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**AFRICAN DEVELOPMENT
BANK GROUP**

PROJECT: AGRICULTURE SECTOR REHABILITATION

COUNTRY: LIBERIA

DRAFT APPRAISAL REPORT: VOLUME I Main Report

Date: March 2009

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Currency Equivalents

As of March 2009

Currency Unit	=	Liberian Dollar (LRD)
UA	=	LRD 94.6447
UA	=	USD 1.46736

Fiscal Year

01 July – 30 June

Weights and Measures

1 metric tonne	=	2204 pounds (lbs)
1 kilogramme (kg)	=	2.200 lbs
1 metre (m)	=	3.28 feet (ft)
1 millimetre (mm)	=	0.03937 inch (“)
1 kilometre (km)	=	0.62 mile
1 hectare (ha)	=	2.471 acres

Acronyms and Abbreviations

ACC	Agriculture Coordination Committee	LISGIS	Liberia Institute of Statistics and Geo-Information Services
ADF	African Development Fund	LRDC	Liberia Reconstruction and Development Committee
ADRA	Adventist Development and Relief Agency	MOA	Ministry of Agriculture
AFCR	African Food Crisis Response	MOF	Ministry of Finance
AfDB	African Development Bank	MOPEA	Ministry for Planning and Economic Affairs
AWPB	Annual Work Plan and Budget	MOU	Memorandum of Understanding
CAAS-Lib	Comprehensive Assessment of the Agricultural Sector	MSME	Micro, Small and Medium Enterprise
CARI	Central Agricultural Research Institute	MTR	Mid-Term Review
CBO	Community-Based Organization	M&E	Monitoring and Evaluation
CDP	Community Development Plan	NAPA	National Adaptation Program of Action
CDF	Community Development Fund	NGO	Non-Governmental Organization
CRS	Catholic Relief Service	NGP	National Gender Policy
DRC	Danish Refugee Council	NPV	Net Present Value
ECOWAS	Economic Community of West African States	NSC	National Steering Committee
ESMP	Environmental and Social Management Plan	O&M	Operation and Maintenance
EU	European Union	PCR	Project Completion Report
FAO	Food and Agriculture Organization of the United Nations	PCU	Project Coordination Unit
FAPS	Food and Agricultural Policy and Strategy	PFMU	Projects Financial Management Unit (Ministry of Finance)
FFS	Farmer Field School	PPCC	Public Procurement & Concessions Commission
FSF	Fragile State Facility	PFMRSP	Public Financial Management Reform Support Program
FS&N-TC	Food Security & Nutrition Technical Committee	EGIRP	Economic, Governance and Institutional Reform Project
GAA	German Agro Action	PRS	Poverty Reduction Strategy
GDP	Gross Domestic Product	RRF	Rights and Rice Foundation
GoL	Government of Liberia	Sida	Swedish International Development Cooperation Agency
GTZ	German Technical Cooperation	SIU	Special Implementation Unit (Ministry of Public Works)
IDP	Internally Displaced Person	TA	Technical Assistance
IFAD	International Fund for Agricultural Development	UNDP	United Nations Development Programme
IFRS	International Financial Reporting Standards	USAID	United States Agency for International Development
ILO	International Labor Organization	WB	World Bank
IMF	International Monetary Fund	WFP	World Food Programme
IPPM	Integrated Plant and Pest Management		
JAS	Joint Assistance Strategy		

Grant Information

Client's information

RECIPIENT:	Republic of Liberia
EXECUTING AGENCY:	Ministry of Agriculture

Financing plan

Source	Amount (UA million)	Instrument
ADF	12.0	Grant
FSF	0.5	Grant
IFAD	3.4	Grant
GoL	1.7	
Beneficiaries	0.7	
TOTAL COST	18.3	

ADB's key financing information

Grant currency	USD
Interest type*	n.a.
Interest rate spread*	n.a.
Commitment fee*	n.a.
Other fees*	n.a.
Tenor	72 months
Grace period	n.a.
EIRR (base case)	(20%)

Timeframe - Main Milestones (expected)

Concept Note approval	January, 2009
Bank Project approval	April, 2009
IFAD Project Approval	December, 2009
Effectiveness (Bank)	October, 2009
Effectiveness (IFAD)	January, 2010
Last Disbursement	April, 2016
Completion	April, 2015
Last repayment	n.a.

Project Summary

Project Overview: The proposed Agriculture Sector Rehabilitation Project covers 30 districts located in the four Western and four South-Eastern counties of Liberia. The project is expected to restore the capacity of Liberia's agricultural sector and therewith enhance the sector's contribution to GDP, increase food security, and farmer's incomes. The project will be implemented in six years under three components: Agriculture Infrastructure Rehabilitation; Agricultural Production and Productivity Improvement; and Project Management. The project total cost is estimated at UA18.3 million with Bank share of UA12.5 million (68%) including UA0.5 million from FSF, co-financer's (IFAD) share of UA3.4 million (19%) and Government contribution of UA1.7 million (9%) in kind. In line with past successful co-financing experiences with IFAD, and taking into account the strategic focus of both institutions, the Bank will essentially finance infrastructure rehabilitation and development works while IFAD financing will cover production activities and capacity building for relevant sector institutions.

The project will directly benefit an estimated 9,610 households in the 8 counties. The household income is expected to increase by 300% on successful completion of the project. Beneficiaries will also participate in infrastructure rehabilitation and maintenance.

Needs Assessment: Since the end of the war, efforts of the Government, international and bi-lateral donors and the NGOs have concentrated on emergency measures aimed at resettlement of Internally Displaced Persons (IDPs) and re-integration of ex-combatants into communities. After a focus on the provision of humanitarian emergency assistance, attention is now turning increasingly towards addressing medium to long-term development needs. Key among these is the formulation and implementation of effective projects for poverty reduction. During the civil war Liberia's production infrastructure was widely destroyed, hindering economic development and aggravating poverty. Given its high GDP and employment share of 46% and 70% respectively, agriculture has been recognized as one of the main drivers of economic growth and peace building. Therefore revitalizing the agricultural sector will significantly contribute to sustainable economic development and growth, food security, employment and income, and poverty reduction.

Bank's and IFAD's Added Value: The Bank has significant experience in the agricultural sector throughout Africa in general, but has yet to consolidate its experience in this sector in post-conflict fragile states. The current project will give the Bank this opportunity. With its Fragile State Facility, the Bank is now in a position to respond more efficiently to the needs of fragile countries via first response interventions and fast-track options. Secondly, the value chain approach to project design has enabled the identification of critical intervention areas, in the rice and cassava value chains, that are hitherto of little interest to the predominantly emergency activities, as well as targeting the most needy thereby reducing the tension that harbours the potential for conflict regeneration. At the technical level, the project will offer lessons for improving water control and enhancing reliability of irrigation water delivery, given that recent rehabilitation efforts have not paid any attention to water resources potential. Addressing vulnerabilities by strengthening early warning, preparedness, mitigation and recovery measures is central to reconstructing and strengthening community resilience in a post-crisis situation. **IFAD** will provide value added in these areas through the experience it has gained over the years in building the capacity of communities in coping with crisis, developing their resilience in facing conflict and disaster, enhancing their self reliance and, where applicable, reintegrating them into the national fabric. In addition, the project will benefit from IFAD gained experience in cassava (Nigeria, Benin, Cameroon, Ghana) and rice value chain development (Cote d'Ivoire, Benin)."

Knowledge Management: The project's Monitoring and Evaluation system will be integrated into the country's PRS M&E system which is web-based. This will allow the Bank, implementing agencies and beneficiaries, to access information and identify the constraints faced during project implementation, as well as the ways and means to overcome those constraints on a continuous basis. At Bank and IFAD's level, knowledge will be generated through regular supervisions, Mid-Term Review and Project Completion Reports. Bank's knowledge in co-financing arrangements and interventions in post-conflict fragile states will be improved.

