and practices; and (c) institute and maintain organisational, administrative, accounting and auditing arrangements for the Project, acceptable to the Bank.
11	Project Management	<p>In accordance with the procurement procedures applicable to the Grant, the Beneficiary shall select and engage a person whose qualifications and experience are acceptable to the Bank, to carry out the PM Duties and Responsibilities referred to in Appendix 6.8.2. The qualifications and experience of any person(s) subsequently assigned/appointed as PM shall be acceptable to the Bank;</p> <p>The Beneficiary shall establish and maintain a PEU with the composition as set out in Appendix 6.8.2, which shall assume the responsibilities and roles described in paragraph 6.03.</p> <p>Except as the Bank may otherwise agree, the Beneficiary shall establish and maintain a PSC and a TAG with the composition and function as referred to paragraphs 6.02.</p>
12	Designated Account	<p>The Beneficiary may, for the purposes of, and during the implementation of the Project, open and maintain an foreign currency account at a commercial bank acceptable to the Bank, through which eligible expenditures related to the operations of the PEU under the Project, and only such activities, may be financed (the Designated Account).</p> <p>Where a Designated Account is established, the Beneficiary shall:</p> <ul style="list-style-type: none"> (a) operate the Designated Account in accordance with the Terms and Conditions for the Operation of the Designated Account;

No	Subject	Terms and Conditions of the Grant
		<p>(b) establish and maintain internal controls for the proper operation of the Designated Account, including the use of statements of expenditure prepared and certified by the Beneficiary, in form and substance acceptable to the Bank, to support the payments and application; and</p> <p>(c) retain the statements of expenditure and supporting documentation for inspection and verification and shall permit the Bank or its nominee to perform an annual performance audit of the Designated Account and all disbursements made against the statements of expenditure in relation to the Project.</p>
		<p>The maximum advance to the Designated Account shall be the equivalent of three months' of the expenditure of the PEU in keeping with the Annual Work Plan and Budget of the Project.</p>
13	Engagement of Consultants	<p>The Beneficiary shall, in accordance with the procurement procedures applicable to the Grant, select and engage the following consulting services and shall, within a timeframe acceptable to the Bank, implement such recommendations arising therefrom, as may be acceptable to the Bank:</p> <p>(a) consultants with qualifications and experience acceptable to the Bank to establish and maintain a PEU and as PEU core staff as described in Appendix 6.8.2. The qualifications and experience of any person subsequently engaged to any of these positions shall be acceptable to the Bank;</p> <p>(b) additional short term consultants to support PEU as set out in paragraph 6.03 and Appendix 6.8.2;</p> <p>(c) competent and experienced design and construction supervision consultants to provide the services set out at Appendix 6.8.2 and</p> <p>(d) consultants with qualifications and experience acceptable to the Bank to provide consultancy services for the development of the MGS as set out at Appendix 6.8.2.</p>
14	Engagement of Contractors	<p>The Beneficiary shall, in accordance with the procurement procedures applicable to the Grant, select and engage contractors to carry out the works to be financed by the Grant.</p>

No	Subject	Terms and Conditions of the Grant
15	Maintenance of Infrastructure	The Beneficiary shall keep the roads, wells, buildings, works and other infrastructure financed from the Grant, or cause the same to be kept, in good repair and condition and shall provide the financial and other resources required to adequately maintain the infrastructure financed from the Grant.
16	Beneficiary's Counterpart Contribution	The Beneficiary shall contribute to the Project JMD67,642,878, which shall be expended in a timely manner on the components of the Project designated for financing by the Beneficiary as shown in the Project Cost Phasing and Financing Plan of the Project, unless the Bank shall otherwise specify in writing.
		<p>Except as the Bank may otherwise agree, the Beneficiary shall meet or cause to be met: (i) the cost of the items designated for financing by the Beneficiary in the Project Cost Phasing and Financing Plan; (ii) any amount by which the cost of the Project exceeds the cost set out in the Project Cost Phasing and Financing Plan; and (iii) the cost of any other items needed for the purpose of, or in connection with, the Project.</p> <p>Except as the Bank may otherwise agree, the Beneficiary shall provide or cause to be provided, all other inputs required for the punctual and efficient implementation of the Project, which are not being financed by the Bank.</p>
17	UK CIF Conditions	<p>The Beneficiary shall permit the Bank or DFID, or any person appointed thereby, to audit the expenditures financed by the Grant, and to provide the Bank and DFID, or the appointed person with all reasonably required assistance, documents and information.</p> <p>The Beneficiary shall ensure that the contracts under the Project provide for the acknowledgement of, and that each deliverable produced under the Project, contains a visibility statement acknowledging that the resources of the Grant have been provided by DFID through UKCIF, and that the UKaid logo is utilised in accordance with DFID standards for use of the UKaid logo.</p> <p>The Beneficiary shall facilitate and permit, during implementation of the Project, and up to five (5) years after the end of UKCIF, any authorised representative of the Bank or DFID to conduct investigations of credible suspicion of or actual fraud, corruption or any other financial irregularity, impropriety or wrong doing and if necessary provide an appropriate refund in accordance with the refund provisions in the Grant Agreement.</p>

No	Subject	Terms and Conditions of the Grant
18	Other Conditions	The Beneficiary shall: (a) maintain in force all legislation, rights of way or use or easements and all permits necessary for the execution of the Project; (b) procure that, except as the Bank may otherwise agree, a service contract is executed between NIC and RADA and NIC and AIC to support the RADA and AIC Project activities as referred to in paragraph 6.03.
19	Reports and Information	Except as the Bank may otherwise agree, the Beneficiary shall furnish or cause to be furnished to the Bank the Reporting Requirements as set out in Appendix 6.7 in the form specified therein, or in such form or forms as the Bank may require, not later than the times specified therein for so doing.
20	Suspension, Cancellation and Refund	The Bank shall be entitled to suspend, cancel or require a refund of the Grant, or any part thereof, if the UKCIF resources or any part thereof is suspended, cancelled or required to be refunded, except that the Beneficiary shall not be required to refund any amount of the Grant already expended by the Beneficiary on the components of the Project to be financed from the Grant and not recoverable by the Beneficiary, unless that amount already expended was misappropriated due to a proven fraudulent, unethical or other activity of wrongdoing.

8. **LOANS COMMITTEE RECOMMENDATION**

8.1 The Loans Committee considered this proposal on December 11, 2018, and agreed to recommend it for approval of the President.

9. **APPROVAL**

9.1 The above mentioned Grant is approved.

Signed: William Warren Smith

W^m. Warren Smith, Ph.D., CD
President

December 20, 2018

Date

MACROECONOMIC CONTEXT DETAILS

JAMAICA COUNTRY ECONOMIC REVIEW 2018

1.0 Overview

1.01 The Jamaican economy continues to show signs of a gradual recovery, led by tourism and construction activity amidst weakness in agriculture and mining, and a deceleration in manufacturing. An accommodative monetary stance contributed to buoyant credit growth, coinciding with improvements in doing business and an increase in consumer confidence. The medium-term outlook remains strong, as ongoing reforms support both higher investment and improved productivity growth. However, key downside risks such as macroeconomic and/or weather-related shocks, policy reversal of the structural reforms, and high crime can derail growth prospects.

2.1 Real Sector Developments

2.1 The economy continues to show signs of recovery. Real Gross Domestic Product (GDP) is estimated to have expanded by 1.9% year on year in the period July–September 2018 relative to its corresponding period in 2017. The improvements reflected positive growth in mining, tourism, construction and agriculture. However, the performance was negatively impacted by drought conditions which caused lower yields and crop losses.

2.2 The growth in tourism (Hotels and Restaurants) was evident in buoyant growth in stop-over visitor arrivals, reflecting the impact of positive economic conditions among Jamaica’s main trading partners, as well as increased airlift into the island. Similarly, construction performance was largely driven by an expansion in public capital expenditure, as well as other non-foreign direct investment infrastructural development. The estimated growth in the sector was augmented by growth in residential construction, which was attributed to the increase in housing starts.

2.3 At the end of September 2018, headline inflation was 4.3%, a deceleration relative to 4.6% recorded at September 2017 on account of a decline in agricultural prices, associated with an improvement in supplies following adverse weather conditions¹ in 2017 [June to December]. The effect of this was partly offset by higher energy costs associated with the lagged impact of increases in oil prices.

2.4 The unemployment rate fell to 8.4% in July 2018, 2.2 percentage points below the rate at July 2016, and the lowest since December 2007. This was attributed in part to an increase in the number of persons employed, with both the construction and wholesale and retail sectors accounting for the largest increases in employment.

¹ Over the last two decades, the frequency and intensity of hurricanes and high-intensity rainfall events have increased, with the country averaging at least one storm event per annum, resulting in cumulative damage and loss estimated at JMD121 bn (2% of GDP) and the loss of 72 lives.

3. Central Government Fiscal Operations and Debt

3.1 CG operations recorded a fiscal surplus of 0.5% of GDP for the first six months of the fiscal year (April - September 2018), relative to a deficit 0.3% of GDP for the corresponding period in 2017. This outturn resulted in a primary surplus of \$73.8 billion (or 3.6 % of GDP), a 0.6% of GDP above the outturn for same period in 2017. In relation to public debt, at the end of March 2018, the outstanding stock was 104.1% of GDP relative to 113.9% of GDP in FY 2015/16.

3.2 The primary surplus performance reflected the higher-than-expected performance of international trade taxes, production and consumption taxes (proxy for consumption expenditure) and the containment of recurrent expenditure. Taxes on income and profits were marginally lower than expected.

3.3 As at October 2018, the rating agencies noted the improvements in the macroeconomic and fiscal indicators. Standard & Poor's upgraded its credit rating for Jamaica to a B with a positive outlook (September 2018); Moody's assigned a rating of B3 with positive outlook (July 2018); and Fitch's reported a B rating with a positive outlook (January 2018).

4. Financial Sector

4.1 Accommodative monetary conditions, as well as increased competition in the market for loanable funds, continued to support growth in overall financing. Private sector credit grew by 16.2% (y.o.y) as at the end of September 2018, compared to an expansion in private credit of 11.5% a year earlier (excluding for new entrants in the financial sector). The expansion in private sector credit also reflected growth in loans and advances to both businesses (utilities, tourism and manufacturing) and households (mortgage loans and instalment credit). Consistent with the relatively favourable macroeconomic environment, the commercial banks' profitability improved, as well as their asset quality.

5. External Sector

5.1 The current account deficit is estimated at 5.4% of GDP for FY 2017/18, compared to the range between 5% of GDP and 10% of GDP. The deficit is broadly sustainable.

5.2 Over the period January-August 2018, net remittance inflows accounted for USD1, 388.7 mn an increase by 0.7% or USD9.82 mn, relative to the previous corresponding period. The increase in inflows was attributable to growth of 7.2% in Other Remittances. The largest source market of remittances was the United States of America with 63.7%, followed by the Canada at 13.2%, then United Kingdom and the Cayman Islands at 11.2% and 6.2%, respectively.

6. Economic Outlook

6.1 The medium-term outlook is positive with Real GDP growth projected to accelerate to 1.7% in FY 2018/19. Domestic economic performance also stands to benefit, should the global recovery be stronger than currently anticipated. The Tourism, Manufacturing, Agriculture, and Construction sectors are the ones that are expected to drive growth in the short term.

6.2 The confidence and productivity-enhancing reforms and public investments that have been undertaken during the course of GOJ's reform programme implementation, are expected to lead to continued export growth and some import substitution. At the same time, enhancements in agricultural productivity, especially through priority investments in infrastructure (including irrigation), will generate direct and indirect increases in incomes and reduction in poverty.

6.3 However, key downside risks such as macroeconomic and/or weather related shocks, policy reversal of the structural reforms, and high crime, can derail growth prospects.

OVERVIEW OF THE ESSEX VALLEY AGRICULTURAL DEVELOPMENT PROJECT

BACKGROUND

1. The Essex Valley Agricultural Development Project (EVADP) was approved by the CDB President in March 2017. The thirty-five million, five hundred and fifteen thousand pounds sterling (£35,515,000) grant to the GOJ is being financed from the Special Funds Resources of the Caribbean Development Bank (CDB), allocated from funds provided by the United Kingdom through the Department for International Development to CDB under the United Kingdom Caribbean Infrastructure Partnership Fund.

PROJECT OUTCOME

2. The expected outcome of the project is enhanced production and productivity of farmers in Essex Valley in a socially inclusive, gender equitable and climate sensitive manner.

PROJECT COMPONENTS

3. (a) **Improved Irrigation Systems (IIS):** provision of infrastructure and systems with the capacity to supply water to the farm gate of all farms on the approximately 700 hectares (ha) of arable land in Essex Valley in a sustainable manner.
- (b) **Enhanced Agricultural Production and Marketing Facilities and Systems (EAPMFS):** Support to improve farmer compliance with food safety standards and climate smart agriculture (CSA) practices.
- (c) **Energy Efficiency (EE)/Renewable Energy (RE):** Development of infrastructure and systems for an EE/RE solution which is aligned to the requirements of the project.
- (d) **Technical Assistance (TA):**
- a climate vulnerability assessment (CVA);
 - capacity-building support to (i) develop Gender-responsive Guidelines for Mainstreaming Economic Inclusion of Vulnerable Groups in Agriculture to support the participation of men, women, youth, and persons with disabilities (PWDs) in GOJ's agriculture policies, programmes and projects; and (ii) develop a Gender-responsive Training Manual for Farmers' Groups to strengthen organisational capacity; and (iii) organisational strengthening of the Essex Valley Farmers' Benevolent Society (EVFBS);
 - a Tariff Study for the National Irrigation Commission (NIC);
- (e) **Project Management, Financial Audits and Baseline Survey:** The establishment of a dedicated Project Execution Unit under the Ministry of Economic Growth and Job Creation (MEGJC); the conduct of annual financial audits of the project's Special Account; and the conduct of a Baseline Study of key project performance data.

JUSTIFICATION FOR EVADP IMPLEMENTATION ARRANGEMENT

4. GOJ's stated policy at the time of the EVADP was to vest responsibility for implementation of projects related to economic growth and job creation – including agricultural based interventions - with the MEGJC.

IMPLEMENTATION UPDATE

5. In March 2018, the Prime Minister, reshuffled the Cabinet of Ministers and ministerial portfolios. Significant changes included the relocation of the NIC and the AIC from the MEGJC to the MICAF. NIC has also undergone an internal re-organisation, including; (i) the establishment of a Projects Department, headed by a Director of Projects - with significant experience in implementing donor financed irrigation related projects in Jamaica; (ii) the appointment of a new Chief Operating Officer - with relevant skills in overseeing activities in the irrigation sub-sector. As a result of those changes responsibility for the EVADP is being transferred from the MEGJC to MICAF. Legal considerations - relating to PEU staff contracts - are currently being addressed.

6. Procurement related challenges has negatively impacted EVADP. The scheduling of activities has accordingly been adjusted - and the project remains on track to be completed by the appraisal estimate of August 31, 2022. A status of the main components is presented at Table 1 below.

TABLE 1: STATUS OF MAIN EVADP COMPONENTS

PROJECT COMPONENT /	ACTIVITIES COMPLETED	NEXT STEPS
COMPONENT 1 - IMPROVED IRRIGATION SYSTEMS (IIS):		
a. Well Drilling	<ul style="list-style-type: none"> • Cabinet Approval received for award of contract to Jamaica Wells Ltd. 	<ul style="list-style-type: none"> • Target date for mobilisation December 10, 2018.
b. Irrigation Network Design & Construction Supervision Consultancy	<ul style="list-style-type: none"> • Negotiation with second ranked bidder: N O Whyte and Associates (NOWAL) completed. • Award to be cleared by National Contract Commission and Cabinet. 	<ul style="list-style-type: none"> • Target date for commencement - April 2019.
c. Cadastral Survey	<ul style="list-style-type: none"> • 80% complete. 	<ul style="list-style-type: none"> • Completion targeted for mid-January 2019.
d. Supply of Well Monitoring Equipment	<ul style="list-style-type: none"> • PEU in dialogue with Water Resources Authority (WRA). 	<ul style="list-style-type: none"> • Supply of equipment will be timed to coincide with equipping of wells.
COMPONENT 2 – ENHANCED AGRICULTURAL PRODUCTION AND MARKETING FACILITIES		
SYSTEMS (EAPMFS):		
a. GlobalGAP Assessment Consultancy	<ul style="list-style-type: none"> • Modifications of TOR & RFP completed based on CDB recommended modifications. 	<ul style="list-style-type: none"> • Issue RFP for receipt of bids by mid-Jan-2019.
b. Design and Construction Supervision Agriculture Buildings	<ul style="list-style-type: none"> • RFP issued to shortlisted consultants for return on December 20, 2018. 	<ul style="list-style-type: none"> • Target date for commencement: June 2019.

PROJECT COMPONENT ACTIVITIES	ACTIVITIES COMPLETED	NEXT STEPS
COMPONENT 3 – ENERGY EFFICIENCY (EE)/ RENEWABLE ENERGY (RE):		
a. NIC/AIC Energy Audit	<ul style="list-style-type: none"> On-going. 	<ul style="list-style-type: none"> Consultant’s Inception report due December 3, 2018.
COMPONENT 4 – TECHNICAL ASSISTANCE (TA):		
a. Climate Vulnerability Assessment	<ul style="list-style-type: none"> Procurement process completed – awaiting GOJ sign-off. 	<ul style="list-style-type: none"> Expected contract Mobilisation: December 2018.
b. Tariff Study of NIC	<ul style="list-style-type: none"> RFP issued to shortlisted consultants for return by December 3 2018. 	<ul style="list-style-type: none"> Expected contract Mobilisation: Q1, 2019.
c. Crop Vulnerability Assessment and Capacity Building in Climate Smart Agriculture	<ul style="list-style-type: none"> EOIs under evaluation by evaluation team. 	<ul style="list-style-type: none"> Issue of RFP: Q4, 2018.
COMPONENT 5 – LAND:		
a. Land Acquisition Well Sites, Buildings, Solar Plant	<ul style="list-style-type: none"> Cabinet approval received for all EVADP land acquisition. Authorisation to access all well sites secured through leases and serving of notices for acquisition. 	<ul style="list-style-type: none"> Valuation of all properties for acquisition ongoing.
COMPONENT 6 – PROJECT MANAGEMENT, FINANCIAL AUDITS AND BASELINE SURVEY:		
a. Recruitment of Key Project Staff	<ul style="list-style-type: none"> PEU Core staff in place. Engineering firm to be engaged to provide - civil, mechanical and electrical engineering support on an intermittent basis. Procurement of M&E Specialist and Social and Gender Specialist on-going. 	
b. Financial Audits	<ul style="list-style-type: none"> TOR & RFP being finalised. 	<ul style="list-style-type: none"> Issue RFP to prepared shortlist of six (6) Auditors by December 7, 2018.
c. Sensitisation of Essex Valley Stakeholders	<ul style="list-style-type: none"> On-going 	
COMPONENT 7 – VEHICLES, FURNITURE AND EQUIPMENT:		
a. Supply of Vehicles and equipment - PEU	<ul style="list-style-type: none"> Completed 	

OVERVIEW OF PROJECT INTERVENTION AREAS

BACKGROUND

1. The intervention areas are located along Jamaica’s southern coastal plains in the parishes of St. Catherine and Clarendon. The areas have been selected given highly favourable agricultural production characteristics, including the presence of fertile soils suitable to the production of a large range of high- value crops - fruits, vegetables, roots and tubers and herbs and species. The designated areas are all owned by the Government of Jamaica (GOJ). Lands will be leased out to commercially oriented farmers (large and small-scale).
2. Consistent with GOJ’s approach to providing an enabling environment in support of private sector investment in the agricultural sector, approximately one third of the irrigated lands will be leased to private sector companies. Of the remaining lands, approximately 25% will be targeted to vulnerable groups – women and youth.
3. Private sector investors are expected to be entities with a thorough understanding of agricultural market dynamics. Consistent with the experience on other agro-parks, they are likely to include; agro- processors; produce aggregators; supermarket chains; exporters.
4. Private sector investors will be encouraged to enter into partnerships with small-holder farmers, including vulnerable groups, operating on the agro-parks. This arrangement is expected to facilitate improved market access for small holder farmers, help ensure a ready supply of raw material and contribute to the image of the private sector investor as a socially responsible economic actor.