Result-based Logical Framework

Hierarchy of Objectives	Expected Results	Reach (Target Population)	Performance Indicators & Source	Indicative Targets, Timeframe	Assumptions /Risks
1 Goal: Contribute to food security and poverty.	<ul style="list-style-type: none"> ▪ Agricultural sector contribution to GDP increased. ▪ Poverty reduced. 	Liberian Population (3.3 million).	<ul style="list-style-type: none"> ▪ Agricultural GDP ▪ Reduction in poverty rate. <p><i>Source:</i> National statistical report from LISGIS and MOF</p>	<ul style="list-style-type: none"> ▪ Agricultural GDP growth of 3.5% per year by 2014. ▪ Poverty rate decreased from 64% in 2007 to 40% by 2014 	Assumption Government continues to emphasize agriculture as a priority beyond 2011.
2 Project Objective : Increase income for smallholders and rural entrepreneurs on a sustainable basis.	<p>2.1 Household income improved</p> <p>2.2 Employment improved</p>	9,610 HH in the project area (8 counties)	<p>2.1.1 Volume of domestic rice and cassava production</p> <p>2.1.2 Household incomes</p> <p>2.1.3 No of jobs created</p> <p><i>Source:</i> Project Impact Survey; National statistical report from LISGIS and MOF</p>	<p>2.1.1 10% annual increase in domestic rice production (10870t/110000t); 1.2% increase in cassava production (5750t/390000t) by 2018</p> <p>2.1.2 Increase in annual HH incomes of rice and cassava farmers from USD 350 to 900 by 2013 & to 1730 by 2015 in project area.</p> <p>2.1.3 453,800 Person days by 2012 (3% permanent jobs of which 1% for women), and 498,800 Person days by 2015 (9% permanent jobs, of which 3% for women)</p>	<p>- Stable political and macro-economic environment consolidated; slow reforms</p> <p>- Phasing out of emergency and initiation of the development phase by start of project implementation.</p> <p>Mitigation: <u>Monitor and dialogue on Land, Decentralisation and MOA Restructuring reforms prior to effectiveness and during implementation.</u></p>
3 Agricultural Production and Marketing Infrastructure Rehabilitation <u>3.1 Land Development and Small-Scale Irrigation</u>	<i>Expected Outcomes</i> 3.1 Irrigation water management improved.	3,200 farm HH in the project area (4 South-Eastern counties)	<i>Expected Outputs</i> 3.1.1 Area under improved water management 3.1.2 Investment studies for agricultural water management infrastructure	3.1.1 820 ha of irrigated low-land rice rehabilitated by 2014 and 1620 ha by 2015, of which at least 40% is for women headed households 3.1.2 Detailed technical study for development of 7,000 ha of swamp rice: Engineering&EIA report by 2012 & Tender documents by 2013	Risk: Salinization Mitigation: Water quality monitoring, control and flushing; salinity tolerant varieties
<u>3.2 Rehabilitation/construction of feeder roads and community infrastructure</u>	<i>Expected Outcomes</i> 3.2 Improved access to input and output markets and reduction of post-harvest losses		<i>Expected Outputs</i> 3.2.1 # of improved marketing & post-harvest facilities 3.2.2 Km of feeder roads	3.2.1.1 16 warehouses; 8 drying floors; 32 mechanised wells & sanitation facilities constructed by 2014 3.2.1.2 Post harvest losses reduced from average of 2700t to 1600t for rice, 720t to 430t for maize; 1400t to 850t for cassava from 2012 to 2015 3.2.2 100 km of well maintained feeder roads rehabilitated by 2012	Risk: - Road damage due to extreme weather conditions & Failure of Government to ensure maintenance. Mitigation: Enhanced road specifications; train & equip community-based contractors; Provision of maintenance fund in GoL budget as condition for continued disbursement.
4 Agricultural Production and Productivity Improvement	<i>Expected Outcomes</i>	5,900 farm HH in the project area (8	<i>Expected Outputs</i> 4.1.1. Area of rice, maize and	4.1.1. 0ha in 2009, 1680 ha in 2012 and 2800 ha of rice in 2015+ 340 ha in 2012	

Hierarchy of Objectives	Expected Results	Reach (Target Population)	Performance Indicators & Source	Indicative Targets, Timeframe	Assumptions /Risks
4.1 <u>Agricultural Productivity Enhancement</u>	4.1.1 Enhanced use of improved production technologies.	counties)	cassava under Integrated Plant & Pest Management-IPPM (selected seeds, fertilizers, weeds & pest management	and 1530 ha of maize in 2015 + 270 ha in 2012 and 1150 ha of cassava in 2015 are under IPPM	<p>Risk: (i) Delays in procurement and delivery of agricultural inputs and implements;</p> <p>Mitigation: Directing Contracting of established input dealers recommended by FAO and MOA.</p>
	4.1.2 Domestic production of rice, maize and cassava improved, and reduction of rice imports		4.1.2 Yields improved for irrigated rice, upland rice, maize and cassava	4.1.2 Increase in yields from 1t/ha in 2009 to 2t/ ha in 2012 and 4t/ha in 2015 for irrigated rice. Increase in yields from 0.7t/ha in 2009 to 1.5t/ha in 2012 and 2t/ha in 2015 for upland rice. Increase in yields from 1t/ha in 2009 to 2t/ha in 2012 and 3t/ha in 2015 for maize. Increase in yield from 5t/ha in 2009 to 7t/ha in 2012 and 7t/ha in 2015 for cassava	
4.2 <u>Agricultural Sector Institutions Capacity Building</u>	4.2.1 Research, Extension and MOA improved.	Extension services, Ministry of Agriculture; CARI; 30 districts in project area	4.2.1.2 # of trained MOA staff of whom 40% are women	4.2.1.2 40 & 80 Agric. Extension staff by 2012 & 2015 respectively; 5 (4 MSc & 1 PhD) CARI scientists and 15 Agriculture, Veterinary & Water management SMS trained by 2012	<p>Risk: Failure to attract qualified and trainable staff to the MOA.</p> <p>Mitigation: Performance-based allowance.</p> <p>Risk:</p> <p>- Willingness of input suppliers to provide credit.</p> <p>Mitigation:</p> <p>- Establishment of guarantee fund to provide security.</p>
			4.2.1.3 # of farmer field school sessions organized	4.2.1.3 At least 10 sessions of FFS organized every year on various subject matters	
			4.2.1.4 Reform of MOA & tools and equipment provided/developed	4.2.1.4 restructuring of MOA implemented; 35 motorbikes; 12 cars; Office and IT equipment; 20ha of seed field rehabilitated and seed testing lab rehabilitated & equipped at CARI; 1500.sq. metres office buildings rehabilitated; seed sector policy & regulatory framework approved; and 11 qualified MOA staff recruited by 2012;	
	4.2.2 Improved delivery of savings and credit services.		4.2.2.1 of smallholder farmers accessing inputs on credit of which 50% are women	4.2.2.1 0 Households in 2009, 2700 in 2012 and 5700 in 2015 access inputs on credit of which 50% are women	
	4.2.3 Community capacity improved.		4.2.3.1 # of literacy/life skills classes held	4.2.3.1 100 workshops held with a total of 6,000 & 12,000 participants by 2012 & 2015 respectively.	
			4.2.3.2 # of functional community-based agents facilitating access to credit	4.2.3.2 At least 30 well trained and equipped community agents by 2012 of which at least 45% are women	
4.2.4 Awareness regarding gender issues, HIV/AIDS, malaria and		4.2.4 # of governmental campaigns on HIV, malaria and malnutrition supported.	4.2.4 12 & 24 HIV awareness campaigns malaria and malnutrition		

Hierarchy of Objectives	Expected Results	Reach (Target Population)	Performance Indicators & Source	Indicative Targets, Timeframe	Assumptions /Risks
	nutrition improved.			supported by 2012 & 2015 respectively.	
5 Environmental and social impact	<p>Expected Outcomes</p> <p>5.1 Reduced potential for slash and burn</p> <p>5.2 Minimized ground water and soil pollution due to use of pesticides and fertilizers</p> <p>5.3 Increased nutritional value of daily diet</p>	3,200 farm HH in project area (4 South-Eastern counties)	<p>Expected Outputs</p> <p>5.1.1.1 Rate of reduction in slash and burn in upland rice cultivation</p> <p>5.2.1.1 Rate of increase in use of liquid fertilizers vs granulated fertilizers</p> <p>5.2.1.2 # of flushing wells in irrigated fields</p> <p>5.3.1.1 Increased income</p>	<p>5.1.1.1 0% in 2009; 30% in 2012 and 80% in 2014 of reduction in upland rice cultivation using slash and burn</p> <p>5.2.1.1 0% in 2009, 44% in 2012 and 67% in 2015</p> <p>5.2.1.2 3 operational flushing wells per scheme</p> <p>5.3.1.1 Income increases from 350 USD in 2009, to 700 USD in 2012 and 900 USD in 2015</p>	<p>Assumption: liquid fertilizers less detrimental to environment than granulated fertilizers</p> <p>Assumption: quality of diet increase with income</p>
6. Climate Proofing	<p>Expected Outcome</p> <p>6.1 Adaptability to climate change improved</p>	3,200 farm HH in project area (4 South-Eastern counties)	<p>Expected Outputs</p> <p>6.1.1 %Cropped area under drought resistant varieties</p> <p>6.1.2 Hydrological and climate monitoring equipment installed within rehabilitated irrigation scheme catchment</p>	<p>6.1.1 100% in 2012 and 100% in 2015 of cropped area under drought resistant varieties.</p> <p>6.1.2 16No. stream gauges, 160 rain-gauges and 16 weather stations.</p>	
<p>7. Inputs</p> <p>ADF</p> <p>Agric. Infrastructure Improvement = UA 6.9 Million (USD 10.1 Million)</p> <p>Agric Prod. & Productivity Improvement = UA 2.7 Million (USD 4.0 Million)</p> <p>Project Management = UA 1.1 Million (USD 1.6 Million)</p> <p>Contingencies = UA 1.2 Million (USD 1.8 Million)</p> <p>TOTAL ADF = UA 12.0 Million (USD 17.6 Million)</p> <p>TOTAL FSF = UA 0.5 Million (USD 0.7 Million)</p> <p>GRAND TOTAL = UA 12.5 Million (USD 18.3 Million)</p>			<p>IFAD</p> <p>Agric. Infrastructure Improvement = UA 1.1 Million (USD 1.6 Million)</p> <p>Agric Prod. & Productivity Improvement = UA 1.4 Million (USD 2.1 Million)</p> <p>Project Management = UA 0.6 Million (USD 0.9 Million)</p> <p>Contingencies = UA 0.3 Million (USD 0.4 Million)</p> <p>TOTAL = UA 3.4 Million (USD 5.0 Million)</p>		

**REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE ADB GROUP
TO THE BOARD OF DIRECTORS ON A PROPOSED GRANT TO LIBERIA FOR THE
AGRICULTURE SECTOR REHABILITATION PROJECT**

Management submits the following Report and Recommendation on a proposed ADF grant for UA 12 million and FSF grant of UA 0.5 million to finance the Agriculture Sector Rehabilitation Project in Liberia.

I – STRATEGIC THRUST & RATIONALE

1.1 Project linkages with country strategy and objectives

1.1.1 The project is aligned to the second pillar of the ADB/World Bank Joint Assistance Strategy (JAS) for Liberia which encompasses improved access to key infrastructure services, improved agricultural and natural resource management in a way that generates pro-poor growth; and improved business and investment climate. It is consistent with Liberia's Poverty Reduction Strategy (PRS) for the period 2008-2011. The PRS is based on four pillars: I Consolidating Peace and Security; II Revitalizing the Economy; III Strengthening Governance and the Rule of Law; and IV Rehabilitating Infrastructure and Delivering Basic Services. By contributing to the rehabilitation of the rice and cassava value chain, the project will directly address several of the Pillar II key challenges such as “restoring value chains and increasing community and MSME participation in supply and value chains” and “increasing food crop yields by adopting new technologies”. Further, the project's agriculture infrastructure component directly addresses pillar IV of the PRS, which includes “rehabilitation of 400 miles of feeder roads” and the application of “labor-intensive construction methods and techniques”, among the strategic objectives.

1.1.2 The goal of the Food and Agriculture Policy and Strategy (FAPS) adopted in December 2008 by the GOL is to attain a “revitalized and modernized agricultural sector that is contributing to shared, inclusive and sustainable economic growth and development”. To attain this long term goal, the following shorter term objectives must be achieved: (i) Food security; (ii) Enhanced, inclusive and pro-poor growth in agricultural production, productivity, competitiveness, value addition and diversification, and linkages to markets, and (iii) Enhancing effective and efficient human and institutional capacities of stakeholders (public sector, private sector, civil society organizations, especially grassroots community based organizations) to undertake planning and delivery of services.

1.1.3 The proposed project will contribute to the achievement of three objectives of FAPS above, as it will not only increase the productivity, and thus the production of rice, maize and cassava in 8 provinces of the country, especially in the south eastern region where poverty is rampant, but it will also add value to these crops through processing and the establishment of efficient marketing channels that will enable farmers to get their products out of their farms and sell them for better prices. Moreover, the project will improve the human and institutional capacities of the beneficiaries and stakeholders (extension services, research and farmers' associations) through training and the provision of logistical means. By subcontracting certain activities to NGOs and inputs suppliers, the project will also set the stage for the development of a fruitful partnership between the private and the public sectors.

1.2 Rationale for Bank's involvement

Liberia is in a recovery phase after being ravaged by a fourteen-year civil war. This devastating civil war has turned Liberia into a fragile state characterized by widespread

degradation of the country's socio-economic conditions. The World Bank, IFAD and FAO produced in 2007 a Comprehensive Assessment of the Agricultural Sector (CAAS-Lib) which provides comprehensive assessment of agricultural constraints and opportunities after the war, and was a major input to the PRS, as well as providing a sound basis for interventions in the sector. The CAAS-Lib indicates that about 86% of rural households live in poverty, and 80% of them are moderately or highly food insecure. The Agricultural Sector Rehabilitation Project (ASRP) will contribute to the revamping of agricultural infrastructure in 8 of the 15 counties in the country, contribute to food security and provide institutional capacity building support. The rationale for ADF's involvement in this project is embedded in its global strategy towards poverty reduction through, notably, increased investment in the infrastructure sector; but more specifically it stems from its Fragile State Facility whose 3rd pillar focuses on human and institutional capacity building, and its Africa Food Crisis Response (AFCR), which aims to ensure food security through enhanced availability of modern inputs and dissemination of NERICA rice. The project will contribute to promoting partnership among donor institutions, as it will be co-financed by the Bank and IFAD. The project has been acknowledged as necessary and complementary by other partners including World Bank, IMF, UNDP, EU, FAO and USAID. By supporting the current project the Bank will not only improve food security but also reduce poverty in Liberia.

1.3 Donors coordination

Table 1.1: Overview of Donor Assistance to Agriculture Sector

Sector or subsector*	Size		
	GDP	Exports	Labor Force
Agriculture	42%	31%	70%
Players - Public Annual Expenditure (average)**			
Donors			
USD million	17.2	<i>The World Bank</i>	48.8%
		<i>USAID</i>	51.2%
Response to Food Crisis			
USD million	61	<i>The World Bank/WFP</i>	72%
		<i>Others</i>	28%
Level of Donor Coordination			
Existence of Thematic Working Groups			Y
Existence of SWAPs or Integrated Sector Approaches			N
ADB's Involvement in donors coordination***			M****

* as most appropriate ** Years [yy1 to yy2] *** for this sector or sub-sector

**** L: leader, M: member but not leader, none: no involvement

1.3.1 Development assistance is coordinated through the Liberia Reconstruction and Development Committee (LRDC), established in 2006. LRDC is a transitional mechanism, established to serve as a platform for dialogue between the government and development partners, and is organized around the four PRS pillars. The LRDC members include the

President as chair, several Cabinet Ministers, and the Heads of Missions of key development partner institutions, including the Bank. The LRDC recently completed the Paris Declaration Survey on Aid Coordination and Harmonization to assist in establishing benchmark and monitoring system. The Government is in the process of relegating the role of the LRDC to the Ministry of Finance following the recent appointment of an Aid Management Advisor who will spear head the setting-up of the aid coordination function in the Ministry.

1.3.2 At the sector level, the Ministry of Agriculture (MOA) established the Agriculture Coordination Committee (ACC), which comprises all partners, including NGOs who are active in the sector. The committee's purpose is beginning to fade with the phasing out of emergency activities. A Food Security and Nutrition Technical Committee (FS&N-TC) comprising several ministers and two donor representatives active in food security and nutrition was recently established under the auspices of the Joint GoL-UNDP Food Security and Nutrition Program (2008-2011). The Minister of Agriculture is the chairperson to both committees, and the FS&N-TC has been selected as the steering committee for this project.

II – PROJECT DESCRIPTION

2.1 Project Objective

The overall goal of the project is to contribute to food security and poverty reduction. Its specific objective is to increase the income of smallholder farmers and rural entrepreneurs including women on a sustainable basis.

2.2 Project components

The proposed Project comprises three components described in Table 2.1.

Table 2.1: project components

Nr.	Component name	Est. cost (UA million)	Component description
1	Agriculture Infrastructure Rehabilitation	ADF: 7.8 IFAD: 1.3	The activities will include: (i) Rehabilitation of water management infrastructure covering an estimated 1,620 ha for swamp rice cultivation in Grand Kru, Grand Gedeh, River Gee and Maryland counties; (ii) Detailed technical studies in preparation for future investments in irrigated rice farming (7,000 ha); (ii) Rehabilitation of 100 km of feeder roads; and (iii) Development of community infrastructure, such as storage and agro-processing facilities, including 2400 square metres of multifunctional post-harvest/marketing facilities, 40 mechanised wells & sanitation facilities.
2	Agricultural Production and Productivity Improvement	ADF: 3.4 IFAD: 1.5	This component will focus on: (i) Agricultural Productivity Enhancement including the increase in crop productivity through an Integrated Plant and Pest Management Approach (IPPM), provision of farm inputs, facilitating women's access to land, employment of youth for the heavy task of land clearance; (ii) Capacity Building of Agricultural Institutions, which will cover the re-equipping and re-tooling of the Ministry of Agriculture at national and local level (including provision of at most 35 motorcycles, 12 cars, 100 bicycles and rehabilitation of 2100 Square Metres office buildings) as well as the rehabilitation and equipping of a seed laboratory for the national research institution, in addition to facilitating farmer's organisational capacity through regular training; secondly, project will provide for short and long-term TA including bolstering the proposed Ministry of Agriculture PCU which is being set-up with initial funding from USAID and World Bank. Agriculture sector staff will be trained within the country and the region, including 80 Extension Agents, including 20 Water Management Technicians; five Agricultural Research scientists; 15 Subject Matter Specialists, including three Agricultural Economists, three Agronomists, two Livestock/Veterinary Specialists, two Entomologists, two Soil & Water Management Specialists and three Agricultural/Irrigation Engineers; (iii) establishing and training community-based agents who will facilitate transactions between farmers and agricultural inputs suppliers and/or produce buyers; and (iv) community capacity building activities to ensure sustainability of project interventions.
3	Project Management	ADF: 1.3 IFAD: 0.6	This component will cover project implementation support to the MOA. Grant resources will be used for payment of operational expenses, including TA salaries, performance-based and field allowances to competitively recruited national staff who will be directly involved in project implementation. The national staff will receive in-service training, including skills transfer from international experts.

2.3 *Technical solution retained and other alternatives explored*

Rehabilitation of existing infrastructure has been preferred to wild flooding and using of floating rice varieties due to narrow valleys and low yields, and subsequent negative effect on the IRR. The choice of ILO to directly supervise and manage the feeder roads

rehabilitation has been preferred to the contracting of fully mechanised capital intensive contractors. Globally the project will adopt the Value Chain approach to deal with the target crops (rice, cassava and maize), because it is an integrated approach that addresses all the aspects of a crop cycle from production to consumption through processing and marketing. The Integrated Plant and Pest Management extension approach with farmers' schools as a training tool, recommended in the project, is preferred to the previous extension system that was merely a supply driven approach meant to attract farmers to adopt available technologies with no feedback mechanism.