INTERVENTION AREAS

Amity Hall

5. Amity Hall, formerly devoted to the production of sugar cane, is supplied via a channel originating from the Rio Cobre River. The identified lands are all owned by GOJ and are suited to the production of a wide variety of crops. On the downside sections of the area are relatively flat, and without investment in drainage infrastructure could be at risk of seasonal flooding.

Parnassus

6. The area comprises large plots of arable GOJ-owned land which were formerly leased to commercial banana production entities. The lands are generally served with aging irrigation systems – via functioning wells. Less than 10% of the area identified for development is used by undocumented farmers on a seasonal basis for the production of cash crops. These farmers will be regularised – issued with formal leases under the project.

TABLE 1: INTERVENTION SITES

Location	Area (hectares)
St. Catherine - Amity Hall	480
Clarendon - Parnassus	315
Total Project Area	795

TABLE 2: PROPOSED LAND ALLOCATION – BY INTERVENTION AREA

Intervention Site	Proposed Land Allocation (Hectares)	
	Commercial Farmers	Small to Medium Size Framers
Amity Hall	200	280 (Female-owned – 70; Youth – 45)
Parnassus	100	215 (Female-owned – 54; Youth – 35)

COMPONENT DETAILED DESCRIPTION

Infrastructure Works

- Improved Irrigation Systems incorporating Climate Resilience Measures - (i) Construction of Pump Houses, Reservoir, Civil Works, GLOBALG.A.P structures and enclosing sections of existing Rio Cobre/Amity Hall; (ii) Wells rehabilitation/drilling and development – Parnassus; (iii) Development of pressurised irrigation network – supply and installation of pipes/fittings, hydrants and water meters; (iv) Supply and installation of irrigation system power supply – transformers, switch-gears, accessories; (v) Installation of irrigation security systems; (vi) Supply and installation of pumps and accessories including SCADA.
- Climate Resilience Roads, Drainage and Flood Protection Systems: (i) Rehabilitation and expansion of Farm Roads and drainage networks; (ii) Land clearing and levelling.
- Enhanced Agricultural Production and Marketing Systems: - Construction of pack houses and GLOBALG.A.P Structures for small-scale farmers incorporating climate resilience and energy efficiency measures.

Engineering and construction-related services

- **Engineering and Construction-Related Services** - Supervision of Infrastructure, electrical and mechanical works and Well Development.

Goods

- **Improved Irrigation Systems incorporating Climate Resilience Measures:** (i) Supply of equipment for water supply and quality monitoring by Water Resources Authority; and (ii) Supply of GIS Equipment for NIC.
- **Climate Resilience Roads, Drainage and Flood Protection Systems:** - Supply of drainage clearing equipment for AIC.
- **Enhanced Agricultural Production and Marketing Systems:** (i) Supply of post-harvest handling equipment for Pack Houses and GLOBALG.A.P Structures; (ii) **MGS** - Supply of on-farm irrigation and land preparation equipment for small-scale farmers/vulnerable groups; and Supply of Training Material and Equipment – Stakeholder capacity building – RADA.

Other Project Support Services

- **Enhanced Agricultural Production and Marketing Systems** - The objectives of interventions under this component are to achieve productivity gains, improve the efficiency of irrigation services, and strengthen market linkages - domestic, regional and international export - with a view to enhancing the income and quality of life of farmers and rural entrepreneurs operating in the project's target

communities in a socially inclusive and gender equitable manner. This sub-component will build on interventions programmed under the EVADP, in particular the proposed studies on GLOBAL-G.A.P and the Conduct of Crop Vulnerability Assessments. Interventions will incorporate specific support for vulnerable groups - including women and youth - by building on the recommendations of the EVADP financed study, 'the provision of Services to Support Gender-Responsive Economic Inclusion of Vulnerable Groups in Agriculture'. The following activities will be undertaken:

1. Strengthening the Capacity of producers/producer groups and linking them to markets
 - The provision of support in key areas including; CSA; GLOBAL-G.A.P and the establishment and strengthening of Producer Organisations; and support towards the establishment of linkages between small and largescale farmers and market agents. This activity will be implemented by RADA, AIC and contracted Service Providers and shall employ a range of approaches including direct coaching, group training, establishment of demonstration plots, etc.
2. Agricultural Value Chain Analysis - The conduct of detailed Agricultural Value Chain Analysis on between five and seven prioritised crops. This includes the identification of key private sector operatives - agro-producers, largescale purchasers of agricultural products (domestic, regional and international) - with the interest and potential in establishing horizontal linkages with small-scale farmers; and development of Investment Plans eligible for financing under the Matching Grant Scheme (MGS) - see (4) below.
3. The establishment of a matching grant scheme (MGS) to assist agricultural producers, including vulnerable groups (females and youth) within the respective agro-parks to: (i) invest in on-farm irrigation equipment and agri-business ventures; and (ii) build vertical farmer linkages and horizontal linkages between small-scale producers and agri-businesses/private sector operatives - service providers, large scale commercial farmers, agro-processors and produce purchasers. Funds have been included under the project to:
 - (i) provide support to prepare a MGS manual including the definition of guidelines and criteria to encourage and support the inclusion of vulnerable groups;
 - (ii) design a communications strategy for the MGS;
 - (iii) assist interested individuals, vulnerable groups, and PGs in the development of Investment Plans which will form the basis for the submission of requests for financing under the MGS - with the exception of on-farm irrigation equipment where the contribution to individual farmers will be fixed on the basis of set criteria; and
 - (iv) provide actual grants to successful applicants.

The management of the MGS will be delegated to AIC. AIC will establish a Selection Committee (SC) for the purpose of developing criteria for the provision of on-farm irrigation systems for small-scale leaseholders; and for approving financing of agribusiness requests - in the form of Investment Plans (IPs) under the MGS. The SC shall be chaired by the CEO of AIC

and include one representative each from the private sector, JAMPRO, MICAF and PIOJ. No disbursements shall be made under the MGS prior to establishment of the SC and approval of the MGS Manual by the SC and CDB. Financing of IPs under the MGS is expected to follow the following process:

(i) Outreach Programme - an information campaign to disseminate the objective, rules and procedures for participation; (ii) Call for Submission for IP Concepts - including detailed rules for the submission of IPs; (iii) Submission and evaluation of IP Concepts by AIC/Agri-business Specialist. Concepts will be evaluated against established criteria including social, gender and youth considerations, environmental sustainability and likely financial and market feasibility; (iv) Submission and evaluation of detailed IP. The project will provide support for the definition IPs which pass the concept stage; (v) Approval of Financing and signing of contract between the individual farmers and/or PG and AIC; (vi) Transfer of funds to PG Designated Account -in tranches; and (vii) Monitoring the implementation of the IP.

Capacity Building

- The establishment of a matching grant scheme (MGS) to assist agricultural producers, including vulnerable groups (females and youth) and Producer Groups (PG) within the respective agro-parks to: (i) invest in on-farm irrigation equipment and agri-business ventures; and (ii) build vertical farmer linkages and horizontal linkages between small-scale producers and agri-businesses/private sector operatives – service providers, large scale commercial farmers, agro-processors and produce purchasers.

Project Management

- Reorganisation and strengthening of the EVADP PEU - including the engagement of a Project Manager - with responsibility for overseeing the implementation of SPAD. The PM will report to the Permanent Secretary, MICAF. The NIC, through the Director of Projects, will provide technical oversight. Additional staff to be engaged to support the operations of the PEU include; an Accounting Officer - for the duration of the project; and specialist consultants, each for a duration of approximately 36 months - including a Procurement Specialist, Agri-Business Development Specialist; Private Sector Development Specialist; a Works Supervisor and two clerks of works.

SCHEDULE OF GOVERNMENT OF JAMAICA/NATIONAL IRRIGATION COMMISSION (NIC) COUNTERPART FUNDING

A. SCHEDULE OF NIC OFFICERS FOR THE SOUTHERN PLAINS AGRICULTURAL DEVELOPMENT PROJECT (SPAD)						
No.	Position	Deliverables	Period of Contribution for 54 months of Project	Expected Length of Attachment to SPAD	Percentage of Time Allocation	Estimated Cost (pounds)
TECHNICAL SUPPORT						
1	Project Director	Project planning, coordination & scheduling	54 months	Ongoing - 54 months	20%	█
2	GIS Engineer	GIS data sets, spacial data and data analysis	54 months	Ongoing - 54 months	20%	█
3	Design Engineer	Review engineering designs and technical report	54 months	Ongoing - 54 months	20%	█
4	Human Resource	HR matters: Records		54 months	20%	█
5	Principal Engineer	Review technical documentation regarding the electrical infrastructure in an effort to provide quality assurance	Commencement after the completion of the well drilling phase and the formulation of the design of the pump station and energy component	2 years - 24 months	10%	█
6	Energy Engineer	Evaluation, construction and installation of renewable energy sites	To commence prior to the formalisation of the renewable energy component (to include revision and evaluation of the document)	36 months - 3 years	10%	█
7	Assistant Energy Engineer	On the ground assistance in the identification of the land owners for each parcel of land and identification of the most suitable parcels for the solar sites to be established	To commence after the formalisation of the renewable energy component	36 months - 3 years	5%	█
8	Administrative Assistant	Filing (to include the conversion to digital) of all correspondence with regard to the project) organising the site visits and meetings with the project's internal and external stakeholders	54 months	Ongoing - 54 months	20%	█
9	Project Administrator	Assist with the processing of land matters, drafting cabinet submissions and monthly reports, coordinating high level meetings	54 months	Ongoing - 54 months	20%	█

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

ITEMS (Cont'd)						Estimated Cost (pounds)
10	Legal Officer	Prepare and review all legal documents (contracts, lease agreements, sale agreements, easements, cabinet submissions, etc.)	54 months	Ongoing - 54 months	20%	
11	Director of Finance	Oversight of annual budget submission to the Ministry of Finance & the Public Service for Fiscal Space, review of draft accounting reports, payroll records, banking transactions, etc.	54 months	Ongoing - 54 months	20%	
12	Accounts Payable Clerk	Preparation, filing, storage and maintenance of records for all payments regarding the Project	54 months	Ongoing - 54 months	20%	
13	Confidential Secretary	Review of all correspondence submitted to the external and internal stakeholders of the Project	54 months	Ongoing - 54 months	5%	
14	Executive Assistant	Assisting with the drafting, submission and revision of all documents submitted to the external and internal stakeholders of the SPAD	54 months	Ongoing - 54 months	5%	
15	Systems Manager MCIA		54 months	Ongoing - 54 months	10%	
16	Work Superintendent MCIA		54 months	Ongoing - 54 months	10%	
						215,424
B.	Associated Employer's Statutory Contribution					
C.	Travelling/Mileage:					
D.	Office Space: Rental & Maintenance - :					
E.	Utilities (light/water/office phone)					
F.	NIC Accounting/IT Platform:					
G.	Creation of Two (2) New Companies - Accounting Reporting Set-up Cost: Consultancy + Installation					
TOTAL						388,247

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

RESULTS MONITORING PLAN

Indicator	Baseline	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	Responsibility for Data Collection
1.1 Increase in average yield of major crops (%)	0; 12/31/2018						CEO, AIC
1.2 Irrigation tariff collection rate (%)	0; 12/31/2018						PM
1.3 Irrigation System O&M cost recovery (%)	0; 12/31/2018						PM
1.4 Percentage of farmers/PGs working through formalised market linkages. (%)	0; 12/31/2018						CEO, AIC

Indicator	Baseline	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	Responsibility for Data Collection
1.1 Farm roads built or upgraded - Amity Hall (Km)	0; 12/31/2018						PM
1.2 Primary, secondary and other roads built or upgraded (Km)	0;						PM
1.3 Farm roads built/upgraded - Parnasus (Km)	0; 12/31/2018						PM

Indicator	Baseline	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	Responsibility for Data Collection
2.1 Land leased to youth - Parnassus (Hectares)	0; 12/31/2018						PM
2.2 Land leased to youth - Amity Hall (Hectares)	0; 12/31/2018						PM
2.3 Land leased to female farmers - Parnassus (Hectares)	0; 12/31/2018						PM
2.4 Land leased to female farmers - Amity Hall (Hectares)	0; 12/31/2018						PM
3.1 Land improved through irrigation, drainage and/or flood management (Hectares)	0; 12/31/2018						PEU
3.2 Land with access to irrigation, drainage, flood control systems and roads - Amity Hall (Hectares)	0; 12/31/2018						PEU
3.3 Land with access to irrigation, drainage, flood control systems and roads - Panassus (Hectares)	0; 12/31/2018						PEU
3.4 Wells Rehabilitated/Developed - Parnassus (#)	0; 12/31/2018						PEU
3.5 Off-farm irrigation pipelines - Amity Hall (Km)	0; 12/31/2018						PM
3.6 Off-farm irrigation pipelines - Parnassus (Km)	0; 12/31/2018						PM
4.1 Stakeholders trained in improved production technology (#)	0; 12/31/2018		100	200	200	200	PM

Indicator	Baseline	Year 2019	Year 2020	Year 2021	Year 2022	Year 2023	Responsibility for Data Collection
4.2 Gender-Responsive Guidelines for Mainstreaming Economic Inclusion of Poor and Vulnerable Groups in Agriculture approved (Yes/No)	0; 12/31/2018						SGS, AIC, Consultancy to develop the Guidelines
4.3 Gender-Responsive Training Manual for Farmers' Groups approved and training delivered (Yes/No)	0; 12/31/2018						AIC, SGS, Consultancy to develop the Manual
4.4 Matching Grant Scheme (MGS) established (Yes/No)	0; 12/31/2018						AIC
4.5 National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture developed and launched (Yes/No)	0; 12/31/2018						AIC

PROJECT COSTS AND PHASING PLAN

Components	OSF-GBP	Total	COUNTERPART		Total
	UK CIF Resources		GOJ	MICAF	
2019 TOTAL					
Infrastructure Works					
Engineering and Construction-related Services					
Other Project Support Services					
Project Management					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	797,604	797,604	93,414	-	891,018
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	797,604	797,604	93,414	-	891,018
Percentage Financing	89.52%	89.52%	10.48%	-	100.00%
2020 TOTAL					
Infrastructure Works					
Engineering and Construction-related Services					
Other Project Support Services					
Project Management					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	2,384,899	2,384,899	94,215	-	2,479,114
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	2,384,899	2,384,899	94,215	-	2,479,114
Percentage Financing	96.20%	96.20%	3.80%	-	100.00%
2021 TOTAL					
Infrastructure Works					
Engineering and Construction-related Services					
Other Project Support Services					
Project Management					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	5,145,824	5,145,824	94,220	-	5,240,044
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	5,145,824	5,145,824	94,220	-	5,240,044
Percentage Financing	98.20%	98.20%	1.80%	-	100.00%
2022 TOTAL					
Infrastructure Works					
Engineering and Construction-related Services					
Goods					
Other Project Support Services					
Project Management					
Capacity Building					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	6,897,618	6,897,618	94,220	-	6,991,838
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	6,897,618	6,897,618	94,220	-	6,991,838
Percentage Financing	98.65%	98.65%	1.35%	-	100.00%
2023 TOTAL					
Infrastructure Works					
Engineering and Construction-related Services					
Goods					
Other Project Support Services					
Project Management					
Capacity Building					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	1,484,368	1,484,368	47,110	-	1,531,478
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	1,484,368	1,484,368	47,110	-	1,531,478
Percentage Financing	96.92%	96.92%	3.08%	-	100.00%
TOTALS					
Infrastructure Works					
Engineering and Construction-related Services					
Goods					
Other Project Support Services					
Project Management					
Capacity Building					
Base Cost					
Physical Contingency					
Price Contingency					
Total Project Cost	16,710,313	16,710,313	423,179	-	17,133,492
Interest During Implementation	-	-	-	-	-
Commitment Fees	-	-	-	-	-
Total Financing	16,710,313	16,710,313	423,179	-	17,133,492
Percentage Financing	97.53%	97.53%	2.47%	-	100.00%

APPENDICES TO CHAPTER 4 - PROJECT VIABILITY

APPENDIX 4.1 FINANCIAL ANALYSIS

ASSUMPTIONS TO FINANCIAL ANALYSIS

GENERAL ASSUMPTIONS

1. The exchange rate used in the analysis is JMD130:USD1.00.
2. The target beneficiaries are:
 - (a) Direct Beneficiaries:
 - (i) commercially-active farmers, who are normally involved in farming and trading and/or well established SMEs;
 - (ii) economically active farmers, who are usually farming their land and producing a small surplus that is sold on an occasional basis in local markets; and
 - (iii) subsistence farmers, who generally lack assets and education and producing mainly for own consumption
 - (b) Indirect Beneficiaries: These are expected to include a large number of rural entrepreneurs and small and micro entrepreneurs – the majority being females, involved in retail of both inputs and farmer outputs.
3. The geographical targeting will focus on selected schemes in the parishes of St. Catherine (Amity Hall) and Clarendon (Parnassus), traditionally known as the sugar and banana growing area of Jamaica. A large percentage of produce is expected to be channelled to supermarkets, the hospitality sector and potentially, the export market. All of these high-end markets require that production and handling systems conform to the principles of good agricultural practices (GAP).
4. The main crops produced under the farm models for this project will be onion, sweet potato, Irish potato, hot pepper, cassava, mango and papaya.
5. The cost of farm labour is set at the going market rural wages rate of about JMD2,000 to 3,000 per day, which is determined by the forces of supply and demand. The value of JMD2,500 per day has been retained for the analysis.
6. The phasing of productive activities is indicative and might vary at implementation. Table 1, which is presented as follows, outlines the overall area of 635 hectares, which will be under improved irrigation facilities but are currently without production:

TABLE 1: PHASING OF HECTARES UNDER PRODUCTION IN SOUTHERN PLAINS
AGRICULTURAL DEVELOPMENT PROJECT

	PY4	PY5	Total
Hectares under short term crop production	77	308	385
Hectares under orchard production	50	200	250
Total hectares	127	508	635

FINANCIAL ASSUMPTIONS

7. The farm models are based on reference figures provided by MICAF/RADA, as well as consultations with farmers in the project area and neighbouring farming/irrigated districts. The analysis is based on 1 ha. While the land is currently not under production, the “without” scenario is based on a farmer using a rain-fed system, with limited access to improved production technology and markets. The “with project” scenario considers (a) farmer access to reliable irrigation services, improved agronomic practices and markets; (b) increased production costs (increasing over the years as the activity expands) including an initial investment in on-farm irrigation kits for the new land under production. Major investment costs consist of land preparation, planting material, irrigation facilities. The analysis considers USD8,694 per ha for the on farm irrigation system. Farm budgets are presented later in this appendix.
8. The analysis based on the average prices provided by MICAF for year 2017. Table 2 below outlines the average market price at the farm gate for the main crops produced in the project area.