Table 2.2: Technical alternatives considered and reasons for rejection

Alternative name	Brief description	Reasons for rejection
Wild flooding /recession agriculture	Wild flooding /recession agriculture could also be used as a method of irrigation. Floating rice varieties would then be used.	<ul style="list-style-type: none"> ▪ Relatively higher labour input, very narrow valleys combined with low yields of floating rice varieties result in unacceptable IRR.
Mechanised construction.	Rehabilitation of feeder roads and water control infrastructure could be fully mechanised instead of labour-intensive.	<ul style="list-style-type: none"> ▪ Poor access and difficulty of mobilising heavy earth equipment. ▪ Very limited, if any, employment opportunity for the local communities. ▪ No opportunity for skill transfer to the local community which is critical for sustainability.
Mass Extension Approach	Mass extension approach could be used for extension services.	<ul style="list-style-type: none"> ▪ Supply driven approach aimed at only transferring new technologies. ▪ No farmers' feed back mechanism
Specific crop activity approach	Approach centred on development of a limited number of activities relating to crop production	<ul style="list-style-type: none"> ▪ Focused on one aspect of the value chain, neglecting other important activities such as input supply, processing, marketing, etc.

2.4 Project type

2.4.1 Investment project

2.5 Project cost and financing arrangements

2.5.1 The total cost of the project, including physical and price contingencies, is estimated at UA 18.3 million. The foreign exchange portion is estimated at UA 10.2 million representing 56% of the total project cost. The local cost portion excluding taxes is UA 8.1 million which is equivalent to 44% of the total cost. A summary of costs by component is provided in Table 2.3 below. All project costs were estimated on the basis of the prevailing prices in Liberia in January 2009.

2.5.2 The Project will be financed by the Bank Group, the International Fund for Agricultural Development (IFAD), the Government of Liberia and the project beneficiaries. The total IFAD financing will be UA 3.4 million, representing 18.7% of the total project cost. Bank Group financing comprises a total ADF grant of UA 12 million and UA 0.5 million from the Bank's Fragile State Facility (FSF). The ADF and IFAD resources will finance 87% of the foreign exchange costs and local costs amounting to UA 15.9 million. The Bank will essentially finance infrastructure rehabilitation works; the FSF funds will be exclusively used for financing technical assistance, while IFAD financing will cover essentially capacity building for relevant agricultural sector institutions. Given the economic situation in the country, the Recipient's contribution is only in kind and is estimated at UA 1.7 million, equivalent to 9.2% of the total project cost, and includes office accommodation and salaries for MOA staff involved in project implementation already in place, in addition to community

participation and post project commitment for maintenance of infrastructure. The project financing plan, expenditure categories and expenditure schedule are shown in Tables 2.4, 2.5 and 2.6.

Table 2.3: Project cost estimates by component [amounts in million UA equivalents]

Components	ADF				IFAD			
	For. currency costs	Loc. currency costs	Total Costs	% foreign	For. currency costs	Loc. currency costs	Total Costs	% foreign
Agriculture Infrastructure Rehabilitation	4.3	2.6	6.9	62	0.8	0.4	1.1	66
Agricultural Production and Productivity Improvement	2.2	0.6	2.7	78	1.1	0.3	1.4	79
Project Management	0.3	0.9	1.1	22	0.1	0.4	0.6	20
Total base cost	6.7	4.2	10.9	62	2.0	1.1	3.1	64
Physical contingency	0.4	0.2	0.6	64	0.1	0.0	0.1	74
Price Contingency	-	0.6	0.6	-	-	0.2	0.2	-
Total project cost	7.0	5.0	12.0	59	2.1	1.3	3.4	61

Note: Exchange rates are provided in the introduction of this report (page (i)). [specify exchange rates used and reference date if different]

Table 2.4: Sources of financing [amounts in million UA equivalents]

Sources of financing	For. currency costs	Loc. currency costs	Total Costs	% total
ADF	7.0	5.0	12.0	66
FSF	0.4	0.1	0.5	2.5
IFAD	2.1	1.3	3.4	18.7
GoL	0.4	1.3	1.7	9.2
Beneficiaries	0.2	0.4	0.7	3.6
Total project cost	10.2	8.1	18.3	100

Table 2.5: Project cost by category of expenditure [amounts in million UA equivalents]

Categories of expenditure	ADF				IFAD			
	For. currency costs	Loc. currency costs	Total Costs	% foreign	For. currency costs	Loc. currency costs	Total Costs	% foreign
Civil Works	3.9	2.1	5.6	65	0.3	0.1	0.5	70
Goods	1.7	0.2	1.9	90	0.7	0.3	1.0	70
Services	0.4	0.3	0.8	56	0.8	0.3	1.0	73
Miscellaneous					0.1	0.0	0.1	80
Operating & Maintenance Costs	0.6	0.8	1.4	42	0.1	0.1	0.2	35
Wages, Salaries & TA	0.1	0.7	0.8	10	0.0	0.3	0.3	10
Total base cost	6.7	4.2	10.9	62	2.0	1.1	0.5	64
Physical contingency	0.4	0.2	0.6	64	0.1	0.0	0.1	74
Price Contingency	-	0.6	1.0	-	-	0.2	0.2	-
Total project cost	7.1	5.0	12.0	59	2.1	1.3	3.4	61

Table 2.6: Expenditure schedule by component [amounts in million UA equivalents]

Components	ADF						IFAD					
	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
Agriculture Infrastructure Rehabilitation	0.6	1.6	2.4	2.0	0.2	0.3	0.0	0.5	0.6	0.0	0.0	0.0
Agricultural Production and Productivity Improvement	1.3	0.6	0.4	0.1	0.3	0.2	0.4	0.4	0.2	0.2	0.1	0.1
Project Management	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Total base cost	2.1	2.4	3.0	2.2	0.6	0.6	0.5	1.0	0.9	0.3	0.2	0.2

2.6 Project's target area and population

2.6.1 The project area comprises eight counties (30 districts) including rice production counties of the south-east (Grand Gedeh, River Gee, Grand Kru and Maryland counties) and major cassava production areas in the north-west (Grand Cape Mount, Bomi, Montserrado and Grand Bassa counties). The direct project beneficiaries are estimated at 9,610 households.

2.6.2 *Land Tenure:* There are four land tenure systems in Liberia, i.e., deed holders, customary occupation, leasing and squatter agreement. Seventy percent of the total households in the project area have access to land through customary tenure, compared to 66% at national level; 17% of the households have deeds; and only 10% are squatters. The publicly acknowledged and respected means for land dispute and access resolution is community-based and community driven. This has been recognised by Government, such that the draft Land Commission bill, which is in the final stages of enactment, will pave the way for the Community Land Rights Law. The Land commission will facilitate resolution of the current land ownership and access challenges including the establishment of the policy and legal framework for communal management of land resources as well as women and youth access to land. The Commission's activities are expected to commence in 2009. Given this situation, it is anticipated that land issues will not be an impediment to project implementation.

2.7 Participatory process for project identification, design and implementation

2.7.1 Project design was highly participatory during the identification, preparation and appraisal missions. All relevant stakeholder institutions, development partners, Civil Society/NGOs, farmers and their representatives, and other key private sector actors in cassava and rice value chain were consulted. The consultative process was crowned with stakeholders workshops. During the workshops, project objectives, strategies and expected outcomes were presented, discussed and agreed. Participation and consultation during implementation will continue with a major focus on direct project beneficiaries through the community mobilisation and education campaigns, Bank's and IFAD's joint supervision and Mid-Term Review (MTR) missions, as well as at national level through the project steering committee.

2.7.2 The project will benefit from the improved financial management system, such as the Integrated Financial Management Information System (IFMIS) to be established in March

2009 under the Bank financed Public Financial Management Reform Support Program I (PFMRSP-I). MOA will be among the five pilot ministries for implementation of internal and external audit activities under the PFMRSP-I. Feeder road rehabilitation activities will be fast tracked given that ILO which is already implementing the ongoing Labour-based Public Works Program is retained as the implementation partner.

2.8 *Bank Group experience, lessons reflected in project design*

There are five on-going Bank financed operations in Liberia, having been approved between October 2006 and December 2008 as indicated in Appendix II. The Labour-based Public Works Program experienced procurement delays due to the diminishing capacity of the Special Implementation Unit (SIU) in the face of increasing project implementation responsibilities given the unit's multi-sectoral mandate; the capacity of seconded SIU staff is also limited. Implementation of the Institutional Support Project (ISP) was delayed primarily due to delay in fulfilment of conditions precedent to disbursement. Based on these experiences, MOA has been retained as the implementing Agency for the Agriculture Sector Rehabilitation Project. This will be strengthened by competent staff recruited through competitive process. The staff will receive a nationally competitive compensation package. The proposed project conditions have been kept to a minimum, and effective launching as well as implementation support missions will be undertaken during the first six months after effectiveness to ensure efficient project start-up. Another important lesson drawn from other donor financed programs in the country is that availability of qualified contractors is a major factor in provision of reliable maintenance services and a key sustainability issue. Therefore life skills training for enhancing community awareness and skills for community ownership and maintenance responsibility is included in project activities, as well as training and equipping of community-based artisans and labor-intensive contractors to ensure availability of maintenance services at community level.

2.9 *Key performance indicators*

2.9.1 The indicators for monitoring progress towards the main outcomes of the project during implementation include: increase in household incomes from USD 350 to 1,730; creation of jobs equivalent to 498,800 person days; 10% increase in rice production; 15% reduction in post-harvest losses; functionality of community based groups; and percentage of women among project beneficiaries as indicated in the Results-based Logical Framework.