TABLE 2: AVERAGE PRICE FOR THE MAIN CROPS PRODUCED

Outputs	Unit	Price-JMD
Onion	kg	120
Sweet potato	kg	90
Irish potato	kg	110
Hot pepper	kg	200
Papaya	kg	133
Mango	kg	66
Cassava	kg	48

9. Table 3 below shows the average annual income increase and the profitability levels for the activities that are likely to be supported by project activities. The expected increases in production and productivity have been phased during the first four years of implementation, following good agronomic practices.

TABLE 3: SUMMARY OF REPRESENTATIVE CROP FINANCIAL RESULTS FOR LAND UNDER PRODUCTION IN SOUTHERN PLAINS AGRICULTURAL DEVELOPMENT PROJECT

Crop	Yield without project (T/ha)	Yield with project (T/ha)	Net income without project (£/ha)	Net income with project (£/ha)	Incremental net income (£/ha)
Onion	21.00	50.40	5,915	20,460	14,545
Irish Potato	16.80	32.90	8,025	23,020	14,995
Sweet Potato	30.50	59.00	16,920	38,440	21,520
Hot Pepper	25.90	53.10	19,990	58,180	38,190
Papaya	18.80	26.60	3,340	10,410	7,070
Mango	16.50	23.00	7,275	13,015	5,740
Cassava	19.10	39.30	5,005	11,735	6,730
Total	148.60	284.30	66,470	175,260	108,790

APPENDIX 4.2 ECONOMIC ANALYSIS

ASSUMPTIONS TO ECONOMIC ANALYSIS

ECONOMIC RATE OF RETURN ASSUMPTIONS

1. The exchange rate used in the analysis is JMD130:USD1.00.
2. The economic analysis of the project is based on a 20 year projected period.
3. The agriculture sector is subsidised. However, according to a review of agricultural policies² in Jamaica, subsidies do not have a significant impact on the sub-sectors targeted by project activities. Notwithstanding same, conversion factors have been applied to specific financial prices that do not reflect economic value. The economic conversion factors for key items are outlined in the following table:

TABLE 4.1: ECONOMIC PRICE CONVERSION FACTORS UNDER THE SOUTHERN PLAINS AGRICULTURAL DEVELOPMENT PROJECT

Item	Economic Conversion Factor	Rationale
Unskilled labour	0.8	The conversion factor for labour reflects the high unemployment rate and scarcity of alternative labour opportunities for unskilled works.
Onion prices	0.75	Prices for onions have been adjusted to reflect government intervention and duties applied at the borders on imports. Economic prices of the other supported crops have been assumed to be equal to financial prices.
Fertilisers	1	No conversions have been applied on agriculture inputs and equipment as they are currently exempted from general consumption tax (GCT).
Seeds	1	
On farm equipment	1	
Project costs	0.95	Goods and services provided under the project costs are tax exempted. However, a 0.95 conversion factor is applied to take into

^{2/} FAO-IDB 2017

		consideration unskilled labour for civil works.
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4. The adoption rate, which measures the likelihood of farmers adopting the proposed technologies, is estimated at 70%.
5. In year 10, the replacement of the on-farm irrigation equipment has been estimated at USD5.715 mn.
6. The ERR and NPV were calculated using an opportunity cost of capital of 12%.
7. ERR calculation is presented later in this appendix.
8. The results of the sensitivity analysis are presented below:

TABLE 4.2: SENSITIVITY ANALYSIS OF ERR (%)

Base case scenario	Project Benefits						Project Costs		Delay in benefits		Adoption rate	
	-30%	-20%	-10%	+10%	+20%	+30%	+10%	+20%	1 year	2 year	60%	50%
22.2%	15.7%	18.1%	20.2%	24.0%	25.7%	24.3%	20.4%	18.8%	18.7%	16.0%	15.0%	12.1%
Total costs							Total benefits					
Switching values							+77%		-43%			

TABLE 5: ECONOMIC RATE OF RETURN CALCULATION

Item	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Vegetable farming area	-	-	-	395,254	2,818,767	6,297,864	6,991,023	8,448,917	8,448,917	8,448,917
Orchard farming area	-	-	-	227,839	717,526	1,019,865	1,254,578	1,395,889	1,483,884	1,635,482
Total economic benefit	-	-	-	117,191	1,470,869	5,122,410	5,771,920	6,891,364	6,952,961	7,059,079
On-farm and main irrigation equipment										5,715,000
NiC system operation and maintenance				250,000	250,000	250,000	250,000	250,000	250,000	250,000
Investment costs	2,258,385	4,881,269	6,545,472	1,436,881						
Total economic cost	2,258,385	4,881,269	6,545,472	1,686,881	250,000	250,000	250,000	250,000	250,000	5,965,000
Economic cash-flow	-2,258,385	-4,881,269	-6,545,472	-1,569,690	1,220,869	4,872,410	5,521,920	6,641,364	6,702,961	1,094,079
EIRR	22.2%									
NPV	11,798,544 USD									

Item	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Vegetable farming area	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917	8,448,917
Orchard farming area	1,769,610	1,965,540	1,996,088	2,127,197	2,127,197	2,127,197	2,127,197	2,127,197	2,127,197	2,127,197
Total economic benefit	7,152,969	7,290,120	7,311,504	7,403,280	7,403,280	7,403,280	7,403,280	7,403,280	7,403,280	7,403,280
On-farm and main irrigation equipment										
NiC system operation and maintenance	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Investment costs					3,500,000					
Total economic cost	250,000	250,000	250,000	250,000	3,750,000	250,000	250,000	250,000	250,000	250,000
Economic cash-flow	6,902,969	7,040,120	7,061,504	7,153,280	3,653,280	7,153,280	7,153,280	7,153,280	7,153,280	7,153,280

APPENDIX 4.3**GENDER MARKER ANALYSIS**

Project Cycle Stage	Criteria	Score
Analysis 1	Consultations with relevant categories of males and females and relevant gender-related public/ private sector organisations and Non-Governmental/ Community-Based Organisations will take / have taken place	Yes
Analysis 2	Socioeconomic, Sector and/or Institutional analysis considers gender risks and/or gender disparities that impact the achievement of project outcomes.	Yes
Design 1	Project interventions / policies address existing gender disparities.	Yes
Design 2	Project objective / outcome includes the enhancement of gender equality or the design of gender-responsive policies or guidelines.	Yes
Implementation 1	Implementation arrangements include either: Capacity building initiatives to enhance gender mainstreaming of the executing and/or implementing agency. Or Active participation of representatives of gender-relevant stakeholders in project execution.	Yes
Implementation 2	Terms of Reference of consultancy/project coordinating unit/project management unit includes responsibilities and resources, including budgets for gender mainstreaming.	Yes
Monitoring and Evaluation 1	Sex-disaggregated data included in the baselines, indicators and targets of the RMF. Or Collection of sex-disaggregated data is part of the project.	Yes
Monitoring and Evaluation 2	At least one gender-specific indicator at the outcome and/or output level in the RMF or included in tranche releases of PBLs.	No

Analysis	Design	Implementation	Monitoring & Evaluation	Score	Code
1.0	1.0	1.0	0.5	3.5	Gender Mainstreamed (GM)

ESTIMATED QUARTERLY DISBURSEMENT SCHEDULE

Year	Quarter	OSF-GBP	Finance Charges	Total	Cumulative
2019	2019 - Q2	180,597	-	180,597	180,597
	2019 - Q3	243,647	-	243,647	424,244
	2019 - Q4	373,360	-	373,360	797,604
Sub-total		797,604	-	797,604	797,604
2020	2020 - Q1	452,953	-	452,953	1,250,557
	2020 - Q2	513,229	-	513,229	1,763,786
	2020 - Q3	495,711	-	495,711	2,259,497
	2020 - Q4	923,006	-	923,006	3,182,503
Sub-total		2,384,899	-	2,384,899	3,182,503
2021	2021 - Q1	1,028,533	-	1,028,533	4,211,036
	2021 - Q2	1,363,675	-	1,363,675	5,574,711
	2021 - Q3	1,376,807	-	1,376,807	6,951,518
	2021 - Q4	1,376,809	-	1,376,809	8,328,327
Sub-total		5,145,824	-	5,145,824	8,328,327
2022	2022 - Q1	1,366,311	-	1,366,311	9,694,638
	2022 - Q2	1,617,734	-	1,617,734	11,312,372
	2022 - Q3	1,956,785	-	1,956,785	13,269,157
	2022 - Q4	1,956,788	-	1,956,788	15,225,945
Sub-total		6,897,618	-	6,897,618	15,225,945
2023	2023 - Q1	1,161,314	-	1,161,314	16,387,259
	2023 - Q2	292,898	-	292,898	16,680,157
	2023 - Q3	15,078	-	15,078	16,695,235
	2023 - Q4	15,078	-	15,078	16,710,313
Sub-total		1,484,368	-	1,484,368	16,710,313
Total		16,710,313	-	16,710,313	16,710,313

PROCUREMENT PLAN
(All Estimated Costs Are In GBP)

A. General

1. Project Information

Country: Jamaica
Borrower: Government of Jamaica
Project Name: Southern Plains Agricultural Development Project
Project Implementing Agency: Ministry of Industry, Commerce, Agriculture and Fisheries
Project Executing Agency:

2. Bank's Approval Date of the Procurement Plan: December 31, 2018

3. This Procurement Plan is valid until: June 30, 2020

4. Prior Review Thresholds: Procurement decision subject to prior review by the Bank as stated in Appendix 2 to the Guidelines for Procurement:

Procurement Method	Prior Review Threshold	Comments
Shopping (All methods)	██████████	
Goods and Non-consulting Services (All methods)	██████████	
Works (All methods)	██████████	
Non-Bank Financed	N/A	GOJ's Procurement Procedures

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

5. Reference to relevant Procurement Guidelines

- CDB's Guidelines for Procurement (2006)
- CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (2011)

6. Any Other Special Procurement Arrangements

N/A

7. Procurement Waivers

No Procurement Waivers were required as part of this Appraisal

B. Goods and Works and Non-Consulting Services

Ref No.	Contract (Description)	Estimated Cost	Procurement Method	Prequalification (Yes/No)	Review by Bank (Prior/Post)	Expected Bid-Opening Date	Comments
	Construct Farm Access Roads & Drains	█	ICB	Yes	Prior		
	Construct Pump House, Reservoir, Canal Enclosure, Global GAP facilities etc.	█	ICB	No	Prior		
	Land Clearing & Levelling	█	NCB	No	Prior		
	Land Surveying	█	NCB	No	n/a	March 2019	
	Matching Grant Scheme - Supply On-Farm Irrigation and Equipment for Small- scale Farmers	█	ICB	No	Prior		
	Pack Houses and GLOBALG.A.P Structures	█	ICB	No	Prior		
	Rehabilitate/Drill Wells	█	ICB	No	Prior		
	Supply & Install Pipelines, Fittings & Meters	█	ICB	Yes	Prior	June 2020	
	Supply and Install Irrigation Security System	█	LIB	No	Prior		
	Supply and Install Power Equipment to Pumps (JPSCo)	█	NCB	No	Prior		
	Supply and Install Pumps and Equipment	█	ICB	No	Prior		
	Supply Drain Cleaning Equipment	█	NCB	No	Prior		
	Supply GIS Equipment	█	NCB	No	Prior		
	Supply Project Vehicles	█	LIB	No	Prior		
	Water Monitoring System - WRA	█	NCB	No	Prior		

C. Consulting Services

Ref No.	Assignment (Description)	Estimated Cost	Selection Method	Review by Bank (Prior/Post)	Expected Proposal Submission Date	Comments
	Accounting Officer	████	ICS	Prior		
	Agri-business Development Specialist	████	ICS	Prior		
	Agricultural Value Chain Analysis	████	QCBS	Prior		
	Clerk of Works 1	████	ICS	Prior		
	Clerk of Works 2	████	ICS	Prior		
	Construction Supervision Consultants	████	QCBS	Prior		
	Construction Supervisor	████	ICS	Prior		
	Development of Operation Manual - Matching Grant Scheme	████	ICS	Post		
	Hydrogeologist	████	ICS	Prior		
	Private Sector Development Consultant	████	ICS	Post		
	Procurement Specialist	████	ICS	Post		
	Project Manager	████	ICS	Prior		

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

D. Procurement Capacity Building activities for the Implementing/Executing Agency

- CDB E-Procurement Modules
- Project Launch Workshop
- CDB Contracted - Consultants Procurement Specialist

E. Summary of Proposed Procurement Arrangement

Project Components / Contracts	CDB ('000)					NBF ('000)		Total Cost ('000)
	ICB	ICS	LIB	NCB	QCBS	Counterpart	Co-Financing	
Infrastructure Works						-	-	
Supply & Install Pipelines, Fittings & Meters						-	-	
Supply and Install Pumps and Equipment						-	-	
Construct Farm Access Roads & Drains						-	-	
Construct Pump House, Reservoir, Canal Enclosure, Global GAP facilities, etc.						-	-	
Rehabilitate/Drill Wells						-	-	
Pack Houses and GLOBALG.A.P Structures						-	-	
Land Clearing & Levelling						-	-	
Land Surveying						-	-	
Supply and Install Power Equipment to Pumps (JPSCo)						-	-	
Supply and Install Irrigation Security System						-	-	
Engineering and Construction-related Services						-	-	
Construction Supervision Consultants						-	-	
Hydrogeologist						-	-	
Goods						-	-	
Matching Grant Scheme -Supply On-Farm Irrigation and Equipment for Small-scale Farmers						-	-	
Supply Project Vehicles						-	-	
Supply Drain Cleaning Equipment						-	-	
Supply GIS Equipment						-	-	
Water Monitoring System - WRA						-	-	
Other Project Support Services						-	-	
Agricultural Value Chain Analysis						-	-	
Private Sector Development Consultant						-	-	
Development of Operation Manual - Matching Grant Scheme						-	-	
Project Management						-	-	
Project Manager						-	-	
Procurement Specialist						-	-	
Construction Supervisor						-	-	
Agri-business Development Specialist						-	-	
Accounting Officer						-	-	
Clerk of Works 1						-	-	
Clerk of Works 2						-	-	
Summary Costs	9,585	905	191	1,001	915	-	-	12,597

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

Goods, Works and Non-Consultancy Services

- NCB - National Competitive Bidding
- ICB - International Competitive Bidding
- LIB - Limited International Bidding
- RCB - Regional Competitive Bidding
- Shopping - Shopping
- DC - Direct Contracting
- FA - Force Account
- UCS - Use of Country Systems
- NBF - Non-Bank Financed
- Other

Consultancy Services:

- QCBS - Quality and Cost-Based Selection
- QBS - Quality-Based Selection
- FBS - Fixed Budget Selection
- LCS - Least-Cost Selection
- CQS - Consultants' Qualification Selection
- SSS - Single Source Selection
- ICS - Individual Consultants Selection
- UCS - Use of Country Systems
- NBF - Non-Bank Financed
- Other

APPENDIX 6.4

IMPLEMENTATION SCHEDULE

PROJECT IMPLEMENTATION SCHEDULE

ID	Task Name	Duration	Predecessor	Timeline											
				2019 H2	2019 H1	2020 H2	2020 H1	2021 H2	2021 H1	2022 H2	2022 H1	2023 H2	2023 H1	2023 H2	
1	Southern Plains Agricultural Development Project - JAMAICA	1186 days?		[Summary bar from 2019 H2 to 2023 H2]											
2	Approve Project (CDB & UK-CIF)	1 day		[Task bar at start of 2019 H2]											
3	Assign interim Project Manager	0 wks		[Task bar at start of 2019 H2]											
4	Sign Grant Agreement, Satisfy Conditions Precedent	13 wks 2		[Task bar in 2019 H2]											
5	Procure PEU Staff, Furniture & Equipment	588 days? 2		[Task bar in 2019 H2]											
6	Detailed Designs - TA Financed	132 days?		[Task bar in 2019 H2]											
7	Obtain Permits & Approvals	522 days? 2		[Task bar in 2019 H2]											
8	Infrastructure Works	999 days? 4		[Summary bar from 2019 H2 to 2023 H2]											
9	Land Surveying	261 days?		[Task bar in 2019 H2]											
10	Rehabilitate / Drill Wells	108 days? 29		[Task bar in 2019 H2]											
11	Supply & Install Pipelines, Fittings & Meters	523 days? 10,20		[Task bar in 2020 H1]											
12	Supply and Install Pumps and Equipment	523 days 10,20		[Task bar in 2020 H1]											
13	Construct Pump House, Reservoir, Canal Enclosure, Global GAP facilities etc.	653 days? 10,20		[Task bar in 2020 H1]											
14	Supply and Install Power Equipment to Pumps (JPSCo)	4.6 wks 13		[Task bar in 2020 H1]											
15	Construct Farm Access Roads & Drains	349 days?		[Task bar in 2020 H1]											
16	Supply and Install Irrigation Security System	192 days? 11		[Task bar in 2020 H1]											
17	Land Clearing & Levelling	67 days?		[Task bar in 2020 H1]											
18	Supply & Install Post Harvest Reefers	52 wks		[Task bar in 2020 H1]											
19	Engineering Design and Construction Supervision Services	851 days? 4		[Summary bar from 2019 H2 to 2023 H2]											
20	Engage Supervision Consultants	132 days?		[Task bar in 2019 H2]											
21	Construction Supervision Consultants	719 days? 20		[Task bar in 2019 H2]											
22	Supply of Goods	946 days?		[Summary bar from 2019 H2 to 2023 H2]											
23	Supply Project Vehicles	87 days?		[Task bar in 2019 H2]											
24	Supply On-Farm Irrigation Equipment	179 days? 11		[Task bar in 2019 H2]											
25	Supply GIS Equipment	89 days?		[Task bar in 2019 H2]											
26	Supply Drain Cleaning Equipment	110 days?		[Task bar in 2019 H2]											
27	Supply Water Quality Monitoring Equipment	66 days?		[Task bar in 2019 H2]											
28	Other Consultancies and Support Services	590 days? 4		[Summary bar from 2019 H2 to 2023 H2]											
29	Procure Consultant Hydro-Geologist	67 days?		[Task bar in 2019 H2]											
30	Agriculture Value Chain Specialist	133 days?		[Task bar in 2019 H2]											
31	Capacity Building	350 days?		[Summary bar from 2019 H2 to 2023 H2]											
32	Training in GLOBALG.A.P and CSA	350 days?		[Task bar in 2019 H2]											
33	Project Management & Coordination (incl. Financial Audits)	1185 days? 2		[Summary bar from 2019 H2 to 2023 H2]											

PROJECT MANAGEMENT DUTIES AND RESPONSIBILITIES

**SUMMARY OF PROJECT EXECUTION UNIT STAFF
AND CAPACITY BUILDING CONSULTANTS**

PEU CORE STAFF

Project Manager

1. Under the direction of the Director of Projects, NIC the PM will be responsible for the effective and efficient day-to-day implementation of the project. Serving as secretary of the PSC, he/she will be responsible for: (a) the establishment of the PEU; (b) recruiting and supervision of PEU staff and contracted service providers; (c) preparation of Annual Work Plans; (d) tracking and reporting on project milestones and deliverables; (e) submission of reports on project implementation performance to the PSC and CDB; (f) ensuring adherence to CDB/GOJ procurement and financial management policies and procedures and preparation of a Project Completion Report; and (g) ensuring the mainstreaming of social and gender during all stages of project implementation.

Procurement Specialist

2. The consultant is required to effectively develop and execute the Procurement Plan including the execution of tenders and preparation of reports in accordance with donor agency's requirements. The Procurement Specialist will also be responsible for, but not limited to the following: (a) ensuring that procurement processes meet CDB and GOJ Procurement requirements; (b) assisting officers of the PEU in the preparation of bidding documents; (c) advertising bids locally and internationally; (d) receiving and screening bids for assessment; (e) notifying selected bidders; and (f) drafting and administering contracts/agreements.

Agri-business Development Specialist

3. The main responsibilities of the Business Development Specialist (BDS) are to: (a) facilitate the development of Producer Groups (PGs) on each Project site; (b) identify market opportunities for farmers/PGs operating in the Project area; and (c) mobilise technical support for farmers/PGs to enable them to negotiate contracts and meet the requirements of buyers – both within and outside of the agro-park; (d) facilitate farmers/PG in making investment decisions – based on demand/business linkages; (e) develop and regularly update an inventory of potential service provider, input suppliers and buyers (institutional, corporate, aggregate buyers, wholesalers, retailers, agro-processors) and facilitate dialogue between those buyers and farmers/PGs.

Accounting Officer

4. As part of the NIC accounting department, the Accounting Officer will provide accounting and analytical services in order to ensure effective implementation, cost control/reporting of the project's finances.

SERVICES TO BE SHARED WITH EVADP

Social and Gender Specialist

5. The consultant will assist the PEU in: (i) reviewing and validating the ESIA – to be developed by the design consultants engaged under the TA Project, ‘Feasibility and Design Study for the St. Catherine and Clarendon Agricultural Development Project’; (ii) monitoring implementation of the social and gender safeguards during construction guided by the Environmental and Social Management Plan; (iii) undertaking a Social and Gender Impact Assessment, ensuring gender mainstreaming across project activities; (iv) supporting the Consultancy – Economic Inclusion of Poor and Vulnerable Groups in Agriculture Organisational Strengthening; (v) developing and implementing a *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture*; and, (vi) facilitating reporting to MICAF on matters of concern to residents and the business community.^{3/}

Monitoring and Evaluation Specialist

6. The M&E consultant will develop (including collecting baseline data), manage, and implement a quality M&E system facilitating effective implementation of the project, assessment of its performance, and evaluation-readiness. The M&E system will: (a) monitor the progress on achievement of outputs and outcomes across all project components and to identify any difficulties or impediments that may occur and guide remedial actions to ensure that the project achieves its intended objectives; (b) ensure frameworks, baseline and performance data necessary to make the project ‘evaluation-ready’ are in place.

SUPPORT CONSULTANTS – INTERMITTENT SERVICES

NIC SUPPLIED

Geographical Information System Specialist

7. The consultant will be responsible for the creation of a comprehensive Geographical Information System (GIS) for the project, including but not limited to: (a) the design and updating of project databases; and (b) compiling geographic data from a variety of sources including national Census Data, field observations, satellite imagery, aerial photographs, and existing maps.

Supplied Via an Engineering Firm – Engaged under the EVADP

8. An Engineering Firm will be engaged through the EVADP to provide support services to both the EVADP and the SPAD Project. Each project will bear the cost associated with those services.

Civil Engineer

9. The consultant will provide civil engineering services on an intermittent basis. Such services could include: preparation, reviewing of tender related document - prequalification submissions, Expressions of Interest and Requests for Proposals. General engineering support - contract administration; reviewing of monthly progress reports; reviewing consultants/contractors/suppliers payments certificates; assisting with the finalisation of consultants/contractors/suppliers payment certificates for submission to Ministry of Finance and CDB; periodic inspection of works on site and reporting thereon; and attendance at periodic construction site meetings.

Electrical/Mechanical Engineering

10. The consultant will provide the electrical/mechanical engineering services required to ensure effective project implementation. He/she will, among other things, be responsible for: (a) review of detailed engineering/mechanical designs, bill of quantities, engineering cost estimates, specifications and contract documents prepared by the design consultants; (b) support the development of specifications for the RE systems by providing necessary data and advice; (d) manage the process of applications and licenses to relevant authorities to operate RE systems; (e) oversee the work of the Supervision Consultants as it relates to the installation of the electrical equipment to ensure that all national and international codes and standards are met; and (f) review of O&M manuals for electrical and mechanical equipment for future maintenance, and oversee supplier training of O&M staff in the operation, servicing/maintenance of all electrical equipment and associated systems.

Environmental Specialist

11. The consultant will assist the PEU in; (a) reviewing and validating the ESIA – to be developed by the design consultants engaged under the TA Project, ‘Feasibility and Design Study for the St. Catherine and Clarendon Agricultural Development Project’; (b) monitoring implementation of environmental safeguards during construction guided by the Environmental and Social Management Plan; and (i) updating residents of communities in close proximity to the project on matters related to implementation including unexpected disruptions and inconveniences that could occur.

Hydrogeologist

12. Responsible for monitoring implementation of activities associated with water source development of the project to ensure compliance with the regulations of the WRA and NEPA. The consultant will also be responsible for, but not limited to, the following: (a) the review of the geological and hydro-geological information associated with the project area; (b) assessing field conditions to determine typical water yields and water quality from tube wells and associated risks and mitigation strategies; (c) assessing the options to improve the recharge rate of the aquifer; and (d) advising on the final design and implementation of a water monitoring system for the project area to ensure the sustainability of the irrigation system.

Position	No.	Months
Core Staff:		
Project Manager	1	54
Procurement Specialist	1	42
Social and Gender Specialist	1	36
Accounting Officer	1	54
Agribusiness Specialist	1	36
Construction Supervisor	1	36
Clerk of Works	2	36
Total Core Staff	8	
Civil Engineer	1	20
Electrical/Mechanical Engineer	1	6
M&E Specialist	1	12
Hydrogeologist	1	6
Environmental Specialist	1	12

Intermittent Services – EVADP Engaged

Intermittent Services – NIC Supplied

GIS Specialist

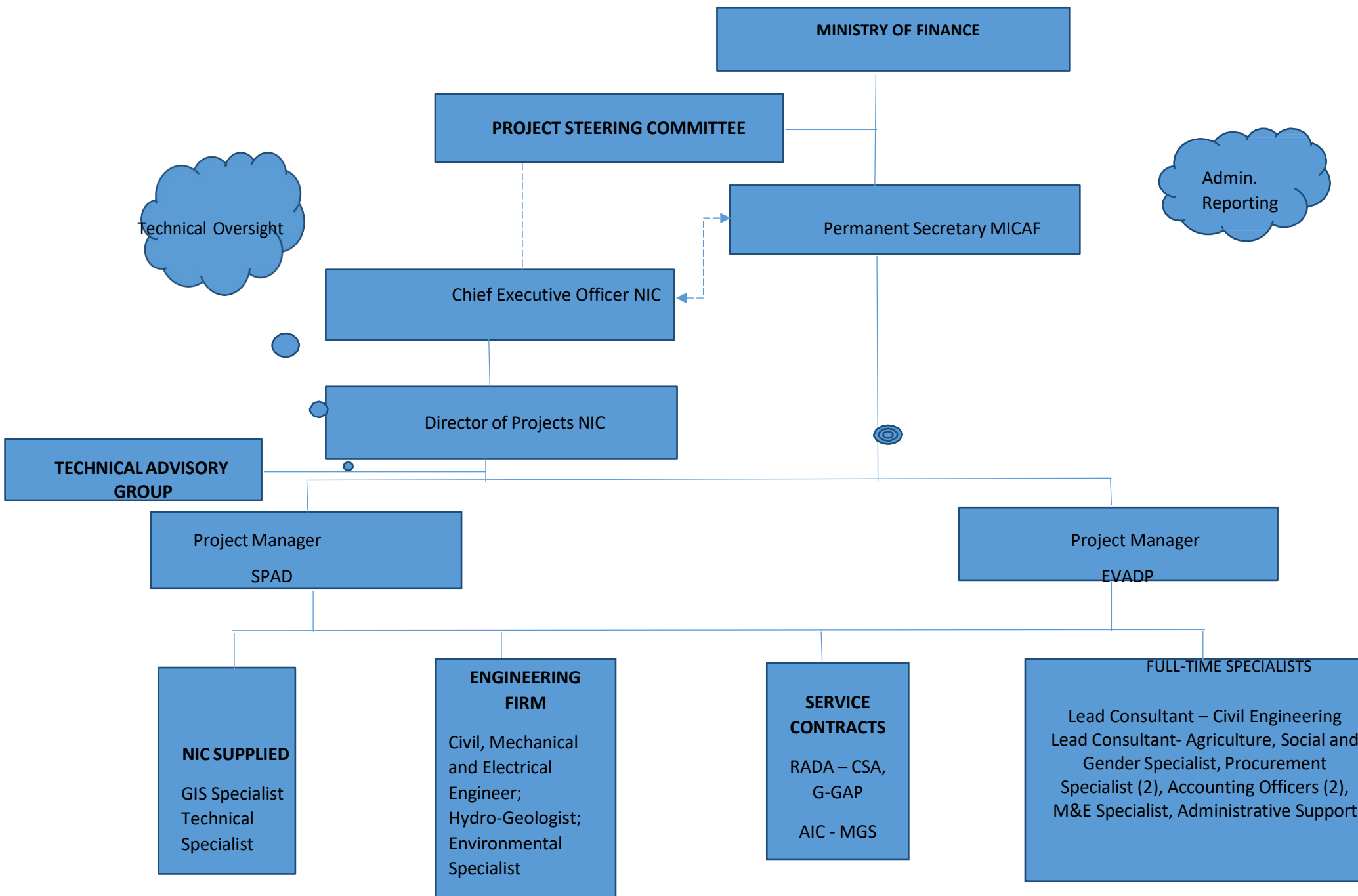
Administrative Support

CONSULTING FIRMS – DESIGN AND SUPERVISION SERVICES

Assignment	Main Areas of Responsibility
Construction Supervision of Irrigation System and Farm Road	<ul style="list-style-type: none"> • Supervision of the contracts in relation to the provision of goods, works and services; detailed above.
Construction Supervision of Pack houses and G-GAP Infrastructure and External Works.	<ul style="list-style-type: none"> • Development of architectural designs for the Pack House GG structures. • Management of the procurement process – engagement of contractors for the buildings including the associated RE/EE systems. • Supervision of contractors.
<p>Consultancy Services – Capacity Building in G-GAP -</p> <p>Programme development will be financed under the EVADP</p>	<ul style="list-style-type: none"> • Development, in collaboration with the MICAF/RADA of the outline of a training programme aimed at enhancing the capacity of producers and stakeholders in Essex Valley to meet the requirements of G-GAP – for fruits and vegetables option. • Advising the PEU, farmers and stakeholders on the structures – design, size, number, suitable location – of structures that are necessary for farmers/farms in the project area to meet GG standard – fruit and vegetable option. • Development of a training programme/ manual covering the key requirements of GG – (based on the findings of the GG assessment). • Undertake, in partnership with MICAF/RADA all the key mandatory required trainings as per GG – Fruits and • Build the capacity of farms and other stakeholders to carry on with proper record keeping even after external certification. • Undertake pre-certification farm audits to assist the PEU in the identification of gaps and farmer readiness to participate in external/certification audits. • Make the necessary arrangements and support the conduct of GG Certification Audits. • Identify and assist the PEU in addressing issues of non-compliance identified during audits.
Development and Implementation of a Programme in CSA.	<ul style="list-style-type: none"> • Assessment of the likely impact of CC/CV on crops/cropping systems in the Project areas – with a focus on suitability and economic factors

<p>Programme development will be financed under the EVADP.</p>	<ul style="list-style-type: none"> • Development , prioritization and capacity building of farmers and stkholders in location specific gender equitable CSA options.
<p>Consultancy Services – Economic Inclusion of Poor and Vulnerable Groups in Agriculture Organisational Strengthening</p> <p><i>All costs associated with this Consultancy will be covered by the UKCIF Essex Valley Agriculture Project</i></p>	<ul style="list-style-type: none"> • Undertake a situational analysis, including broad consultations with stakeholder groups to (i) examine the barriers to economic participation of poor and vulnerable groups in the agriculture sector; (ii) document international, regional and national best practices; (iii) identify the most comprehensive approach for ensuring institutionalisation of economic inclusion of poor and vulnerable groups in agriculture. • Assess and build the capacity of farmers groups including, <i>inter alia</i>, the Essex Valley Farmers’ Benevolent Society and the Jamaica Network of Rural Women Producers. • Develop <i>Gender-Responsive Guidelines for Mainstreaming Economic Inclusion of Poor and Vulnerable Groups in Agriculture.</i> • Develop a <i>Gender-Responsive Training Manual for Farmers’</i> • Deliver training and, <i>inter alia</i>, convene a stakeholder consultation workshop.
<p>Consultancy Services – Matching Grant Scheme for Poor and Vulnerable Farmers</p>	<ul style="list-style-type: none"> • Undertake an assessment of the most viable matching grant scheme modalities for consideration in the context of (i) investments in on-farm irrigation equipment and agri-business ventures; and, (ii) linkages between small-scale farmers/farmer groups – males, females, youth and PWDs – to agri-business/private sector operatives including service providers, larger commercial famers, agro-processors and produce purchasers in the Jamaican context. • Design the matching grant scheme including options for the GoJ to consider for implementation. • Develop criteria for identification and selection of grant recipients including a focus on small-scale farmers – male and female, youth and PWDs. • Develop communication campaign for raising awareness of the MGS among small-scale male, female, youth and PWD farmers/ Farmer groups.

PROJECT ORGANISATION CHART



IMPLEMENTATION SUPPORT PLAN

1. The implementation support to be provided will include:
 - (a) assistance in the review of documents/contracts related to the procurement of goods, works and services under the project;
 - (b) assistance in identifying a suitable entities and defining the criteria for implementation of activities under the EAPMFS, RE/EE and TA components;
 - (c) assistance in coordinating stakeholder consultation – in particular the integration of measures to ensure that the issues and concerns of vulnerable persons area addressed in a holistic manner;
 - (d) reviewing implementation progress and achievement of project outcomes;
 - (e) addressing implementation issues;
 - (f) monitoring systems to ensure their continued adequacy through monitoring reports and field visits; and
 - (g) monitoring changes in risks and compliance with legal agreements as needed.
2. The ISP will be reviewed annually to ensure that it continues to meet the implementation support needs of the project. In addition to reviewing implementation progress, the ISP aims at providing technical support to GOJ/MEGJC in the achievement of the results.
3. The ISP has been developed based on the risk profile of the project with particular focus on implementation and capacity risk, as well as the traditional supervision focus areas of financial management, contract management and procurement.

Strategy and Approach for Implementation Support

4. Supervision of the Project will be undertaken by a team comprising Operations Officers - Agriculture and Rural Development; Engineer; Environmental; and Social, and Financial Analysts and Legal Counsel. The Team will be supported by a Consultant Procurement Specialist. Given the relatively complex nature of the project, it is anticipated that services of the Consultant Procurement Specialist will be utilised intensively during Year 1-3, of project implementation - an estimated 90 man-days - and that CDB staff will engage in formal supervision and field visits at least two times per year.
5. The first formal supervision activity will be the PLW. The objective of the PLW is to review the implementation arrangements, orient MICAF - NIC, AIC and RADA and other key stakeholders to the use of CDB's fiduciary management and procurement systems, and discuss arrangements for project start-up. The PLW is scheduled for the third quarter of 2019 - following signature of the Grant Agreement and confirmation by GOJ that the PSC has been established.

6. The supervision team will prepare an Aide Memoire after each supervision mission as well as annual Project Supervision Reports (PSRs) - these reports will, *inter alia*, compare planned versus actual progress on each component, comment on compliance with Grant covenants, CDB procurement and contracting policies and any issues requiring resolution.

7. Within six months of project completion, Staff will conduct an Exit Workshop to assess results, discuss implementation issues, and identify lessons learnt. A draft Project Completion Report (PCR) will be prepared and discussed with the client during the Exit Workshop. The final PCR will be validated by the Office of Independent Evaluation (OIE). Staff will prepare a Management Response to the OIE’s validation report.