2.9.2 The primary responsibility of tracking of the project's progress towards achieving its indicative targets is with the MOA-M&E unit, together with the Ministry of Planning and Economic Affairs (MOPEA) and the Liberian Institute for Statistics and Geo-Information Services (LISGIS), the two institutions which are jointly mandated to monitor national progress through a web-based *PRS Deliverables Tracking System*. Primary M&E data will be collected and input into the web-based tool by MOA-M&E unit, while LISGIS will be facilitated to undertake impact studies. MOPEA's County Development Officers and M&E assistants will validate the project specific M&E data in the field. MOPEA will produce the validated project M&E reports whenever required. The MOA-PCU will be responsible for continuous reporting to the Bank via the preparation of an Annual Work Plan and Budget (AWPB) and four Quarterly Progress Reports each year. In 2013 a Mid Term Review (MTR) will be conducted to allow for necessary adjustments and amendments in activities or reallocation of budget. After project completion the outcomes will be assessed through the preparation of a Project Completion Report.

III – PROJECT FEASIBILITY

3.1 *Economic and financial performance*

3.1.1 **Financial Analysis:** Results from the financial analysis show that the average annual net income of beneficiary farm households generated from crop sales will increase from USD 130 without the project to roughly USD 568 by 2013 and will have reached a level of USD 1,016 per household at full project development in 2015. The income increase results from the improved production technologies and expanded area expected to increase annual rice (upland and lowland) and cassava/maize production by 10,870 tons (10%) and 5,750 tons (1.2%) respectively. With respect to irrigated rice, increase in yields and incomes would be achieved mainly through the use of improved varieties and irrigation, and the use of fertilizer and integrated pest management. Concerning upland rice and cassava/maize yield increases would result solely from the use of improved varieties and fertilizer. Because of the larger size of the target area and the higher potential for yield increases the rice farmers in the South-Eastern countries will experience a stronger income increase than the farmers in the Western project areas cultivating cassava and maize.

3.1.2 **Economic Analysis:** The main benefits considered in the analysis arise from (i) an increase in annual rice and cassava/maize production resulting from the adoption of improved agricultural production technologies (fertilizer, certified seeds/cuttings, mechanization, integrated pest management) and expanded area (rehabilitation of irrigation schemes); and (ii) the reduction in post-harvest losses (provision of processing units, storage and marketing facilities, and rehabilitation of feeder roads). The costs taken into account for the economic analysis include all project costs. Thereby costs comprise investment, maintenance and operating costs occurring from the operation of swamp irrigation schemes, and the related marketing infrastructures such as feeder roads, marketing centers and processing units. Since feeder roads cannot be specifically allocated to farmers from certain communities but rather to regions the investment and maintenance costs related to feeder roads are adjusted to the number of people living in the four counties where feeder road rehabilitation will take place.

3.1.3 The computation of the Economic Internal Rate of Return is based on the following assumptions: (i) The net benefits accrue to the project over a period of 25 years from the date of the start of the project; (ii) All financial prices and costs are converted to economic prices using conversion factors for tradable and non-tradable items; (iii) The investment costs have been computed by considering an economic opportunity cost of capital of 12%. Based on these assumptions the EIRR of the project was found to be 20%.

Table C.1: key economic and financial figures

EIRR (base case)	(20%)
NPV (base case)	USD 12.9 million
NB: detailed calculations are available in Volume II (Technical Annex B6)	

3.2 *Environmental and Social Impacts*

Environment

3.2.1 The project is a predominantly infrastructure rehabilitation as well as improvement in current farming practices through the enhanced application of modern production technologies and inputs. The environmental implications are predominantly on the positive

side with insignificant negative impacts. Project activities include; rehabilitation of dykes, weirs and canals for the control of water to irrigated fields, landscaping during preparation of land for irrigation, application of fertilizers and pesticides, rehabilitation of farm tracks and roads, construction of warehouses/market structures and light mechanization of farm activities, and technical studies for future development of swamp rice irrigation schemes. The project is classified as category II and the Environmental and Social Management Plan (ESMP) was published on 29th March 2009 (www.afdb.org).

3.2.2 Rehabilitation of swamp water management infrastructure as well as use of improved technologies will significantly reduce the unsustainable upland cultivation which is predominantly slash and burn. The potential negative impacts include water table modification, modification of stream/river flows, soil salinisation, breeding of malaria and schistosomiasis parasites, potential pollution of stream/river. Mitigation measures have been designed and included in the relevant project activities; they include: promoting good agricultural practises, provision of hydrological monitoring equipment to ensure maintenance of environmental flows in the streams and optimization of water use; provision of mosquito nets and protective clothing; re-use of processing by-products, especially rice straw and husks; and establishment and training of user associations to ensure ownership and sustainability. An amount of UA 338,000 has been provided for implementation of the ESMP.

Social

3.2.3 More than 9,610 households will benefit from the project. These comprise 5,900 small farm households benefiting from increased income accruing from enhanced agricultural production and processing, and the production of certified rice seed in addition to 2,360 households who will benefit from employment in land clearing activities for women-headed households. The rehabilitation of feeder roads will additionally contribute to employment by generating 1,250 jobs of which 30 percent will be women employees whereas the maintenance requirements for the feeder roads will further create another 100 permanent jobs. The employment opportunities translate into 453,800 person-days by 2012 which will include 3% permanent jobs of which 1% are for women. Accordingly at project completion the project will have created employment of 498,800 person-days comprising 9% permanent jobs of which 3% of these will be held by women. Also the rehabilitation and construction of the community infrastructure and swamp sites will contribute to employment generation. All households in the project areas will benefit from the improved food supply and services through the infrastructure provided by the project.

3.2.4 With respect to poverty reduction and social impacts the selection of the project areas represents an important aspect. By covering the 8 counties in the West and South-East the project targets the counties with the highest poverty level in the country. According to Liberia's PRS Grand Gedeh, Grand Cape Mount and Bomi are among the counties with a poverty head count of up to 80 percent, while the remaining project areas show a poverty head count of around 65 percent. This also applies to other poverty indicators such as net secondary school enrolment and adult literacy. Furthermore due to the low population density and the difficult accessibility in the 4 South-Eastern project counties only a small share of donor funds has been allocated to these areas. Thus, given the comparatively high concentration of poverty and low living standards in the project areas the project directly contributes to wealth distribution in the country. The improved economic well-being resulting from the higher income level is expected to have positive multiplier effects to education with families being able to afford sending children to school while at the same time the enhanced food supply together with improved accessibility to health care facilities is expected to

substantially improve the health level in the project counties. The Project also indirectly addresses the issue of stability and security given that rice is a “political staple” which was the main catalyst for the past conflicts.

3.2.5 Negative social impacts that might arise through the project are related to an increase in the prevalence rate of communicable diseases such as HIV/AIDS caused by enhanced travelling through the improvement in roads and transport. However, this risk is mitigated by the project providing for support to government health campaigns. In the same vein the project will contribute to the fight against malaria by coordinating its efforts with on-going initiatives through providing insecticide treated nets.

Gender

3.2.6 Women in Liberia constitute a significant proportion among the rice and cassava farmers. The project’s training activities are thence specifically designed and targeted to strengthening women’s self-confidence, decision-making power and entrepreneurial skills in order to consolidate their participation and benefit from project activities. In addition adult education activities which promote the interaction and communication between men and women will positively influence the improvement in women’s perception and their role within the community. Moreover through food processing, women’s marketing revenues will be improved by the value-added because of the longer shelf life of the products, particularly in the case of cassava. Enhancing women and youth activity in project has also been provided for by providing cash to employ youth in land preparation for women-headed households. The increased incomes will multiply further and translate into even stronger engagement of youth and women into marketing and entrepreneurial activities through enhanced access to land and credit. The project will ensure that all women and youth headed households are beneficiaries of project resources and activities, including access to irrigated land.

3.3 *Climate Change*

The Government of Liberia has already prepared and approved a National Adaptation Program of Action (NAPA). The NAPA identified the following major adaptation activities and needs for agriculture: timing of crop cultivation in response to changing rainfall patterns; intercropping, irrigation, and the optimisation of lowland/swamp farming practices; pest control including fencing of farms against rodents, bird scares scrolls, regular weeding and the use of high echoing bells; and maintaining fast growing nitrogen fixing tree species to improve soil fertility and using multi-purpose tree species on farmlands to maintain foliage cover. The specific projects recommended in the NAPA include: integrated crop/livestock farming and optimisation of low land/swamp farming techniques; awareness and sensitisation about the importance of water resources management and rebuilding of the national meteorological monitoring network to enhance capacity for monitoring and prediction of weather events; promoting biomass based energy products; and promoting energy efficiency and conservation. All aspects of NAPA strategies relevant to the project have been integrated in the project design. Therefore, rehabilitation of low-land water control infrastructure which is a core activity of the project, is in itself climate change responsive. Provision has been made for rice straw based biogas plants (20@max.3m³/day) and installation of solar power systems (20@1.5kW) as part of the multifunctional storage/processing/marketing facilities, as well as the installation of micro-hydro-power plant (8@20 kW) and hydro-meteorological stations as part of water management infrastructure for the supply of cleaner/renewable energy to meet the energy demand for processing and storage. The project will also support the development of functional pest management capacity given the potential of higher rates

of breeding of pests caused by the changing climate/extreme weather conditions, in addition to promoting the use of drought tolerant genetic material.