TABLE 1: STAFF SKILLS REQUIRED

Time	Focus	Skills Needed	Resource and Estimated Input
BOD’s Approval to 12 months.	<ul style="list-style-type: none"> • PLW 	<ul style="list-style-type: none"> • CDB/UKCIF Management Rep. • Legal • Procurement • Agriculture • Engineering • Social • Environment • Claims Processing 	<ul style="list-style-type: none"> • Director PD and DC – 2 Days (PLW) • Legal Counsel – 1 W • Head Procurement Unit –1 W • Consultant Procurement Specialist – 5 Ws • Claims Disbursement Officer–1W • OO (Agriculture and Engineer – 5 Ws each • OO (Social, Environment, Analyst) – 2 Ws each • Administrative Support – 2 SW • Claims Disbursement Officer – 2 SW
	<ul style="list-style-type: none"> • Project Start-up Support • Procurement • Monitoring of Project Implementation and Results • Contract Management Support– preparation of TORs, review of contract documents, evaluation of reports • Review of implementation reports. • Preparation of Supervision Reports. • Claims Processing 	<ul style="list-style-type: none"> • Procurement • Agriculture • Engineering • Social • Environment • Claims Processing 	
Plan Review After Year 1 - 3			
12–36 months	<ul style="list-style-type: none"> • Monitoring of implementation, risks and results. • Claims review and Disbursement. 	<ul style="list-style-type: none"> • Agriculture • Environment • Financial Management • Legal • Engineering 	<ul style="list-style-type: none"> • Consultant Procurement Specialist – 3 Ws • Claims Disbursement Officer – 2 W • OO (Agriculture, Engineer – 5 Ws each • OO (Social, Environment, Analyst) – 2 Ws each • Administrative Support – 2 SW
	<ul style="list-style-type: none"> • Procurement and Contract management support, preparation of TORs, review of contract documents, evaluation of reports. • Review of reports • Preparation of supervision reports. • Visit to construction site. 	<ul style="list-style-type: none"> • Procurement • Agriculture • Environment • Financial Management • Legal • Engineering 	
	<ul style="list-style-type: none"> • Monitoring of compliance with legal covenants. 	<ul style="list-style-type: none"> • Agriculture • Legal 	

Time	Focus	Skills Needed	Resources and Estimated Input
	<ul style="list-style-type: none"> • Preparation of annual PSRs. 	<ul style="list-style-type: none"> • Agriculture • Social 	
		<ul style="list-style-type: none"> • Environment • Engineering • Financial Management 	
	<ul style="list-style-type: none"> • Preparation of PCR and Exit Workshop. 	<ul style="list-style-type: none"> • Agriculture • Social • Legal • Financial Management • Procurement 	<ul style="list-style-type: none"> • OO (Agriculture, Engineer – 5 Ws each • OO (Social, Environment) – 2 Ws each • Administrative Support – 2 SW • Divisional Staff – 2 days
Plan Review and Modification As Required			

APPENDIX 6.8**REPORTING REQUIREMENTS**

Report	Frequency	Responsibility
1. Work Plan and Budget By component detailing planned activities (outputs) associated cost and timing.	Annually - The first within three months of the Project Launch Workshop.	Director of Projects NIC
2. Gantt Chart of Project Activities	Monthly - within five working days	Project Manager
3. Implementation Status –Based on WPB including planned verses actual progress on output and outcome indicators.	No later than July 15 th and January 31 st	Project Manager
4. Financial Status and Updated Projections.	Quarterly	Project Manager/Accountant
5. Financial Audit.	Annual - Within 120 days of the end of each calendar year	
6. Procurement Plan.	Annually or as needed - covering the next 12-month period	Project Manager/Procurement Specialist
7. Consultant Supervision Reports - in keeping with applicable TOR and including: (a) monthly Progress Reports on Progress of Works; (b) Work Certificates; and (c) Infrastructure/Contract Completion Report.	As per applicable TOR	Project Manager
8. Consultants' Reports - Technical Assistance/Capacity Building and related components.	As per applicable TOR	As per applicable TORs
9. Detailed Risk and Issues Register	Monthly	Project Manager
10. PCR prepared and submitted by PM.	Within six months of project completion.	Director of Projects, NIC

DRAFT TERMS OF REFERENCE
PROJECT EXECUTION UNIT STAFF AND SUPERVISION CONSULTANTS

PROJECT MANAGER

1. OBJECTIVES

1.1 Reporting to the Director of Projects, National Irrigation Commission (NIC), the consultant is responsible for the effective and efficient day-to-day implementation of the project. She/he will be responsible for ensuring the functioning of the project from the beginning to the end including project inception activities, annual, quarterly and monthly planning and reporting, and implementation of the project activities, project review and project closure.

1.2 In the final analysis, the PM has to ensure that all contractors fully deliver their contracts, fulfill all obligations, and adequately address any changed conditions or required changes to the design. The magnitude and impact of any issues that arise during the project should be managed by early detection and rapid response supported by intimate knowledge of the design and specifications.

2. SCOPE OF CONSULTANCY SERVICES

2.1 The consultant will carry out all research, data collection, analysis, reporting, and related work required to attain the objectives outlined above. The consultant will be expected to, among other things:

- (a) head and manage the Project Execution Unit (PEU) for the SPAD Project;
- (b) assist in the review of the work of the design consultants – including the conduct of the Climate Vulnerability Assessment and the Environmental and Social Impact Assessment;
- (c) analyse and ensure the accuracy and completeness of all survey reports, maps, drawings and other topographical or geologic data relevant to the project;
- (d) ensure that civil, hydraulic, structural, social and environmental design elements meet the required standards;
- (e) assist in the development/periodic review the Project's implementation schedule, component cost estimates and communications and monitoring and evaluation plan;
- (f) participate in the preparation and review of, Request for Expressions of Interest (ROEI), Requests for Proposals (RFP), and associated tender documents and contracts;
- (g) ensure that applications for all permits and approvals required for the timely and effective implementation of Project activities are made in a timely manner;
- (h) ensure that project implementation activities are compliant with the applicable GOJ laws and regulations;
- (i) supervise all project staff in the PEU as well as local and/or international consultants working for the project;

- (j) prepare and update monthly a detailed project plan in the form of a detailed Gantt chart covering all project related activities to monitor and track progress. This must include ensuring partnership with the Social and Gender Specialist, to ensure the mainstreaming of gender, disability and youth equality in all elements of the project including unfettered and equitable access to infrastructure and services developed under the project; Revisions of the Gantt chart should be included in the monthly report to CDB;
- (k) establish and maintain project risk and issue registers covering the full breadth of project related activities and ensure that these are updated and submitted to CDB on at least a monthly basis;
- (l) ensure that all contract deliverables are in compliance with the respective contracts and delivered in a timely manner;
- (m) inspect project sites to monitor progress and ensure conformance to design specifications and safety standards and that risk assessment is updated;
- (n) ensure that all necessary third party issues are addressed in a timely manner;
- (o) ensure that all agreements with implementing agencies are prepared, negotiated and formally agreed upon and adhered to;
- (p) with respect to co-implementing partners, in particular - Rural Agricultural Development Agency (RADA) and the Agro-Investment Cooperation (AIC):
 - ensure that they mobilise and deliver the outputs in accordance with their respective service agreements or contracts;
 - provide overall supervision/coordination of their work to ensure the production of the expected outputs;
 - ensure that all the necessary reports are completed, that they are accurate and on time, and that the project documentation is properly compiled, filed and maintained in accordance with the relevant legislations and the requirements of the Caribbean Development Bank (CDB);
 - ensure that all issues are resolved or elevated to the Director of Projects, NIC;
 - proactively manage changes to the project scope, project schedule and project costs using appropriate verification techniques;
 - track and report on project milestones and deliverables;
 - direct responsibility for the project budget by ensuring that:
 - project funds are properly disbursed;
 - expenditure is in accordance with the project documents and project work plans;

- all project authorised budgets are not exceeded without prior approvals from the relevant sponsors;
- in conjunction with the Director of Finance and Planning, National Irrigation Commission (NIC) accounting records and all supporting documents are properly kept and filed, and that accurate financial reports are prepared;
- financial operations are transparent and financial procedures/standards and regulations are properly applied; ensuring that all necessary communication is properly handled both internally and externally;
- being ultimately responsible for the following CDB requirements:
 - representation of Government of Jamaica, Agro-Investment Corporation and NIC in all its dealings with consultants, suppliers and contractors;
 - prequalification of contractors;
 - issuing of tenders, evaluation of bids and recommendation of the awards for the construction contracts;
 - management and administration of the implementation of construction contracts;
 - cost control;
 - expedition of the submission to CDB of claims for disbursement/ reimbursement;
 - liaise with CDB on all technical and administrative aspects of the project;
 - preparation and submission to CDB of quarterly reports on the investment cost of the project;
 - keeping accounts for project-related expenditures and disbursement activities;
 - preparation of an annual work programme and budgets and submission of same to CDB two months prior to the beginning of the fiscal year under consideration;
 - submission to CDB, within two weeks after the end of each month, of monthly reports;
 - submission to CDB of a project completion report (PCR) and as-built drawings within three months after the date of issue by the engineering consultants of a certificate of practical completion of the project; and
 - preparation and submission to CDB of a PCR within six months after practical completion of the project.

3. **CONSULTANT(S) REQUIREMENTS**

3.1 The consultant should have:

- (a) at least a Master's degree in Construction Management, Engineering or related technical field or equivalent qualifications;
- (b) a minimum of ten years' extensive experience in project management, planning and implementation; a Project Management Certification will be an advantage;
- (c) the ability to quickly build productive relationships with high level Government officials and key stakeholders in the private sector;
- (d) strong leadership capabilities and proven ability to manage a multi-agency team;
- (e) good public-speaking skills;
- (f) good computer skills, including the ability to utilise Microsoft Office Suite including Microsoft Project;
- (g) strong management skills including ability to provide strategic guidance, technical oversight, analytical skills, oral and written communication and team building skills; and
- (h) experience working with international and donor organisations on the implementation of participatory projects will be considered an asset;

4. **SUPERVISION OF THE CONSULTANT**

4.1 The consultant(s) will report to the Permanent Secretary, MEGJC, who will be responsible for routine supervision of the consultant and monitoring the progress of this consultancy.

5. **DURATION**

5.1 The maximum duration of the assignment is 60 months.

BUDGET

(£)

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

DRAFT TERMS OF REFERENCE
PROCUREMENT SPECIALIST

1. JOB SUMMARY

1.1 Under the general direction of the Project Manager, Southern Plains Agricultural Development Project (SPAD), the incumbent will provide procurement services in order to ensure effective implementation of the project. The incumbent is required to effectively develop and execute the SPAD Procurement Plan including the execution of tenders and preparation of reports in accordance with donor agency's requirements.

2. SCOPE OF CONSULTANCY SERVICES

2.1 The Procurement Officer's responsibilities include:

- (a) ensuring that procurement processes meet CDB and GOJ procurement requirements;
- (b) establishing and managing a procurement database;
- (c) advertising bids locally and internationally consistent with CDB's procurement guidelines and GOJ's requirements;
- (d) assisting officers of the PEU in the preparation of bidding documents including Terms of Reference and product specifications;
- (e) identifying qualified local and international bidders;
- (f) receiving and screening bids for assessment;
- (g) establishing and advising selection committees;
- (h) verifying that selection procedures were followed;
- (i) notifying selected bidders;
- (j) drafting and administering contracts/agreements;
- (k) maintaining the PEU Procurement Plan; and
- (l) providing related Project Management guidelines and services to the PEU especially on procurements and contracts.

3. CONSULTANT(S) REQUIREMENTS

3.1 Recruitment will be in accordance with CDB's procurement guidelines.

- (a) a first degree in Engineering, Management or Business Administration from a recognised institution; and

- (b) at least five years of administrative and procurement experience in local and international procurement. Previous experience with CDB and other international and donor organisations with implementation of participatory projects will be considered an asset.

In addition the consultant will be required to have:

- (c) actual experience in preparing/reviewing bidding documents;
- (d) strong analytical and operational knowledge of procurement;
- (e) good technical skills;
- (f) good judgment and decision-making skills;
- (g) self-motivated with excellent attention to detail;
- (h) the ability to solve problems; and
- (i) good team player.

4. **REPORTING REQUIREMENTS**

4.1 The consultant is expected to prepare:

- (a) local/international procurement notices;
- (b) finalised Contractor Prequalification documents;
- (c) finalised Contractor/Supplier Bidding documents; and
- (d) Tender and Proposal Evaluation Reports.

5. **DURATION**

5.1 The assignment is will be for a 24-four month period, with the possibility of a twelve month extension.

6. **BUDGET**
(£)

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DRAFT TERMS OF REFERENCE
AGRI-BUSINESS DEVELOPMENT SPECIALIST

1. BACKGROUND

1.1 The Southern Plains Agricultural Development Project (SPAD) offers direct social and gender benefits for commercial agricultural enterprises through improved access to agricultural resources; technical expertise; organisational strengthening and female and male farmers' capacity building in the rural communities of Amity Hall (St. Catherine) and Parnassus (Clarendon). The Project will further contribute to the recovery of the rural economic sector, food security, social inclusion and gender equality, while significantly addressing the environmental risks in the two rural communities. It is anticipated that the project will stimulate improved access to agricultural resources for male and female farmers thereby enhancing participation in commercial agricultural activities. Since a major proportion of the population in the project areas depend on agriculture as the primary economic and income-generating activity, the Project will provide new areas for agricultural cultivation, including agricultural fertile lands, farm access roads and climate smart irrigation facilities, for the ongoing recovery of commercial agriculture within the aforementioned two rural communities.

1.2 The Consultancy will support the project to stimulate investment in on-farm climate smart irrigation equipment and training for poor and vulnerable farmers thereby contributing to building resilience to adverse weather events and improving food security within rural communities. Further, this Consultancy will coordinate with the Consultancy to establish a Matching Grant Scheme (MGS) as well as the Social and Gender Specialist (SGS) to ensure inclusive and equitable participation in agri-business activities. Alignment with markets arrangements through, for example the Mother Farm Model to rural farmers (male and female), should enhance both the sustainability and profitability of the commercial farming enterprises; enhancing social equity while safeguarding against environmental degradation.

2. OBJECTIVES

2.1 The main responsibility of the Agri-Business Development Specialist (ABDS) is to:

- (a) Facilitate the inclusion of poor and vulnerable farmers/Producer Groups (PGs) – male, female, youth and people with disabilities (PWDs) – in all agri-business development activities undertaken by the ABDS.
- (b) Facilitate the development of farmers/PGs on each Project site.
- (c) Identify market opportunities for farmers/PGs operating in the Project area.
- (d) Mobilise technical support for farmers/PGs to enable them to negotiate contracts and meet the requirements of buyers – both within and outside of the ago-park.

3. METHODOLOGY

This Consultancy will report to the Project Manager, SPAD. He/She will engage closely with the Ministry of Culture Gender, Entertainment and Sport (MCGES), Ministry of Industry, Commerce, Agriculture and Fisheries (MICAFA)⁴, Ministry of Education, Youth and Information (MOE)⁵, Agro-investment Corporation Jamaica (AIC), National Irrigation Commission (NIC), Rural Agricultural Development Agency (RADA), Jamaica Agricultural Society (JAS), Bureau of Gender Affairs (BGA), Jamaica Council for Persons with Disabilities (JCPD) and farmers' groups including, but not limited to, the Essex

Valley Farmers' Benevolent Society (EVFBS) - as stipulated in the UKCIF Essex Valley Project and the Jamaica Network of Rural Women Producers (JNRWP), in carrying out the assignment.

3.1 The Consultancy will be informed by participatory consultations with state and non-state stakeholders to inform evidence-based design and gain buy-in for implementation of the MGS. Elite interviews, focus groups, site visits, transect walks, and other appropriate participatory methodologies must be employed. Focus groups may be convened separately for males, females, youth, and persons with different type and severity of disabilities.⁶ Examples of stakeholders include, but are not limited to:

- (a) Public agencies including, *inter alia*, the MCGES, MICAF, MOE, AIC, NIC, RADA, BGA, JCPD, Planning Institute of Jamaica (PIOJ), Department of Cooperatives and Friendly Societies (DCFS), Jamaica Social Investment Fund (JSIF) and the Social Development Commission (SDC).
- (b) Non-governmental organisations (NGOs) including, *inter alia*, the EVFBS, JNRWP, JAS, disabled peoples' organisations such as the Combined Disabilities Association, women's groups such as the Network of Women for Food Security and their partner the Association of Mushroom Producers of Jamaica, and youth representatives/leaders such as those associated with Youth Information Centres and 4-H Clubs.

4. SCOPE OF WORK

4.1 The services included in this assignment are to be conducted in accordance with generally accepted international standards and professional practices. The scope of work is understood to cover all activities necessary to accomplish the objectives of the consultancy, whether or not a specific activity is cited in these Terms of Reference.

4.2 The ABDS will be responsible for the following:

- (a) ensure outreach, mobilisation and engagement of poor and vulnerable farmers/PGs – male, female, youth and PWDs – through liaising with the Project's SGS;
- (b) facilitate farmers/PGs to source services and production inputs in a timely and cost effective manner;
- (c) in keeping with recommendations emerging from the SPAD financed, 'Agricultural Value Chain (AVC) Study', and dialogue with private sector entities/Private Sector Development Specialist facilitate farmers/PGs to make informed investment decisions;
- (d) develop and regularly update an inventory of potential service providers, input suppliers and buyers (institutional, corporate, aggregate buyers, wholesalers, retailers, agro-processors) and facilitate dialogue between those buyers and farmers/PGs;

⁴ Specifically the agriculture and fisheries portfolio.

⁵ Specifically the youth portfolio.

⁶ Severity may range from mild, moderate, severe and profound. The types may include, *inter alia*, intellectual, visual, physical, learning, speech, deafness and mental illness.

- (e) support farmers/PGs in negotiating contracts and meeting the requirements of business partners;
- (f) support farmers/PGs to develop Business Plans;
- (g) coordinate with and provide support to the SGS in developing appropriate agri-business messaging for the *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture*;
- (h) coordinate with RADA and other Government of Jamaica service providers in development and delivery of training and support to farmers/PGs;
- (i) develop in partnership with AIC, NIC and the *Consultancy – Matching Grant Scheme (MGS)*, a mechanism for facilitating the disbursement of the MGS to potential farmers/PGs to facilitate on-farm investment.
- (j) participate in review meetings, planning meetings, training and exposure programs, workshops, seminars being implemented under the Project.

5. QUALIFICATIONS AND EXPERIENCE

5.1 The ABDS will have the following minimum qualifications and experience:

- (a) an Advanced Degree or Degree in Agriculture or Rural Development, Agri-Business Management or Business Administration or similar degree;
- (b) five years' experience (holders of an Advanced Degree) or ten years' experience (Degree holders) facilitating the commercialisation of smallholder farm operations;
- (c) good interpersonal and communication skills and teamwork abilities;
- (d) experience conducting studies, workshops, seminars, review meetings, annual planning exercises;
- (e) experience in inclusive community outreach and participatory development practices including, *inter alia*, interviews, focus groups, site visits, transect walks, workshops;
- (f) experience networking and building partnerships with agriculture based marketing organisations, corporate buyers, private sector;
- (g) experience working knowledge in MS Word, MS Excel and MS Power-point; and
- (h) experience working in the agriculture sector in Jamaica an asset.

6. DURATION

6.01 The assignment is will be for a 24-four month period, with the possibility of a twelve month extension.

7.

BUDGET

(£)

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DRAFT TERMS OF REFERENCE
CONSTRUCTION SITE SUPERVISOR

SCOPE OF SERVICES

1. The Construction Site Supervisor (CSS) will develop a thorough familiarity with all aspects of the irrigation system and associated facilities being constructed on the site – in particular the detailed designs, drawings and contract documents. The CSS will report directly to the Project Manager, PEU.

2. Specifically the incumbent will:
 - (a) Maintain continuous communication with the Contractor, Project Manager, Clerks of Works and the Supervision Consultants.
 - (b) Observe and review the quality and progress of construction to determine, in general, that it is proceeding in accordance with the contract documents and schedule.
 - (c) Review daily records of all daily activities including daily progress, weather conditions, visitors, inspectors, sub-contractors on site, nature, quality and location of work performed as well as labour and heavy equipment on site.
 - (d) Meet, verify identification, and accompany any inspectors from local agencies having jurisdiction over the project. Record the visits in writing and report the results of such visits/inspections to the Project Manager and Supervision Consultants. Ensure that all corrective actions are undertaken as necessary resulting from inspections.
 - (e) In consultation with the Clerks of Works, review the storage of materials, including any off-site storage. Review/Document with written reports and photographs as necessary and issue instructions for corrective action
 - (f) Issue site instructions as necessary to the Contractor.
 - (g) Notify the Contractor's Representative of any unsafe conditions observed and corrective measures taken.
 - (h) Issue instructions to remove/repair or otherwise correct any work which is substandard or otherwise not in accordance with the contract documents.
 - (i) Constantly review the progress of the works relative to the construction schedule and recommend actions for corrective actions to minimise/prevent delays to completion of any contract being constructed under the project.
 - (j) Evaluate, log, and make recommendations on requests for change orders.
 - (k) Attend all project meetings as the Owner's representative. Submit written reports to the Project Manager following each meeting.
 - (l) Coordinate scheduling and observe tests as required by the contract documents.