IV – IMPLEMENTATION

4.1 Implementation arrangements

4.1.1 The ministry of Agriculture (MOA) will be the executing agency. Project implementation will be mainstreamed within the Ministry to enable retention of capacity that will be built by the project. However MOA does not have the duly skilled staff for project implementation. The project will competitively recruit a team of four experts – i.e. Project Coordinator, Financial Management specialist, Procurement specialist and Monitoring & Evaluation specialist, in addition to National Technical Officers – i.e. , Accountant, , Agronomist, Irrigation/Rural Infrastructure Engineer, Gender & Community Development Officer, IT Specialist, and Support staff. The Experts and National Technical Officers (NTO) will constitute the project implementation team (MOA-PCU) which will be directly responsible for project execution. The MOA-PCU will be anchored in the Planning and Development Department of the MOA. The MOA-PCU will work in close liaison with MOA departments of Research and Extension, Administration and Technical Services during implementation. At the local level, the project will be implemented through the decentralised establishment of the MOA - County Agricultural Coordinators (CAC) and the District Agricultural Officers (DAO) and Clan Technicians. To this end, the project will train some 80 Extension Officers and provide them with motorbikes. The project will enter into partnership with NGOs through contracting or with any other public or private implementation partner (IP) on the basis of requisite experience and competency, and clear terms of reference indicating the roles and duties of each partner. The project organisation and detailed implementation arrangement are included in the Project Implementation Document (Volume II). The project will pay salaries for experts, and performance allowances to NTO, as well as to the county district and clan level staff who are directly involved in implementation of project activities. Project procurement activities will be carried out directly by the MOA-PCU. A number of service providers/implementation partners will be directly recruited to undertake specific activities under the project and these include RRF, GAA, ILO, WARDA and CRS. Training of MOA-PCU procurement staff will be undertaken with support from on-going Bank financed Public Financial Management Reform Support Program (PFMRSP) and World Bank financed Economic, Governance and Institutional Reform Project (EGIRP). Start-up equipment and facilities will be procured by local shopping.

4.1.2 There will also be a project steering committee for purposes of policy guidance. Guided by the need to limit administrative burden, the existing Food Security and Nutrition Technical Committee (FS&N-TC), was agreed to perform the function of the project steering committee. The FS&N-TC is a ministerial committee chaired by the MOA, with farmers' and other private sector representatives. The committee will meet at least twice a year for purposes of the project, including approval of the annual project work plans and budgets; the semi-annual progress reports; audit reports and MTR, in addition to giving guidance on any other high level policy matters that crop-up during project implementation prior to seeking Bank's and IFAD's consent.

4.1.3 Procurement for the project would be carried out in accordance with the Bank's "*Rules and Procedures for Procurement of Goods, Works and Related Services*" and the "*Rules and Procedures for the Use of Consultants*" and the provisions stipulated in the

grant/protocol agreement. Given that co-financing is parallel, procurement of IFAD financed goods and services will be carried out in accordance with IFAD's procurement guidelines. The procurement arrangements are presented in Appendix IV. The procurement plan for the first 18 months is presented in annex B5 of the Implementation Document. The Procurement Plan will be updated at least once annually to reflect the actual project implementation needs.

4.1.4 The Implementing Agency is required to use an accounting system that conforms to international standards. The MOA-PCU will prepare a manual for accounting, administration and financial management procedures, which should define in detail the responsibilities of each member of the PCU. In addition, the manual has to precisely outline mechanisms for internal control. Provision is made for acquisition of the relevant IT equipment and accounting software, besides recruitment of qualified accounting staff. Given the fragility status in general and capacity constraints of the MOA in particular, provision has been made for the MOA-PCU to be staffed by a team of experts, including a Financial Management Specialist, one Accountant and two Accounts Assistant/Book Keepers who will be directly responsible for financial management. Bank's project launching mission will emphasize these requirements to ensure due compliancy.

4.1.5 The ADF resources will be disbursed in conformity with the rules and procedures of the Bank. Three methods of disbursement will be applied: (i) Direct payment method will be used for the payment of significant amounts against contracts concluded between project management and suppliers/implementing agencies following review and approval by the Bank and notification of "no objection". (ii) Reimbursement method will be applied for eligible expenses and in the case where the recipient has duly used his own resources for project activities; (ii) Special Account method or Revolving Fund will be used for recurrent costs and small contracts. Three accounts will be opened for this purpose - one special dollar/foreign exchange account for depositing of ADF funds and one local currency accounts, to receive transfers from the special dollar/foreign exchange account. The Project Coordinator and Financial Management specialist will be principal signatories to the three accounts.

4.1.6 The project accounts and financial statements will be audited annually by qualified and independent external auditors recruited by the implementing agency and acceptable to the Bank. The statements will be prepared in accordance with International Accounting Standards (IAS) or Generally Accepted Accounting Principles (GAAP), audited and submitted to the Bank not later than six months following the end of the year to which they relate. The auditors will audit the financial statements and issue a management report. Among other things, the auditors will certify that all Bank funds provided for the project have been used in accordance with the conditions of the grant agreement, with due attention to economy and efficiency, and only for the purposes for which the financing was provided. The Terms of Reference for the external audit used would be the standard ToR issued by the Bank with relevant modifications to take account of any special circumstances.

4.2 Monitoring

In project year one a survey will be undertaken to validate the baseline. The monitoring and evaluation (M&E) of the project will be carried out at two levels: (i) **Internal M&E** will be done by a specific section that will be set up in the Project Implementation Unit. This section will be headed by the project M&E specialist. Internal monitoring will entail outcome assessment and output and activity monitoring, preparation and submission of Quarterly Progress, and Project Completion Reports to the Bank. The project M&E unit will work through the decentralized county level extension system and the farmers' organisations

for collection of data on project outcome, outputs and activities. (ii) **External M & E** will be carried out by the MOA Monitoring Division in conjunction with the national M&E department under the MOPEA which is mandated, equipped and staffed to monitor national progress on the basis of PRS deliverables. MOPEA has already put in place a web-based M&E tool which is accessible to stakeholders and special project template will be designed by MOPEA to enable attribution of project results. This will enable the Bank to access M&E information on a continuous basis. The Bank and IFAD will also undertake joint periodic but timely supervision (at least twice per year) and Mid-Term Review missions to assess progress, including the core sector deliverables, as well as the effectiveness and efficiency in the implementation. A joint GoL/Bank/IFAD project completion mission will be undertaken three months prior to deadline for last disbursement.

4.3 Governance

4.3.1 The Government of Liberia is in the process of undertaking reforms which include those that address governance issues that are critical to the project, such as streamlining of public mandates, land management, decentralisation and corruption. The Food and Agriculture Policy and Strategy (FAPS) was approved in December 2008 and proposals for restructuring the MOA to make it more functional were finalised. Cabinet assent to the restructuring is awaiting the approval of the overarching proposal for streamlining of public mandates. Given the concerted facilitation by USAID TA, restructuring of the Ministry of Agriculture, which is critical to development of effective project implementation capacity, is expected to be approved prior to the commencement of the project. The Land Commission bill, which is expected to be approved by Cabinet and enacted in the first half of 2009, will pave the way for legalising community-based management of land resources, an approach that has proved to offer lasting solutions to land disputes and access rights. These important reforms will be followed-up by the Bank during the period leading to project effectiveness. Seed chain development is also critical to the project but the regulatory framework is non-existent and its development will be facilitated by the project.

4.3.2 Effective decentralisation of political, fiscal, and administrative responsibilities is also critical to project success. The subvention to counties of USD 3.0 million during the previous 2 financial years is a positive initiative in this regard and implementation of the draft National Decentralisation Policy will be supported and closely monitored during project implementation. Government recently approved the Anti-Corruption Commission bill, and the enactment of the draft Whistle Blower law and Civic Education Policy will be closely monitored and promoted during Bank supervision missions as way of reinforcing safeguards against the potential for fraud and corruption. Provision of long-term technical assistance to the MOA, as well as making the TA directly accountable for project implementation, will reduce the exposure to the risks of fraud and corruption.

4.4 Sustainability

4.4.1 The compliance of the project's objective with the national agricultural development priorities as outlined in the CAAS-LIB, the PRS and the FAPS ensure the country's commitment to the project. It responds directly to key challenges identified in the PRS by enhancing the performance of the crop value chains through the expansion of agricultural area under irrigation, promoting the use of farm inputs and improved production technologies, increasing access to markets, improving market performance and building capacity of farmer-based organisations and other value chain actors.

4.4.2 The project will adopt locally familiar technologies for community infrastructure, in addition to ensuring ownership and maintenance responsibility by the beneficiaries through

training and equipping of: (i) community-based agents for facilitating business transactions between farmers and traders, and (ii) local labour-intensive contractors for infrastructure maintenance. Commitment by GoL to budget resources for maintenance of project infrastructure beyond the capacity of the community has been secured through a project condition. Provision has also been made for facilitating the constitution of effective irrigation water user groups and associations, as well as determining the water user fee which will be paid in the form and at a frequency agreed by the association members. The Farmer Field School (FFS) approach to adoption of Integrated Plant and Pest Management (IPPM) which is demand driven in nature, shall not pose any problems with sustainability. Provision is also made for project focused adult education on the basis of recent development partner financed interventions in the country which have demonstrated that the integration of literacy and life skills training resulted into a very high degree of ownership and sustainability of project benefits.

4.5 Risk management

Risk	Mitigation Measure
Fragility: Delays in procurement and delivery of agricultural inputs and implements; limited accessibility and remoteness of project sites; failure of the implementing agency to attract qualified staff.	Direct contracting of locally established and acceptable service providers with proven performance record; Provision of long term technical assistance for project execution and performance based allowance for recruited national staff.
Failure of Government to maintain infrastructures after the project given the lack of consistent policies and clear institutional mandates	Community-based approach to maintenance and securing Government's commitment to budget for maintenance, based on which PCU will procure maintenance contracts before close of project activities
Uncertainty of land tenure discouraging investment in rehabilitation and development of agricultural water management infrastructure.	Provision made for Land Commission to facilitate community land management
Low literacy rate and lack of life skills may undermine effective implementation of project activities.	Provision has been made for concerted and protracted adult education and life skills training, part of which is scheduled to precede other community level project activities.
Climate change risks including extreme drought and/or wet conditions and the attendant potential for increased pest infestation and deterioration of infrastructure, especially feeder roads.	Project will use drought resistant varieties as well as providing for the improvement of pest management capacity in the MOA. Feeder roads will be designed and constructed to specifications that are optimised with the potential damage due to extreme wet conditions, in addition to creating maintenance capacity at community level.