- (m) Receive and review all requests for payment from the Contractor. Make recommendations to the Project Manager concerning payment.
- (n) Assist the design team in the development of punch lists. Monitor the completion of work on punch lists and inform the Project Manager of the status on a regular basis.
- (o) Participate in final inspections and commissioning.
- (p) Maintain records at the construction site in an orderly manner as directed by the Project Manager/Owner. Include copies of all correspondence concerning the project, contract documents, construction schedule, change orders, test results, permits, inspection reports, insurance policies, minutes or summaries of meetings, shop drawings, invoices, lien releases, and any other applicable documentation.
- (q) Carry out any other site supervision services as directed by the Project Manager.

QUALIFICATIONS

3. The CSS will have:

- (a) Graduate certification from a Tertiary Institution in Construction, Civil Engineering, Project or Construction Management.
- (b) A minimum of 15 years' experience in construction supervision of activities of a civil/irrigation engineering construction project.
- (c) Broad general understanding of current construction practices, methods, and materials.
- (d) The ability to read and understand construction drawings, specifications, and contracts.
- (e) The ability to understand and review the results of testing of materials.
- (f) Broad general understanding of current construction practices, methods, and materials.
- (g) Knowledge of the roles and interactions of the members of the construction team.
- (h) An understanding of construction site safety requirements and familiarity with environmental requirements of the contracts as well as generally on construction sites.
- (i) Excellent interpersonal communications skills and basic writing and computer skills.
- (j) Knowledge of Surveying.
- (k) Ability to provide impromptu briefings and reports to visitors and inspectors concerning the status of construction and ongoing activities.

- (1) The ability to participate in final inspections and commissioning.

DURATION OF ASSIGNMENT

4. The duration of the assignment will be 36 months.

DRAFT TERMS OF REFERENCE
CLERK OF WORKS

1. SCOPE OF SERVICES

1.1 The Clerk of Works (CoW) will develop a thorough familiarity with all aspects of the irrigation system and associated facilities being constructed on the site – in particular the detailed designs, drawings and contract documents. CoW will report directly to the Construction Site Supervisor.

1.2 Specifically the incumbent will:

- (a) Maintain continuous communication with the Contractor, Construction Site Supervisor and the Supervision Consultants.
- (b) On a daily basis, observe the quality and progress of construction to determine, in general, that it is proceeding in accordance with the contract documents and schedule.
- (c) Maintain daily records of all daily activities including daily progress, weather conditions, visitors, inspectors, sub-contractors on site, nature, quality and location of work performed as well as labour and heavy equipment on site.
- (d) Meet, verify identification, and accompany any inspectors from local agencies having jurisdiction over the project. Record the visits in writing and report the results of such visits/inspections to the Construction Site Supervisor. Monitor any corrective actions necessary as a result of inspections.
- (e) Monitor the proper storage of materials, including any off-site storage. Report problems to the Construction Site Supervisor and Contractor's Representative. Recommend whether any materials should be replaced due to improper storage. Document with written reports and photographs as necessary.
- (f) Advise the Construction Site Supervisor of any need to issue site instructions to the Contractor and issue same in the absence of the Construction Supervisor.
- (g) Notify the Construction Site Supervisor and Contractor's Representative of any unsafe conditions observed and corrective measures taken.
- (h) Immediately notify the Construction Site Supervisor and the Contractor's Representative of any work which is substandard or otherwise not in accordance with the contract documents. Document with photographs, measurements etc. as appropriate.
- (i) Immediately notify the Construction Site Supervisor and the Contractor's Representative of any conditions, which may delay completion of any contract being constructed under the project.
- (j) Carry out any other site supervision services as directed by the Construction Site Supervisor.

2. QUALIFICATIONS

2.1 The CoW will have the following qualifications:

- (a) A minimum of ten years' experience in the daily supervision of activities of a civil engineering construction project.
- (b) Broad general understanding of current construction practices, methods, and materials.
- (c) The ability to read and understand construction drawings, specifications, and contracts.
- (d) A general knowledge of and the ability to conduct sampling and site testing of materials.
- (e) Broad general understanding of current construction practices, methods, and materials.
- (f) Knowledge of the roles and interactions of the members of the construction team.
- (g) An understanding of construction site safety requirements and familiarity with environmental requirements on construction sites.
- (h) Excellent interpersonal communications skills and basic writing and computer skills.
- (i) Knowledge of Surveying.
- (j) Ability to provide impromptu briefings and reports to visitors and inspectors concerning the status of construction and ongoing activities.
- (k) Participate in final inspections and commissioning.

3. SUPERVISION OF THE CONSULTANT

3.1 The Site Supervisor will be responsible for routine supervision of the COW.

4. DURATION

4.1 The maximum duration of the assignment is 60 months.

5. BUDGET

(£)

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TERMS OF REFERENCE
SOCIAL AND GENDER SPECIALIST

1. BACKGROUND

1.1 The overall objectives of the services are to assist the Government of Jamaica (GOJ) to address specific vulnerabilities in gender inequality of men and women as well as barriers faced by youth and persons with disabilities (PWDs) in agriculture. These terms of reference (TORs) align with and complement those of the Social and Gender Specialist (SGS) developed under the United Kingdom Caribbean Infrastructure Fund Essex Valley Agriculture Development Project (UKCIF EVADP).

1.2 Inequality, poverty and vulnerability remain unacceptably high and threaten the sustainable development of Jamaica. The Jamaica 2017 Human Development Index (HDI) value of 0.732 when adjusted for inequality registered 17 per cent (%) loss of its value to 0.608. Poverty and other forms of socio-economic inequalities (income, gender, disabilities and geography) remain significant development challenges particularly for residents of rural communities, who are highly dependent on the agricultural sector for their livelihoods. Women, youth and PWDs are among those experiencing the most adverse impacts with limited ownership, control and/or access to land, agricultural inputs, finance, credit and technological capacities. For example, Chambers (2018) in Working paper entitled 'Impact evaluation of REDI 1 on Rural Women in Jamaica outlined that, most female farmers work smallholdings (3.95 acres compared to 7.98 acres for male) for cash crop or subsistence production and are principally engaged in food production for domestic consumption. According to Chambers (2018), accessing markets and moving up the value chain remains a major challenge for rural women in Jamaica.

1.3 Women also contend with labour market segregation in the agricultural sector. Agriculture is generally viewed as men's work, compounded by traditional caregiving roles that may mitigate against women's participation in the sector. Women face multiple disadvantages such as higher unemployment (women 11.4%, men 5.8% and both 8.4% in July 2018) and labour market segregation. The majority of women (129,400) work in the 'Wholesale and Retail, Repairs of Motor Vehicle and Equipment' industry, while the majority of males (144,700) are employed in the 'Agriculture, Hunting, and Forestry and Fishing'⁷. Within the agricultural sector women mainly participate as farming partners with spouses, temporary hired labourers, marketing agents, and subsistence farmers.

1.4 Women with disabilities like other PWDs are likely to fare worse due to stigma and discrimination. PWDs represented 6.4% of the population in 2001⁸, experienced multiple barriers to economic participation, compared with non-disabled peers in Jamaica (Gayle-Geddes 2015; UNDP 2016). Having a disabled household member increases the probability of being poor in Jamaica by 13.4%, 9.7% and 6.3% for households that are multidimensional; consumption; and poor on both fronts, respectively [Caribbean Development Bank (CDB) 2016]⁹. The economic challenges disproportionately borne by female-headed households rural dwellers, PWDs, youth, children, among other vulnerable groups, demand targeted programming to address the weaker economic prospects of the poor and vulnerable in agriculture.

⁷ STATIN, July 2018, Labour Force Statistics: Employed Labour Force by Industry Group; <http://statinja.gov.jm/LabourForce/NewLFS.aspx>

⁸ Sight, Hearing, Speech, Learning, Intellectual, Physical, Mental Illness, Multiple and Other were reported.

⁹ CDB (2016) *The Changing Nature of Poverty and Inequality in the Caribbean: New Issues, New Solutions*; Gayle-Geddes, Annicia (2015) *Disability and Inequality: Socioeconomic Imperatives and Public Policy in Jamaica* and UNDP (2016) *Caribbean Human Development Report: Multidimensional progress: human resilience beyond income*.

1.5 The National Policy for Gender Equality (March 2011) identifies the sexual division of labour in agriculture, and calls for the development and implementation of “strategies to alleviate poverty and other vulnerabilities among female farmers”. The National Youth Policy 2015-2030 further underscores that youth are disproportionately affected by unemployment (36%); more than twice the national rate. The debilitating impacts of prolonged youth dependence despite improving educational outcomes, gave rise to the policy goal of improved employment and entrepreneurial opportunities for youth, and the imperative of youth mainstreaming¹⁰. The National Policy for Persons with Disabilities (2000) identifies barriers to the participation of PWDs, and articulate the need for equalisation of economic opportunities for PWDs. The Disabilities Act (2014) has gone further to deem the discrimination on the grounds of disability as unlawful.

2. **OBJECTIVES**

2.1 The objectives of the assignment include:

- (a) Undertaking a Social and Gender Impact Assessment (SGIA) of the project areas including Essex Valley (St. Elizabeth), Parnassus (Clarendon) and Amity Hall (St. Catherine).
- (b) Ensuring the effective social and gender mainstreaming across all project components as defined by the UKCIF Essex Valley and St. Catherine and Clarendon project documents.
- (c) Developing a *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture*.
- (d) Collaborating with and supporting the *Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture and Organisational Strengthening* consultancy.

3. **METHODOLOGY**

3.1 The SGS will report to the Project Manager of the Project Execution Unit (PEU). The SGS will work closely with the Ministry of Culture, Gender, Entertainment and Sport (MCGES), Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF)¹¹, Ministry of Education, Youth and Information (MOE)¹², Agro-Investment Corporation Jamaica (AIC), National Irrigation Commission (NIC), Rural Agricultural Development Agency (RADA), Jamaica Agricultural Society (JAS), Bureau of Gender Affairs (BGA), Jamaica Council for Persons with Disabilities (JCPD) and farmers’ groups including, but not limited to, the Essex Valley Farmers’ Benevolent Society (EVFBS - as stipulated in the UKCIF Essex Valley Project) and the Jamaica Network of Rural Women Producers (JNRWP), in carrying out the assignment.

¹⁰ Youth mainstreaming is “a strategy for ensuring that the needs and interests of the youth are considered in the development of all national policies, programmes, plans and legislation” (The **National Youth Policy** 2015–2030, p.32). The National Youth Mainstreaming Strategy (2011) requires all Ministries, Departments and Agencies assess their policies, plans and programmes to ensure that issues affecting the youth are explicitly considered and integrated.

¹¹ Specifically the agriculture and fisheries portfolio.

¹² Specifically the youth portfolio.

3.2 The SGS will review secondary data including, *inter alia*, policy and legal documents, relevant strategic sector plans, reports, studies, gender analytical reports, poverty assessments, as well as data sources such as census reports, and surveys related to the project sites and surrounding communities.

3.3 The SGS will collect primary data through participatory consultations with state and non-state stakeholders to inform evidence-based design and gain buy-in for implementation of the outputs of the consultancy. Elite interviews, focus groups, site visits, transect walks, and other appropriate participatory methodologies must be employed. Focus groups may be convened separately for males, females, youth, and persons with different type and severity of disabilities.¹³ Examples of stakeholders include, but are not limited to:

- (a) public agencies including, *inter alia*, the MEGJC, MICAF, MOE, AIC, NIC, RADA, BGA, JCPD, Planning Institute of Jamaica, Department of Cooperatives and Friendly Societies, Jamaica Social Investment Fund and the Social Development Commission; and
- (b) non-governmental organisations including, *inter alia*, the EVFBS, JNRWP, JAS, disabled peoples' organisations such as the Combined Disabilities Association, women's groups such as the Network of Women for Food Security and their partner the Association of Mushroom Producers of Jamaica, and youth representatives/leaders such as those associated with Youth Information Centres and 4-H Clubs.

4. SCOPE OF SERVICES

4.1 The services included in this assignment are to be conducted in accordance with generally-accepted international standards and professional practices acceptable to CDB. The scope of work is understood to cover all activities necessary to accomplish the objectives of the consultancy, whether or not a specific activity is cited in these TOR. A participatory and consultative approach should guide all activities undertaken by the SGS, thereby contributing to their completion in as timely a manner as possible.

Part A: Social and Gender Impact Assessment

4.2 Undertake a socioeconomic baseline assessment of the project areas – Essex Valley (St. Elizabeth), Parnassus (Clarendon) and Amity Hall (St. Catherine), including surrounding areas that might draw interested farmers and/or farmers groups – to identify the economic barriers, bias, stereotypes and perceptions affecting the identification of agricultural activities as viable career pathways for poor and vulnerable groups including women, youth and PWDs. This activity could include the execution of a Knowledge, Attitudes and Practices survey both at project outset and completion to monitor behavioural change in this area, if deemed appropriate. Community level socio-economic and governance data should include *inter alia*:

- (a) population and population growth;
- (b) demographic;
- (c) socio-cultural, poverty and living standards;

¹³ Severity may range from mild, moderate, severe and profound. The types may include, *inter alia*, intellectual, visual, physical, learning, speech, deafness and mental illness.

- (d) household composition;
- (e) socio-cultural, poverty and living standards;
- (f) crime and violence including gender-based and child violence;
- (g) education, including technical and vocational training;
- (h) health;
- (i) number and capacity of civil society or community-based organisations, as well as level interaction with formal national institutions;
- (j) economic activities and labour force indicators¹⁴;
- (k) the economic position of women and men in the value chains and agricultural production systems;
- (l) barriers to participation in the formal agricultural sector and to benefitting from profits generated;
- (m) the incidence (frequency) theft of agricultural produce, the associated impacts on small farmers livelihoods and potential mitigation measures; and
- (n) the organisational structure in the agricultural sector to achieve economies of scale¹⁵.

4.3 The socially inclusive¹⁶ and gender-sensitive SGIA will investigate the socio-economic developmental opportunities, and potential significant social impacts (including risks) of the project upon the targeted beneficiaries and surrounding communities. The SGIA will identify measures to safeguard against risks identified, as well as support positive social impacts of the project. The SGIA shall disaggregate data and examine the differential influence of identified social impacts, and the intersection with vulnerabilities such as those associated with sex (male and female), disability¹⁷, age cohort (youth 15-24 years, working age 15-64 years and elderly over 64 years), and geography (parish, community, urban/rural). It will be conducted in a highly participatory manner, engaging the communities and households, particularly with representatives of women, men and vulnerable groups such as youth, and PWDs.

¹⁴ The economic activities for the agricultural sector must elucidate occupation, fulltime, part-time and/or seasonal work, agricultural incomes and other sources of income, and level of unpaid activities of men and women, youth, and PWDs in Project areas. Analysis of role differences in food and cash crop production, managerial and financial control over production, and the methodologies undertaken for both storage and marketing of agricultural products, exhibited by male, female, youth and disabled farmers should be done.

¹⁵ (k) – (m) shall be investigated with a view to enhancing the capacity of vulnerable groups' to achieve better labour market outcomes and incomes in the agricultural sector.

¹⁶ Social inclusion is the process of improving the terms on which individuals and groups take part in society - improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity (<http://www.worldbank.org/en/topic/socialdevelopment/brief/social-inclusion>). This process includes those who are traditionally excluded due to inequalities associated with, *inter alia*, gender, poverty, disability, age cohort, geographic location (urban/rural/peri-urban), ethnicity, race and indigenous peoples' identity. The exclusion experienced may be evident in stereotypes, stigmas, and superstitions based on group identity and intersection of multiple identities.

¹⁷ Severity may range from mild, moderate, severe to profound. The types may include, *inter alia*, intellectual, visual, physical, learning, speech, deafness, mental illness, multiple and other.

4.4 The SGIA will both validate and be informed by research undertaken via the Environmental and Social Impact Assessments (ESIAs) for each of the two relevant UKCIF Agriculture Projects and the Situation Analysis undertaken by the Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture and Organisational Strengthening consultancy. This exercise should lead to the development of a social and gender results monitoring matrix for continuous assessment of the achievement of social gender equality results through the two UKCIF projects.

Part B: Social and Gender Mainstreaming

4.5 Ensuring the effective mainstreaming of social and gender issues across project activities in a way that is both tangible and measurable will require that the SGS work closely with the PEU and other consultants to validate the findings of the ESIA's undertaken for the UKCIF Essex Valley Agriculture Project and the UKCIF St. Catherine and Clarendon Agriculture Feasibility and Design Study respectively. This includes validation and implementation of the Environment and Social Management Plans, including both coordinating and monitoring the execution, management and/or establishment of the associated Stakeholder Engagement Plans, Community Participation Mechanisms, Grievance Response Mechanisms, and Social and Gender Action Plans for each project.

4.6 Ensuring and monitoring the mainstreaming of gender, disability and youth across all elements of the two projects will require a clear identification of project stakeholders and the issues that will impact them. The SGS will maintain constructive stakeholder relationships including ensuring ongoing organisational support to the EVFBS and JNRWP amongst other farmer groups and associations in the project areas.

4.7 The SGS will play the role of community liaison representative for the PEU and provide all project stakeholders, communities and the general population with regular information regarding progress on implementation of the two projects.

Part C: National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture

4.8 Develop a *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways in Agriculture for Poor and Vulnerable Groups in Agriculture* through consultations with all public and private actors in this space including, but not limited to: (a) Government Ministries, Agencies and Institutions; (b) private training facilities and institutions; (c) non-government organisations and farmer's networks, including the EVFBS and JNRWP; (d) farmers and farm workers; and (e) actors operating along the value chain from farm to table within the domestic, regional and international trading spaces.

4.9 Develop a costed implementation plan for the advocacy and awareness raising campaign through consultations with the relevant Government Ministries, Agencies and Institutions and PEU, including a timeline and identification of lead-agent. An envelope of resources has been identified for the implementation of this campaign. The SGS will also provide support to the relevant actors and lead-agent in their role-out of the *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways in Agriculture for Poor and Vulnerable Groups in Agriculture*.

Part D: The Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture and Organisational Strengthening consultancy

4.10 The SGS will determine, through consultation with the PEU and consultant team, the most effective approach to collaborate with and support the *Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture and Organisational Strengthening* consultancy. This support would include, *inter alia*:

- 4.10.1 reviewing the work plan of the *Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture Organisation Strengthening* consultancy to ensure the participation of key stakeholders for consultation, training and other relevant deliverables;
- 4.10.2 developing and implementing strategies and systems to mobilise the participation of all relevant stakeholders and ensure equal access to project benefits and components by men, women, youth and PWD farmers and farmer groups, in keeping with the *Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture Organisation Strengthening* consultancy; and
- 4.10.3 identifying opportunities for common messaging and alignment between the activities under Part C above and those described in the TORs for the *Gender-Responsive Economic Inclusion of Poor and Vulnerable Groups in Agriculture Organisation Strengthening* consultancy.