4.6 Knowledge building

4.6.1 The project represents the first post-conflict development project in the country in the agriculture sector which is a unique opportunity for experience which would have wide ranging application. In addition, this is the first co-financing activity in a post-conflict country based on the value chain approach. Partnership with IFAD financing for soft aspects and Bank financing for infrastructure will further enhance the knowledge on this mode of cooperation in project financing, offering opportunities for up-scaling.

4.6.2 The project's Monitoring and Evaluation system will be integrated into the country's PRS M&E system which is web-based. This will allow the Bank, implementing agencies and beneficiaries, to access information and identify the constraints faced during project implementation, as well as the ways and means to overcome those constraints on a continuous basis. At Bank's level, knowledge will be generated through regular supervisions, Mid-Term Review and Project Completion Reports. Studies for future investments will enhance understanding of swamp rice value-chain in Liberia. Knowledge on interventions in post-conflict fragile states will be strengthened.

V – LEGAL INSTRUMENTS AND AUTHORITY

5.1 Legal instrument

ADF and FSF Grants to the Republic of Liberia

5.2 Conditions associated with Bank's intervention

- Conditions Precedent to First Disbursement: (i) Recipient will have provided evidence for the recruitment of a Project Coordinator and a Financial Management specialist, Procurement Specialist, Accountant, M&E Specialist, Irrigation/Rural Infrastructure Engineer, Gender & Community development Officer and Agronomist whose qualifications will be acceptable to the Fund (Para. 4.1.1); (ii) Provided evidence of having opened one foreign currency special account (SA) for the deposit of the proceeds of the grant and one local currency account (LCA) in a bank acceptable to the Fund for receiving transfers from the special dollar/foreign exchange account (Para. 4.1.5).
- Other Conditions: For fiscal year 2015/2016, the Recipient will have provided evidence of having approved in its budget, amounts sufficient for the maintenance of project infrastructure, currently estimated to be United States Dollars five hundred and ninety thousand per year (Para. 2.5.2 and 4.4.2).

5.3 Compliance with Bank Policies

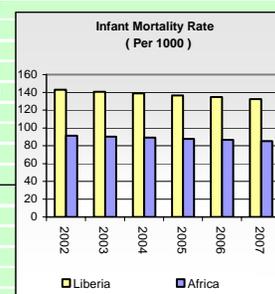
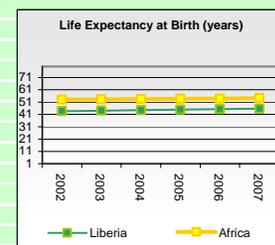
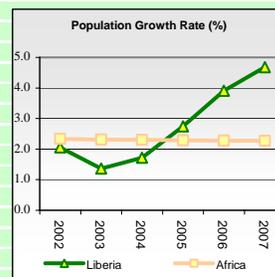
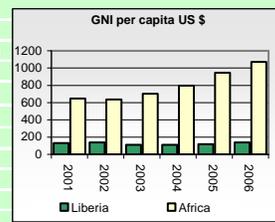
5.3.1 This project complies with all applicable Bank policies, which include: Bank's Medium Term Strategy; ADF-XI; Fragile State Facility (FSF); Policy on Eligible Expenditures for Bank Group Financing; and ADB World Bank Joint Assistance Strategy (JAS).

VI – RECOMMENDATION

6.1 Management recommends that the Board of Directors approve in principle the proposed project of UA 15.7 million, including three grants of 12 million from ADF, 0.5 million from FSF window. In order to comply with ADF front loading policy, approval is specifically requested for UA 6 million. Approval for the balance of the ADF grant of UA 6.5 million will be requested in 2010 on a lapse-of-time basis, subject to the stability of Liberia's allocation. This procedure, which has been discussed with the Government of Liberia, will not cause any delays in the expenditure schedule as demonstrated in Table 2.6.

Appendix I. Country's comparative socio-economic indicators

	Year	Liberia	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		111	30 307	80 976	54 658
Total Population (millions)	2007	3.8	963.7	5 448.2	1 223.0
Urban Population (% of Total)	2007	60.3	39.8	43.5	74.2
Population Density (per Km ²)	2007	33.7	31.8	65.7	23.0
GNI per Capita (US \$)	2006	140	1 071	2 000	36 487
Labor Force Participation - Total (%)	2005	41.4	42.3	45.6	54.6
Labor Force Participation - Female (%)	2005	40.3	41.1	39.7	44.9
Gender - Related Development Index Value	2004	...	0.486	0.694	0.911
Human Develop. Index (Rank among 174 countries)	2004	...	n.a.	n.a.	n.a.
Popul. Living Below \$ 1 a Day (% of Population)	2002-05	76.2	34.3
Demographic Indicators					
Population Growth Rate - Total (%)	2007	4.7	2.3	1.4	0.3
Population Growth Rate - Urban (%)	2007	4.1	3.5	2.6	0.5
Population < 15 years (%)	2007	47.2	41.0	30.2	16.7
Population >= 65 years (%)	2007	2.1	3.5	5.6	16.4
Dependency Ratio (%)	2007	97.3	80.1	56.0	47.7
Sex Ratio (per 100 female)	2007	100.0	99.3	103.2	94.3
Female Population 15-49 years (% of total population)	2007	22.3	24.2	24.5	31.4
Life Expectancy at Birth - Total (years)	2007	45.7	54.2	65.4	76.5
Life Expectancy at Birth - Female (years)	2007	46.6	55.3	67.2	80.2
Crude Birth Rate (per 1,000)	2007	49.6	36.1	22.4	11.1
Crude Death Rate (per 1,000)	2007	18.3	13.2	8.3	10.4
Infant Mortality Rate (per 1,000)	2007	132.5	85.3	57.3	7.4
Child Mortality Rate (per 1,000)	2007	205.2	130.2	80.8	8.9
Total Fertility Rate (per woman)	2007	6.8	4.7	2.8	1.6
Maternal Mortality Rate (per 100,000)	2005	1 200	724	450	8
Women Using Contraception (%)	2000-06	...	29.9	61.0	75.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)*	2004	3.1	39.6	78.0	287.0
Nurses (per 100,000 people)*	2004	18.3	120.4	98.0	782.0
Births attended by Trained Health Personnel (%)	2000-05	89.1	50.4	59.0	99.0
Access to Safe Water (% of Population)	2006	64.0	62.3	80.0	100.0
Access to Health Services (% of Population)	2004	39.0	61.7	80.0	100.0
Access to Sanitation (% of Population)	2004	27.0	45.8	50.0	100.0
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2000-05	3.7	4.7	1.3	0.3
Incidence of Tuberculosis (per 100,000)	2005	301.4	300.7	275.0	18.0
Child Immunization Against Tuberculosis (%)	2006	89.0	83.7	85.0	93.0
Child Immunization Against Measles (%)	2006	94.0	75.4	78.0	93.2
Underweight Children (% of children under 5 years)	2000-05	26.5	28.6	27.0	0.1
Daily Calorie Supply per Capita	2004	1 923	2 436	2 675	3 285
Public Expenditure on Health (as % of GDP)	2005	4.4	2.4	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2006	91.0	96.4	91.0	102.3
Primary School - Female	2001-06	...	92.1	105.0	102.0
Secondary School - Total	2001-06	34.0	44.5	88.0	99.5
Secondary School - Female	2001-06	...	41.8	45.8	100.8
Primary School Female Teaching Staff (% of Total)	2001-06	28.0	47.5	51.0	82.0
Adult Illiteracy Rate - Total (%)	2007	39.3	33.3	26.6	1.2
Adult Illiteracy Rate - Male (%)	2007	23.3	25.6	19.0	0.8
Adult Illiteracy Rate - Female (%)	2007	55.3	40.8	34.2	1.6
Percentage of GDP Spent on Education	2000-05	6.4	4.5	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2005-07	2.0	6.0	9.9	11.6
Annual Rate of Deforestation (%)	2000-07	2.0	0.7	0.4	-0.2
Annual Rate of Reforestation (%)	2000-07	...	10.9
Per Capita CO2 Emissions (metric tons)	2005-07	0.1	1.0	1.9	12.3



Sources : ADB Statistics Department Databases; World Bank: World Development Indicators;

last update : July 2008

UNAIDS; UNSD; WHO, UNICEF, WRI, UNDP; Country Reports

Note : n.a. : Not Applicable ; ... : Data Not Available;

Appendix II. Table of ADB's portfolio in the country (signed projects)

List of active projects (loans and grants):

Name	Type ¹	Rating	Amount (UA)	Date approved
ISP for Economic Management and Good Governance	G		3 million	October, 2006
Labor-Based Public Works Project	G		15.24 million	December 2007
Monrovia Extension and 3 Towns Project	G	n.a.	1.44 million	March 2008
Technical Assistance for Access Bank	L	n.a.	0.67 million	November 2008
Public Financial Management Reform Support Programme I	G	n.a.	12 million	December 2008
TOTAL APPROVALS			32.35 million	

¹ L:loan, G:grant

Appendix III. Key related projects financed by the Bank and other development partners in the country