5 REPORTING REQUIREMENTS/DELIVERABLES/BUDGET

5.1 The SGS would provide to the PEU Manager, one hard copy and one electronic copy of the following Products for approval:

- (a) Inception Report^{18/} submitted within two (2) months and finalised within three (3) months of signing the contract, and would include at minimum the following:
 - Work plan detailing approach to be taken to manage all components stipulated in these TORs.
 - Proposed methodology for undertaking the SGIA.
 - Proposed Social and Gender Results Monitoring Matrix in alignment with the overarching project Results Monitoring Frameworks to track the achievement of social gender results via project activities.
 - Proposed methodology for developing the *National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture*.
- (b) Monthly Progress Reports.
- (c) Draft SGIA, within four (4) months of finalising the Inception Report.
- (d) Final SGIA, within six (6) months of finalising the Inception Report.

^{18/} Each Institution would be expected to gather all relevant internal documentation for submission to the Firm upon signing of the contract to facilitate a timely execution of the contract activities.

- (e) Draft National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture, submitted to CDB within eight (8) months of finalising the Inception Report.
- (f) Final National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture, within twelve (12) months of finalising the Inception Report.
- (g) Biennial Reports on the implementation of the National Gender-Responsive Advocacy and Awareness Raising Campaign on Inclusive Career Pathways for Poor and Vulnerable Groups in Agriculture,
- (h) Annual Narrative and Financial Reports detailing specific challenges, barriers and/or opportunities for advancing socially-inclusive and gender-responsive project outcomes.
- (i) Final Report detailing specific challenges, barriers and/or opportunities for achieving intended project objectives, by month thirty-four (34) of the consultancy.

5.2 The assignment is to be completed over a period of 36 months.

5.3 The budget for the SGS is as follows:

BUDGET

(£)

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

6. QUALIFICATIONS AND EXPERIENCE

6.1 The SGS will be a member of the PEU and will report to the Project Managers for both the Essex Valley and St Catherine and Clarendon Agriculture Development projects.

6.2 The SGS would be recruited on a full-time basis throughout the project duration.

6.3 The SGS must possess at minimum the following qualifications and/or experience:

- (a) Post graduate degree in social sciences, gender or women's studies, international development, or related field.
- (b) A minimum of five years' experience in stakeholder assessments and participatory assessment and communication techniques.
- (c) A minimum of five years' experience in gender, disability, youth development, rural development, community based poverty reduction programmes, entrepreneurship.

- (d) A minimum of five years' experience developing awareness raising and advocacy campaigns.
- (e) A minimum of five years' experience working in agricultural and/or rural development projects including agriculture extension services, women in agriculture, irrigation, livelihoods programming, value chain systems and marketing, or other related field would be an asset.
- (f) Strong interpersonal and diplomacy skills with a demonstrated ability to engage with community groups.
- (g) Excellent written and verbal communication skills in English.
- (h) Experience in Jamaica is an asset.

DRAFT TERMS OF REFERENCE
CONSTRUCTION SUPERVISION SERVICES

1. OBJECTIVE OF THE ASSIGNMENT

1.1 The overall objective is to provide international standard of Engineering Supervision of the construction of irrigation and drainage infrastructure and associated civil works for the St Catherine and Clarendon irrigation sites as per the detailed designs, bidding documents, construction plans, implementation schedules, etc. prepared by the consultant and approved by the NIC.

1.2 The specific objective of this aspect of the consulting services is to assist the NIC to implement the construction aspects of the Project as follows:

- (a) to ensure high standards of quality assurance in the execution of works and to actively facilitate completion of the works within the stipulated time limit;
- (b) to provide comprehensive supervision of project implementation activities carried out by the contractor and ensure complete compliance with the drawings, technical specifications and various stipulations contained in the contract documents; and
- (c) to undertake comprehensive and independent measurement of activities and calculation of quantities and administer detailed record-keeping for the estimation of interim payments and calculation of final ad-measured quantity for final payment.

1.3 The Supervision Consultant will commence work at the time of the award of the Works Construction Contract and will mobilise the supervision-consultancy team to align with the Contractors contractual timelines. The Consultants involvement during the Defects Liability Period will involve limited team members and with limited time input to be proposed by the Consultant in their bidding document.

2. SCOPE OF CONSTRUCTION SUPERVISION

2.1 The consultant scope of services of the consultant shall include, but not limited to, the following tasks:

- (a) **Task 1a: Supervise Main Works;** including verification and approval of the Contractor's Health and Safety provisions, general supervision of Construction, review and monitoring of contractor's program (Construction, Equipment Supply, Installation and commissioning and related activities), conduct quality Control of Civil and Mechanical Works, conduct independent measurement and estimation and thereby review the Contractor's Claims (Payments and Variation), environmental monitoring activities, review of contractor's submission for completion of the works and handover of the works and related actions as appropriate.
- (b) **Task 1b: Supervise Equipment Supply, Testing and Commissioning of Equipment;** review the contractor's submission and supervise installation, ensure Quality Assurance and manage the commissioning and performance testing of plant.

- (c) **Task 1c: Supervision of the Implementation of the Environmental Management Plan (EMP);** assist the PMU to Establish procedures for monitoring EMP implementation, prepare a detailed program for implementing the EMP during Construction, review and update of the EMP, review independent environmental consultant reports, coordinate with Client Local Authorities and contractors as need be, conduct capacity building and training of counterpart staff.

2.3 Specifically, the scope of the consulting services for each of the major areas includes but is not limited to the following activities:

Quality Control

- (a) Review of all mix designs proposed by the contractors and approve/suggest modifications in the mix design, laying methods, sampling and testing procedure, and quality control measures, to ensure required standard and consistency in quality at the commencement of items. The approval of mix designs with or without modifications shall be issued as early as possible, but in any case not later than the time limit prescribed in the relevant specifications. In cases, where no time limit is prescribed in the specifications, not later than 14 days from the date of submission of Job Mix Formula (JMF) by the Contractor.
- (b) Evolve a system of Quality Assurance of works, including, but not limited to, establishing testing frequencies and acceptance criteria for all construction activities based on best international practices.
- (c) Inspect the performance of the work with regard to workmanship, compliance with the specifications and all necessary testing required for acceptance of any item of work.
- (d) Inspect and approve all materials sources nominated by the Contractor.
- (e) Assess and check the laboratory and field tests carried out by the contractors, and carry out independent and comprehensive tests in the consultant's own or an independent material testing laboratory.
- (f) Issue orders to the contractor to remove or make good any work which is found to be:
- not in accordance with the drawings;
 - not in accordance with the specifications in terms of either work method or materials specification; and
 - covering work which has not been inspected for acceptance or rejected as unacceptable.
- (g) Maintain independent records of all testing work, including cross referencing to items of work to which each test refers and location from which any samples were obtained for testing.
- (h) The consultant will process interim and final payments to the contractor in accordance with

contract of the civil contractor. Interim monthly payments shall be based on interim payment certificates processed by the consultants following claims filed by the contractor.

Supervision

2.2 The consultant will be responsible for the supervision of all construction works.

Prior approval from Employer

2.3 The consultant will make all necessary measurements and control the quality of works. The consultant will make all engineering decisions required for the successful and timely implementation of the construction contract. He will have all the powers that are defined as those of 'Engineer' with the exception of the following, for which he will seek prior approval of the "Employer":

- (a) issuing the order to commence the works;
- (b) issuing/approving variations in quantities exceeding ten per cent (%) variation for individual item or aggregate variation exceeding 5% of the contract value;
- (c) issuing/approving/sanction of additional items, sums or costs and variation of rates and prices;
- (d) approving subletting of any part of the works;
- (e) approving any extension of contractual time limits; and
- (f) stopping and/or termination of the Contractor for Works.

Main Activities

2.4 In addition to or as an expansion of the activities and responsibilities required of the Engineer as detailed in Construction Contracts, the supervision consultant will, inter alia, undertake, but not limited to the following activities:

- (a) Give the order to commence the works:
 - administer the Construction Contracts, approve materials, issue variation orders to the contractors and ensure that the quality of the works is in accordance with the contractual specifications;
 - approve/suggest modifications in the contractor's work program, method statements, material sources, etc;
 - monitor progress of the Works, identify causes, or potential causes, of any delay and advise the Employer of suitable corrective actions in a timely manner;
 - review and approve Contractor's proposed personnel for positions nominated in the Contract;
 - provide assistance to the Employer in respect of contract implementation, by evaluating and making recommendations on claims and other matters;
 - advise and assist the Employer with respect to the arbitration, the appeal of arbitration or litigation relating to the works, whenever required;
- provide other specialist services relevant to the Project as may be agreed to, during negotiations or ordered by the Employer; on the basis of personnel

- rates in line with similar qualifications and experience; and
 - monitoring and reporting on the implementation of the Resettlement Plan (if any) in accordance with the CDB's Policy on Involuntary Resettlement.
- (b) Monitoring of status of the contractor's compliance with HIV/AIDS provisions (if any) in the Civil Works Contracts.
 - not used.
 - ensure that the construction methods as proposed by the contractor for carrying out the works are satisfactory, with particular reference to the technical requirements of sound environmental standards as defined by the GOJ and CDB,
 - inspection* of contractor's construction equipment, safety of the works, property, personnel, and general public.
- (c) Initiate advance actions for handing over of site and/or issue of drawings, and/ or advise Employer.
- (d) Scrutinise the Construction Methods proposed by the Contractor for carrying out the Works to ensure that these are satisfactory with particular reference to the technical requirements, project implementation schedule and environmental aspects as well as safety of works, personnel and the general public.
- (e) Submit for approval by the GOJ, the Quality Assurance System to be implemented by the Consultant for their own operations.
- (f) Obtain, review and make recommendations on the Quality Assurance system of the Contractor and forward to the Client for approval.
- (g) Review of Construction plan for service roads and drainages based on review of Tender drawings and the survey carried out by the Contractor.
- (h) Issue of all detailed drawings including canals, drainages and protection works etc.
- (i) Scrutinise and approve the Contractor's working drawings and drawings for temporary works, as required under the contract.
- (j) Review and ensure conformity of Contractor's securities in approved formats.
- (k) Associate himself with all tests being carried out by staff of the Contractor and undertake additional closely supervised and independent tests as necessary to ensure the quality of works.

- (l) Review the test results/certificates of all construction materials and/ or sources of materials and undertake additional tests as necessary to assess the quality of works.
- (m) Review and check the safety management plan prepared by the Contractor, and undertake daily safety patrol. If construction is not carried out within the framework of safety management plan, then bring it to the attention of the Contractor and the PMU.
- (n) Prepare updated and additional drawings as required during the contract period and supply to the contractor in time.
- (o) Measurement of quantities and certification, recording of measurements, and verification of invoices of the contractor.
- (p) Examine the requests for advances and monthly statements of Contractors.
- (q) Prepare monthly reports fully describing the progress of work and the services rendered by the consultant during the month under review, indication also the problem areas and action required to overcome them.
- (r) Prepare Financial Statements.
- (s) Maintain a day-to-day diary recording of all events relevant to the works.
- (t) Finalising as-built drawings and maintaining all test data and results.
- (u) Certify "s constructed" drawings for each component of the works finished by the Contractor.
- (v) Obtain requisite insurances and ensure confirmation of their validity.
- (w) Ensure validity of various securities furnished by contractor.
- (x) Monitor closely and regularly the mobilisation and progress of work and advise the Contractor about corrective measures.
- (y) Carry out detailed checking and verification of the setting-out data for the work including lines, levels and layout to ensure conformity with the working drawings.
- (z) Carry out supervision of all works as per approved method statement of various items of work and ensure proper supervision as per requirement.
- (aa) Examine Contractor's preparation and the completed portion of work as per 'requests for inspection' and promptly advise the Contractor.
- (bb) Ensure taking requisite samples during execution and promptly advise the contractor about the results.
- (cc) Carry out regular inspection of the contractor's equipment, plant, machinery, installations,

housing and medical facilities etc. and ensure they are adequate and are in accordance with the terms and conditions of the Contract.

- (dd) Direct the Contractor to carry out all such works or to do all such things as may be necessary to avoid or to reduce the risk in case of any emergency affecting the safety of life or of the works or of the adjoining property and advise the Employer thereof as soon thereafter as is reasonably practicable.
- (ee) Supervise the Contractor in all matters concerning safety and care of the work including environmental aspects and labor welfare.
- (ff) Evolve and implement a system for the quality assurance of the works. The system of control of quality of materials and completed works shall also include sampling methods and criteria and acceptance criteria.
- (gg) Maintain a permanent record of all measurements for the work quantities to be paid for and the results of all tests carried out for monitoring the quality of works.
- (hh) Inspect the Works on completion before taking over and indicate to the Site Contract Coordinator (Tech.) any outstanding work to be carried out by the Contractor during the Defect Liability Period.
- (ii) Inspect the works at appropriate intervals during the Defect Liability Period and certify the Defect Liability certificate.
- (jj) Prepare and implement a work safety audit system.
- (kk) Maintenance of co-ordination with every package of implementation of project.
- (ll) Ensure execution of work as per implementation schedule.

Deliverables

2.5 Prepare and issue the following reports in hard and soft copies, the format and content for each report is to be acceptable to the Employer:

- (a) An Inception/commencement report along with a construction supervision manual in five copies, to be submitted within 30 days of commencement of services. The commencement report shall contain the details of all meetings held with the Client and the Contractor and decisions taken therein, the resources mobilised by the Consultants as well as the Contractor and the Consultants' perception in the management and supervision of the project. The Report shall also include the Master Work Programme and Resource Mobilisation for the Project. The primary objective of the Supervision Manual will be to evolve guidelines for administration, supervision and management of the project. Such a manual is not intended to be a contractual document nor is it to take precedence over the specifications. The Manual will merely act as a guide and reference to the various staff in the management and supervision of the project in discharging their duties in a smooth and systematic manner.

- (b) A brief monthly progress report in five copies which should be submitted within seven days of the end of each month.
- (c) A detailed quarterly report in five copies, to be submitted within 14 days of the end of each quarter. Quarterly reports should include description of project activities, illustrated by progress/completion photographs, status of any delays and contractual claims, and details of all latest financial projections. The Progress Report (monthly and quarterly) shall contain details of all meetings, decisions taken therein, mobilisation of resources (Consultants' and the Contractors') physical and financial progress and the projected progress for the forthcoming periods. The report shall clearly bring out the delays/non-conformance(s) if any, reasons for such delays, if any, and the recommendation for corrective measures. The report shall also contain the performance data for Contractor's plant and equipment.
- (d) A detailed Contract Completion/Final Report in six (6) copies are to be submitted to the Employer. The consultant (will prepare a comprehensive final completion report of the construction contract package after completion of the work. The report shall incorporate summary of the method of construction, the construction supervision performed, as built construction drawing, problems encountered and solutions undertaken.
- (e) The consultant shall submit the self-appraisal report within the prescribed time summarising the following details:
- Details of Personnel including substitution made during the
 - Assignment.
 - Details of variation orders issued.
 - Details of extension of time granted to the Contractor.
 - Details of Quality Assurance System.
 - Quality observed at site by the consultant.
 - Details of claims.
 - Special preventive measures for maintenance suggested by the consultant.
 - A Quality Assurance Manual in seven (7) copies, detailing all QA/QC procedures, to be submitted within 30 days of commencement of services.
- A maintenance Manual, detailing routine and periodic maintenance tasks that will be required to maintain the completed Project. Draft copies of this manual should be submitted for comments to the Employer within 12 months of commencing services; and
 - Interpretation of the Technical Specifications, and other Contract Documents.

Design/Technical

2.6 The Consultant's work will include if required, amending the alignment plans, profile drawings, culverts, drains, roads and other elements of the works, based on updated topographic survey of the project site, including data gathered by the Contractor as work proceeds. The Construction Drawing are to provide full construction details which will include, but not be limited to, the following:

- (a) Detailed water conveyance.
- (b) Detailed water conveyance geometry.
- (c) Detailed drainage, including extension and connections to existing culverts and drains; and associated earthworks protection. In urban/semi-urban/Built-up areas detailing is required for entire storm water runoff collection system.
- (d) Details of all farm road, stripping and all other connecting paths control and safety measures.

2.7 Construction-ready drawings shall be issued by the Consultant as early as possible, but in any case, no later than 14 days from the date of submission of relevant data by the contractor.

- (a) Make necessary modifications to the design and drawings wherever required due to levels or conditions that are found on site as a result of the change in the founding strata or any other reason at the time of execution.
- (b) Ensure that Construction-ready Drawings as issued to the Contractor are complete, consistent and coherent across the entire project.

Measurement and Payment

2.8 The Consultant will independently take-off all quantities from drawings for items defined in the Bill of Quantities and arrive at independently substantiated measurements, keeping neat and accessible measurement records for each interim certificate and the final certificate, including the maintenance of any measurement books issued to him. The Consultant will undertake a comparison of independently calculated quantities and the Contractor's estimated quantities as presented in his interim certificates for payments, and any differences will be resolved in the physical presence of and signed off by the Resident Engineer. The Consultant shall:

- (a) Issue interim certificates for payments;
- (b) Certify completion of part or all of the works;
- (c) Review and ensure continuity of Contractors' sureties in approved formats;
- (d) Prepare quarterly cash flow projections. Cash flows should identify budget estimates for all outstanding work;
- (e) Update cost estimates each year or at quarterly completion (25%, 50%, 75%, and 100%) of the Project, whichever takes place early;
- (f) Maintain records of all plant, labour and materials used in the construction of the Works;
- (g) Check Contractor materials ordering schedule;

- (h) Analyse any contractual claim submitted by the Contractor and prepare a report addressing the actual basis, in terms of both technical and financial issues, for the claim and recommendations for a response to the Contractor;
- (i) Prepare financial statements and withdrawal applications;
- (j) The consultant will process interim and final payments to the Contractor. Interim monthly payments shall be based on interim payment certificates processed by the Consultant following claims filed by the Contractor; and
- (k) The Consultant will be accountable for the quality and the measured quantities of the work.

Staffing for Construction Supervision Services

2.9 The total implementation period will consist of:

- (a) the preparation of construction supervision of two months before commencement of civil work;
- (b) the construction period as specified; and
- (c) Defect Liability Period as per the arrangement proposed.

2.10 The site supervision team would be mobilised on the date of actual commencement of works by the contractor as decided by the Employer. During the defect liability period, the consultant along with other staff will be required to continue on a part time basis, as and when required for which the matter shall be dealt separately at the appropriate stage towards the completion of the project.

Key staff required:

2.11 Consultants are required to furnish the Bio-data of the following key personnel:

- (a) Key staff include:
 - Team Leader, Snr. Civil Engineer (Engineer's Representative)
 - Snr. Resident Engineer (site design/supervision)
 - Resident Engineer (Irrigation & Drainage Specialist)
 - Snr. Contract Specialist
 - Sr. Soils & Materials Engineer
 - Social Development/Resettlement specialist
- (b) Non-key staff include:
 - Land surveyor (measurement)
 - Quantity survey technician (measurement)
 - CAD Draftsman (drawings/doc control)
 - Environmental specialist
 - Administration assistants
 - Drivers

Preferred Qualification Requirements for Key Personnel - Supervision

2.12 The qualification requirements are "preferred" qualifications, and meeting which would be rated "average" in the technical evaluation. However, qualifications specifically mentioned with language such as "minimum" or "at least" are minimum qualification requirements, failing which may be considered as "non-complying" for those specific requirements.

Team Leader- (60 weeks)

2.13 Person should be highly experienced Engineer, with a minimum of Master's Degree in Civil or Irrigation Engineering or equivalent, having overall experience of at least 25 years. He should have worked as Resident Engineer/Project Manager/Team Leader or as 'Engineer' or 'Engineer's Representative' for at least twelve years on supervision of rehabilitation/construction; lead role in at least one project > USD10 Million as a single package and should have experience in contract administration of large size water or irrigation projects, in his home country or in other developing countries. He must be familiar with FIDIC Conditions of Contract and must be able to communicate in English language.

Senior Resident Engineer (Supervisor and QC Specialist (I&D) - (128 weeks)

2.14 Should be an experienced Engineer with a minimum of bachelor's degree and preferably with a master's degree in engineering, having at least 20 years overall experience and at least 10 years of experience in pump station, well-field development and pipeline engineering operations. Must demonstrate capability in construction quality control, contracts management, and in planning and monitoring irrigation works using project management software such as PRIMAVERA, or MSProject, or other Critical Path Method (CPM)/Program Evaluation and Review Technique (PERT) software.

Assistant Resident Engineer (Irrigation & Drainage) - (120 weeks)

2.15 Person should be a mid-level engineer with a minimum of bachelor's degree or its equivalent in civil or agricultural engineering or its related discipline. Should have professional experience of 10 years in the irrigation and drainage sector or in works of similar nature, and has worked for at least 5 years on design and supervision of irrigation project projects costing over \$10 million (single project). Supervision experience must include pipeline, well-field and pump station construction.

Assistant Resident Engineer (Survey and Measurement) - (120 weeks)

2.16 Person should be a mid-level engineer with a minimum of bachelor's degree or its equivalent. Should have professional experience of a least 10 years in water-related civil works, and has worked for at least 5 years on cost estimation, survey and measurement of site works. Must have experience in the preparation of quantity/cost records/planning of works using project management software such as PRIMAVERA or other Critical Path Method (CPM)/Program Evaluation and Review Technique (PERT) software, in the administration and scheduling of Construction activities using FIDIC Conditions of Contract.

Soil and Material Engineer - (30 weeks)

2.17 Person should be a senior level engineer with a minimum of bachelor's degree or its equivalent in Material/soil engineering. He should have professional experience of at least 12 years, out of which 8 years' experience of working on at least two water supply or irrigation projects (costing over \$10 million each). He should have experience in the Design/Supervision of earthen dams, dam linings, flood bankments, and foundation design. He should have experience in managing FIDIC based contracts and should have experience in planning and monitoring Irrigation and Drainage works using project management software of administration and scheduling of construction activities in the context of FICIC Conditions of Contract and technical specifications and methods of measurement.

Social Development/ Resettlement Expert- (30 weeks)

2.18 Person should be a Graduate in Social Sciences having an overall experience of 10 years out of which 5 years should be on Irrigation and Drainage infrastructure projects. Must have experience in Rehabilitation and Resettlement works related in major Irrigation projects preferably funded by International Funding Agencies, costing more than \$10 Million (Single project). He/She should be fully familiar with preparation and implementation of resettlement plan as per procedures laid down by World Bank and be conversant with requirements of International Funding Agencies regarding environmental safeguards and preparation and execution of EMP as per the requirement.

Note:

1. The input of the Team Leader includes two months period of advance mobilisation prior to mobilisation by the contractor and two months' period during the defect liability.
2. Visits and review by Engineer or any other staff of headquarters will be deemed to have been covered within the overheads.

TERMS AND CONDITIONS FOR THE OPERATION
OF THE DESIGNATED ACCOUNT

1. After CDB has received evidence satisfactory to it that the DA has been duly opened by GOJ at a commercial financial institution acceptable to CDB, GOJ shall make a request to CDB for an amount not exceeding three months Eligible Expenditures (defined in paragraph 3 below) to be withdrawn from the Grant Account and deposited in the DA. On the basis of such request or requests, CDB shall, on behalf of GOJ, withdraw from the Grant Account and deposit in the DA such amount or amounts as GOJ shall have requested.
2. GOJ shall furnish to CDB, at regular intervals, requests for subsequent withdrawals from the Grant Account to be deposited into the DA to replenish that account. Prior to, or at the time of each such request, GOJ shall furnish to CDB the documents and other evidence required by CDB for the payment or payments in respect of which replenishment is requested. On the basis of each such request, CDB shall, on behalf of GOJ, withdraw from the Grant Account and deposit into the DA such amount as GOJ shall have requested and as shall have been shown by said documents and other evidence to have been paid out of the DA for Eligible Expenditures.
3. Payments out of the DA shall be made exclusively for expenditures in respect of the reasonable cost of goods, works and services required for the components of the Project allocated for financing by CDB as shown in the Financing Plan for the Project up to the respective limits specified therein (“Eligible Expenditures”).
4. For each payment made by GOJ out of the DA, GOJ shall, at such time as CDB shall reasonably request, furnish to CDB such documents and other evidence showing that such payment was made to meet expenditures in connection with the project as they were actually incurred.
5. Notwithstanding the provisions of paragraph two hereof, CDB shall not be required to make further deposits into the DA:
 - (a) if, at any time, CDB shall have determined that all further withdrawals should be made by GOJ directly from the Grant Account in accordance with the provisions of the Grant Agreement;
 - (b) if GOJ shall have failed to furnish to CDB, within the period of time to be specified in the Grant Agreement any of the audit or other reports required to be furnished to CDB pursuant to the said Grant Agreement in respect of the monitoring and audit of the records and accounts for the DA; or
 - (c) if, at any time, CDB shall have notified GOJ of its intention to suspend in whole or in part the right of GOJ to make withdrawals from the Grant Account pursuant to the provisions of the Grant Agreement; and
 - (d) if the total unwithdrawn amount of the Grant allocated to the Eligible Expenditures, less the amount of any outstanding special commitment entered into by CDB pursuant to the Grant Agreement with respect to the Project, is 10% of the Grant amount.

6. Within the period of six months prior to the terminal disbursement date of the Grant, withdrawals from the Grant Account of the remaining unwithdrawn amount of the Grant allocated to the Eligible Expenditures shall follow such procedures as CDB shall specify by notice to GOJ. Such further withdrawals shall be made only after and to the extent that CDB shall have been satisfied that all such amounts remaining on deposit in the DA as of the date of such notice will be utilised in making payments for Eligible Expenditures.

- (a) If CDB shall have determined at any time that any payment out of the DA:
 - (i) was made for an expenditure or in an amount not eligible pursuant to paragraph 3 hereof; or
 - (ii) was not justified by the evidence furnished to CDB,
GOJ shall, promptly upon notice from CDB:
 - (aa) provide such additional evidence as CDB may request; or
 - (bb) deposit into the DA (or, if CDB shall so request, refund to CDB) an amount equal to the amount of such payment or the portion thereof not so eligible or justified.

Unless CDB shall otherwise agree, no further deposit by CDB into the DA shall be made until GOJ has provided such evidence or made such deposit or refund as the case may be.

- (b) If CDB shall have determined at any time that any amount outstanding in the DA will not be required to cover further payments for Eligible Expenditures, GOJ shall, promptly upon notice from CDB, refund to CDB such outstanding amount.
- (c) If the DA is inactive for a period of six months, CDB shall notify GOJ that it will request a refund of the outstanding balance unless, within 90 days GOJ submits evidence satisfactory to CDB of Eligible Expenditure financed through the DA.
- (d) GOJ may, upon notice to CDB, refund to CDB all or any portion of the funds on deposit in the DA.
- (e) Refunds to CDB made pursuant to sub-paragraphs 6 (b), (c) or (d) hereof shall be credited to the Grant Account for subsequent withdrawal or for cancellation in accordance with the relevant provisions of the Grant Agreement.

7. Once CDB has received satisfactory documentation from GOJ for all amounts advanced to the DA, GOJ shall furnish a bank statement to CDB showing that the account balance has been reduced to zero and the DA shall be closed.

Figures and Charts

& CLARENDON AGRICULTURAL DEVELOPMENT PROJECT



AMITY HALL/BRIDGE PEN SOILS

LEGEND

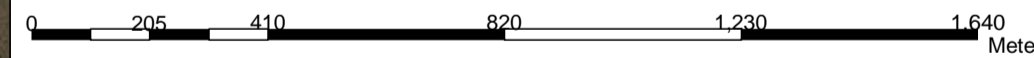
- AMITY HALL, BRIDGE PEN PROJECT BOUNDARY
- OTHER AMITYHALL EXISTING ROADS
- BRIDGE PEN EXISTING DRAINS
- BRIDGE PEN EXISTING ROADS

AMITY HALL BRIDGE PEN SOIL NAME & TEXTURE

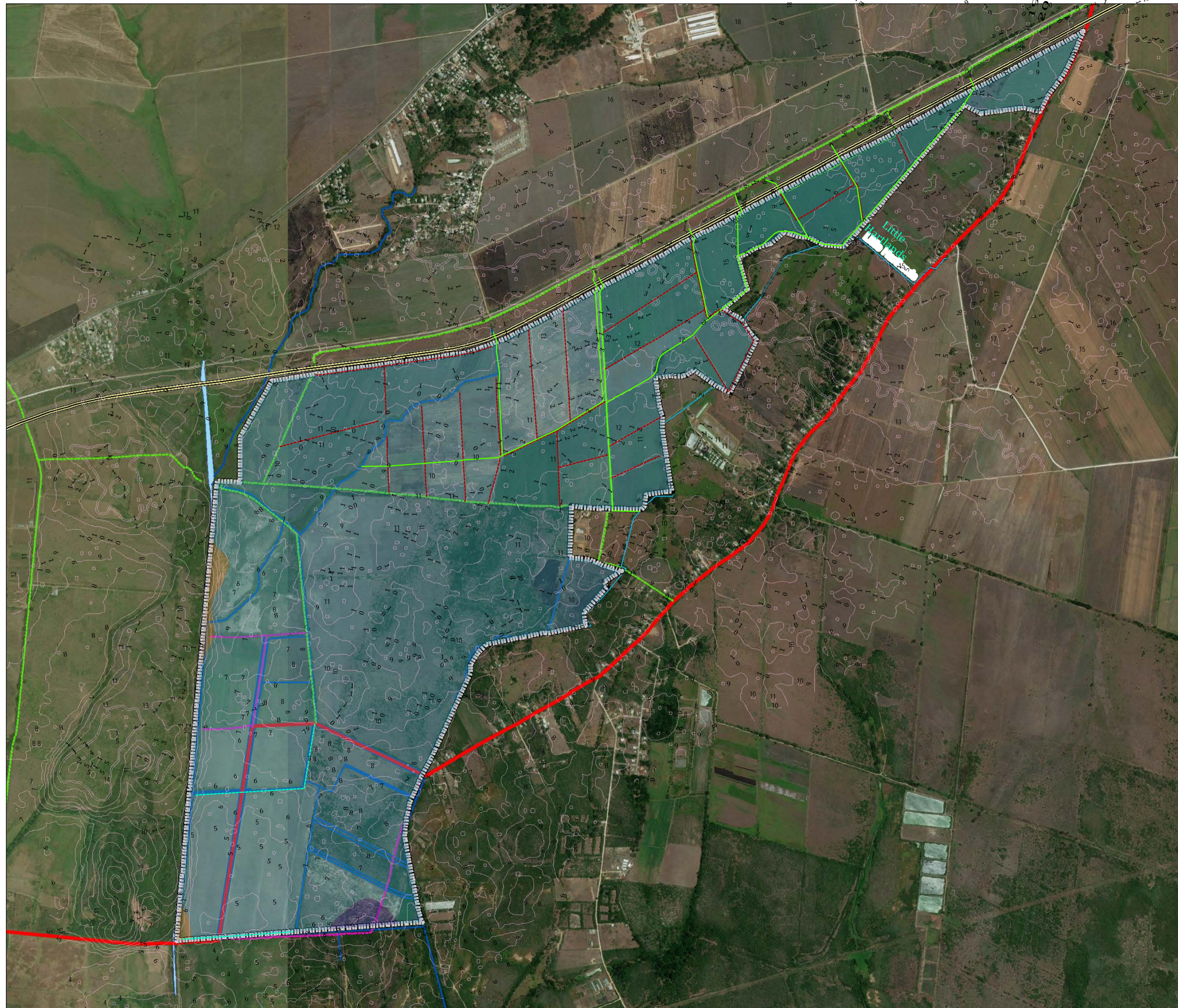
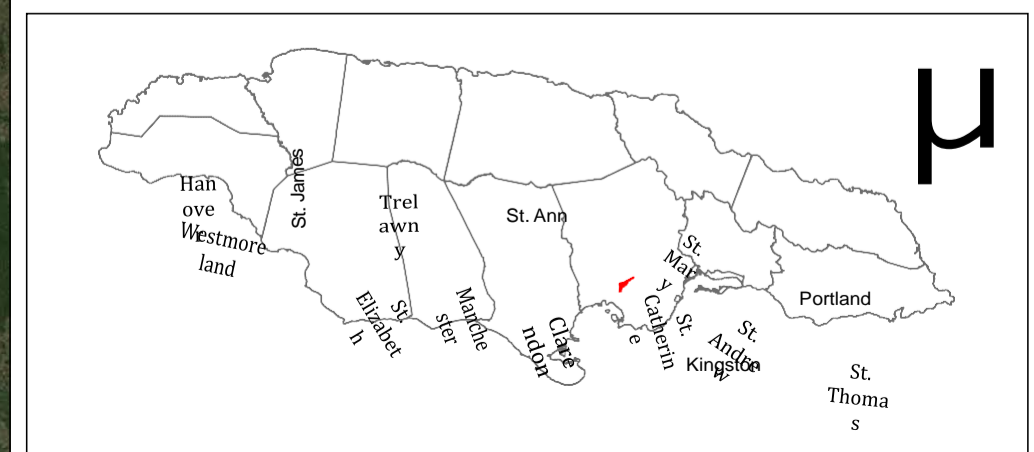
- Salt Island, Clay
 - Springfield, Clay
 - Sydenham, Clay
 - CANAL
- ### Road Class
- HIGHWAY
 - PAROCHIAL
 - FARM ROAD
 - TRACK
 - drainage
 - River

SOIL NAME	TEXTURE	PH	HECTARES	PERCENTAGE
Sydenham	Clay	Neutral to slightly alk	454.870687	98.689734
Springfield	Clay	Medium acid	3.360633	0.72913
Salt Island	Clay	Neutral	2.678511	0.581136

1:8,000



LOCATION MAP



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

4
6 6
6 6
5 6
3 3

5
4
3
6 5

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

SOUTH ST. CATHERINE & CLARENDON AGRICULTURAL DEVELOPMENT PROJECT



PARNASSUS PROJECT SOILS

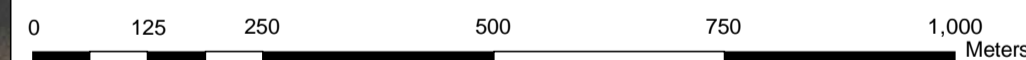
Legend

- WELL SITES
- PROJECT BOUNDARY
- drainage
- Railway
- Reservoir
- River
- ROAD CLASS**
- CLASS C
- Farm Roads



AREA OF PROJECT AREA
308 Hectares or 761.09 Hectares

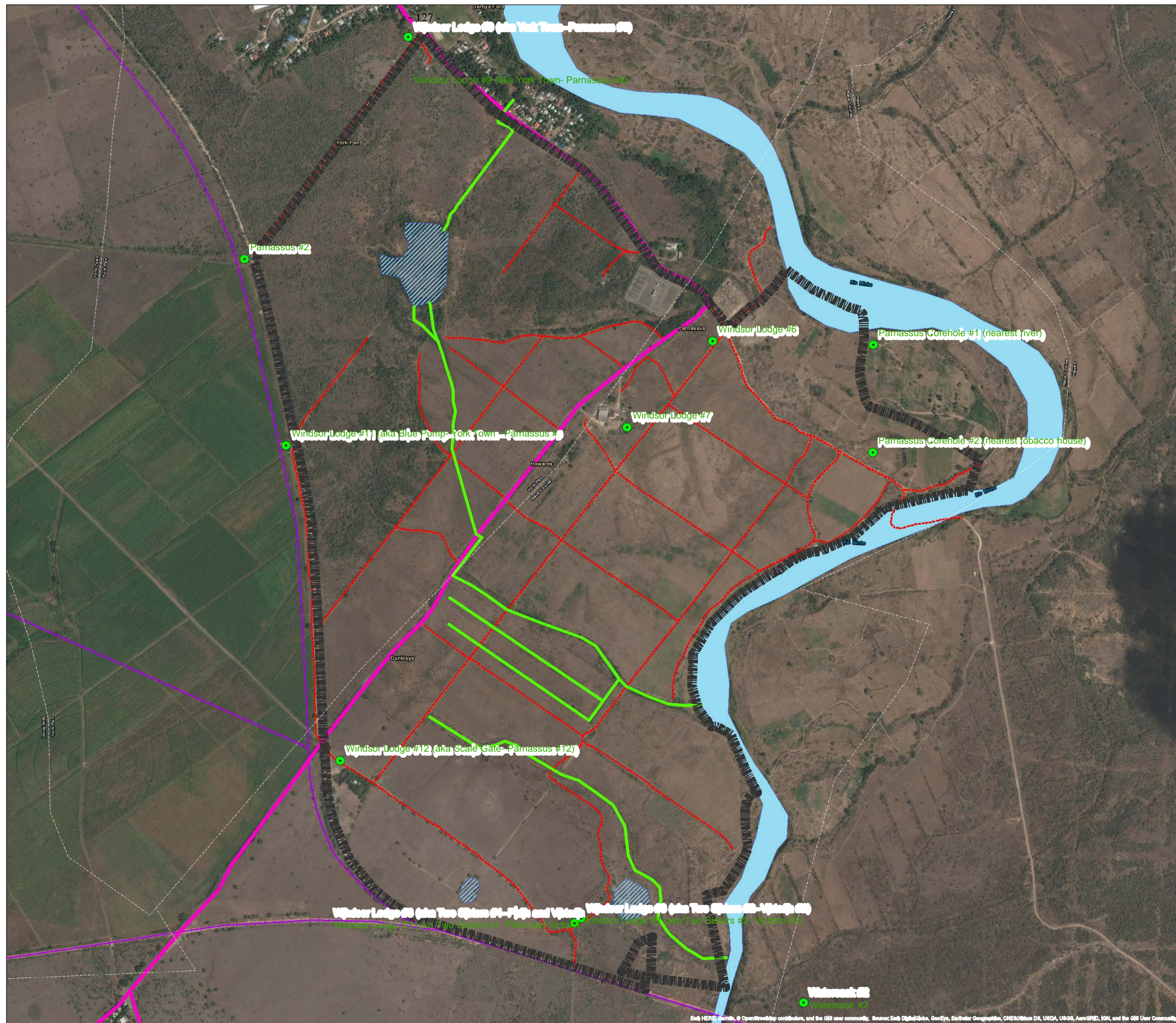
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LOCATION MAP



100



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