DONOR	FUNDING	STATED AREAS OF INTERVENTION
The World Bank	USD 49 million	<ul style="list-style-type: none"> • AIDP I + II: Urban markets and ports (Construction of major bridges and roads, and river crossings; Provision of inputs and construction of market infrastructure (coffee, cocoa and other cash crops))
ADF	UA 9 million	Public Financial Management Reform Support Program I
ADB	UA 1.44 million	Monrovia Extension and 3 Towns Project
ADB	UA 0.67 million	Technical Assistance for Access Bank
ADF	UA 3 million	ISP for Economic Management and Good Governance
ADF	UA 15.24 million	Labor-Based Public Works Project
Emergency Interventions to address the Food Crisis		
WB/WFP	USD 44 million	Cash and food for work
USAID	USD 10 million	Facilitate the procurement, multiplication and distribution of improved planting materials using resources available in West Africa; Support the development and commercialization of technologies and practices that reduce post harvest losses and add value; Assist agri-business to access technical and financial support required to take advantage of market opportunities; Improve marketing infrastructure (trunk roads); Managerial technical assistance to Ministry of Agriculture
IFAD	USD 2.5 million	Planting materials (some limited distribution of seed rice; funding for seed bank); Marketing (purchase paddy); Fertilizers; Pest and disease management inputs
ADB	UA 3 million	Correction of macro-economic imbalance due to temporarily suspension of import tariffs of agricultural products and inputs

Appendix IV. Procurement Arrangements

	Procurement Method													N.B.F.	Total
	International Competitive Bidding	National Competitive Bidding	Local Competitive Bidding	Consulting Services	Consulting Services: SSS	International Shopping	Local Shopping	Direct Contracting	Direct Purchase/Negotiations/ Single Tender	Limited Tender/Repeat Order	Force Account	Financial Intermediaries			
A. Civil Works															
1. Water Management Structures	-	-	-	-	-	-	-	3,612	-	-	-	-	-	3,612	
								(3,612)						(3,612)	
2. Land Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3. Feeder Roads /c	-	1,565 (1,565)	-	-	-	-	-	-	-	-	-	-	-	1,565 (1,565)	
4. Micro-Hydropower plants	-	-	-	-	-	309 (154)	-	103 (36)	-	-	-	-	-	412 (190)	
5. Buildings	-	-	8	165 (165)	-	-	-	651 (415)	6	-	-	-	-	829 (580)	
B. Goods															
Vehicles /f	265 (262)	-	-	-	-	-	94 (94)	-	-	-	-	-	-	359 (356)	
Equipment /g	-	-	-	-	-	-	926 (192)	115 (5)	407 (140)	-	-	-	-	1,448 (337)	
Other Equipment /h	-	-	-	-	-	500 (444)	-	-	46 (46)	-	-	-	-	546 (490)	
C. Services															
Training /i	-	-	-	-	-	-	8	1,448 (474)	-	-	-	-	-	1,456 (474)	
Technical assistance	-	-	-	-	1,064	-	-	-	-	-	-	-	-	1,064	
Audit and Mid-Term Review /k	-	-	-	87 (87)	-	-	-	-	-	-	-	-	-	87 (87)	
NGO and Other Contractual Services /l	-	-	-	-	-	-	-	1,098 (1,062)	-	-	-	-	-	1,098 (1,062)	
Engineering Studies /m	-	-	-	670 (670)	-	-	-	-	-	-	-	-	-	670 (670)	
D. Personnel															
MOA Staff Wages /n	-	-	-	-	-	-	-	-	-	-	-	-	484 (28)	484 (28)	
Project Salaries and Allowances /o	-	-	-	-	-	-	-	-	-	1,235 (846)	-	-	-	1,235 (846)	
E. Operating Costs															
1. Office equipment and Vehicle Maintenance	-	-	-	-	-	-	-	100 (78)	-	100 (78)	-	-	8	208 (157)	
2. Road Maintenance /q	-	887 (887)	-	-	-	-	-	168 (168)	-	-	-	-	729	1,785 (1,056)	
3. Water Management Infrastructure Maintenance /r	-	-	-	-	-	-	-	617 (370)	-	-	-	-	848	1,465 (370)	
4. Community Infrastructure Maintenance /s	-	-	-	-	-	-	-	62 (37)	-	-	-	-	143 (15)	206 (52)	
F. Miscellaneous	-	-	-	-	-	-	-	-	134	-	-	259 (199)	106	498 (199)	
Total	265 (262)	2,452 (2,452)	8	922 (922)	1,064	809 (597)	1,028 (286)	7,975 (6,259)	592 (186)	100 (78)	1,235 (846)	259 (199)	2,319 (43)	19,029 (12,131)	

Note: Figures in parenthesis are the respective amounts financed by ADF

l Use ILO trained Labour-based contractors

f Includes Vehicles and Motorcycles; Verify presence of sufficient no. of local manufacturers agents and change procurement mode if so.

g Locally manufactured/supplied Farm and Agro-processing eqpt; Bicycles; Fertilizer; Protective clothing & Mosquito nets

h Micro-Hydropower eqpt, Farm eqpt, Agro-processing eqpt, Office Equipment

i Specialised institutions, NGOs and Individuals to be contracted to undertake in country or external training

k Verify the mode of procurement during appraisal with a view to Direct purchase

l Includes Impact Studies and all directly contracted services Identify and specify NGOs to be contracted in each of the four counties on basis of their local presence and capacity.

m Detailed Technical Studies and tender documents Prior to commencement of project

n Salaries of all project staff appointed through civil service agency procedures

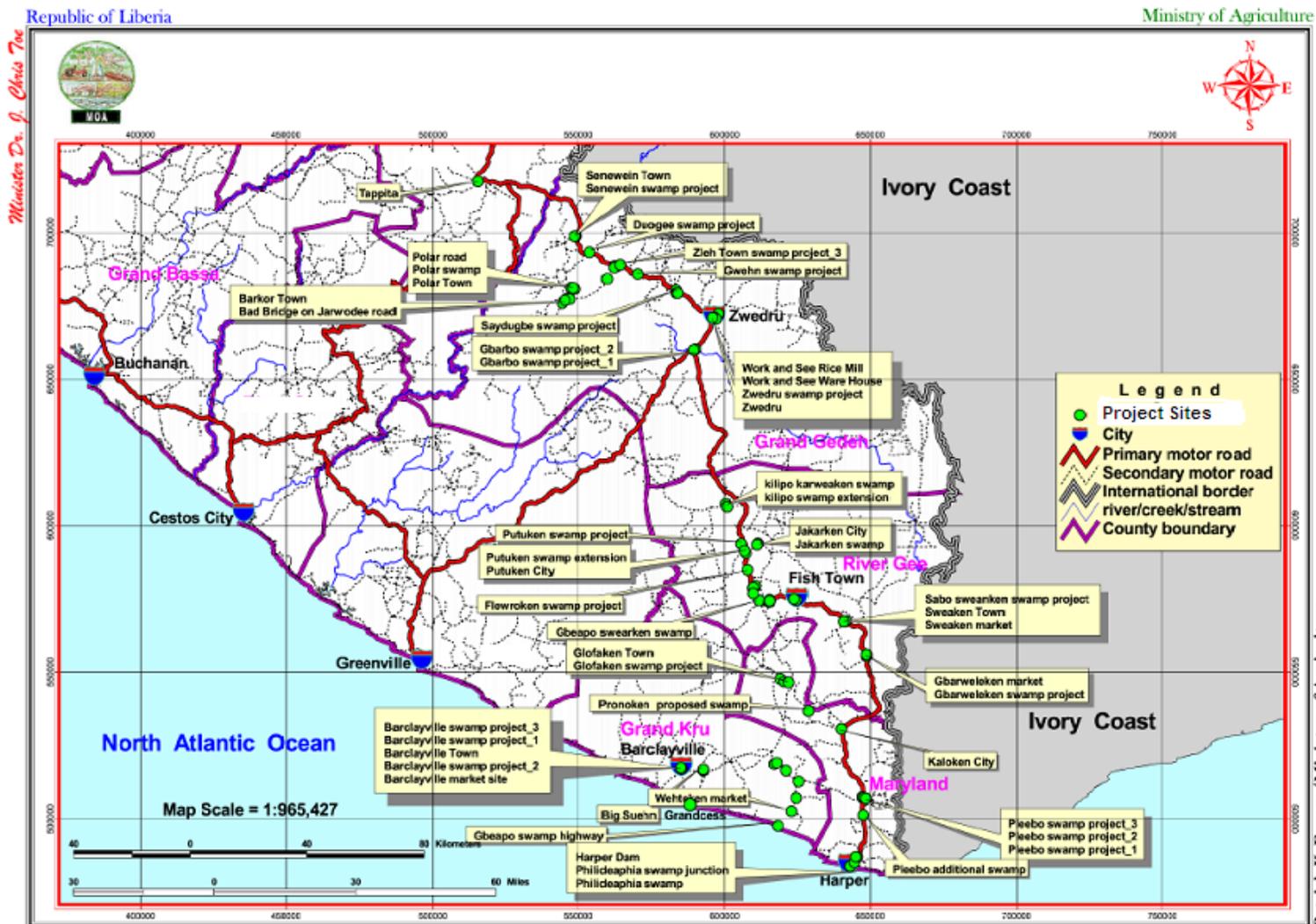
o Salaries and allowances for national TAs + top allowances for MOA staff working on project

q Labour -based contractors' contracts for capital works would be extended for maintenance

r Maintenance during project period and three years thereafter

s Maintenance during project period

Appendix V. Map of the Project Area



Minister Dr. J. Chris Tawie

Republic of Liberia

Ministry of Agriculture

Patrick K. Fanga/Ministry of Agriculture