IFAD
Investing in rural people

Republic of Liberia

Tree Crops Extension Project (TCEP)

Final project design report

Main report and appendices

Document Date: Insert date
Project No. 1100001761

West and Central Africa Division
Programme Management Department

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Currency equivalents

Currency Unit	=	Liberian dollar (LRD)
US$1.0	=	LRD 92.50

Weights and measures

1 kilogram	=	1000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

Abbreviations and acronyms

ACDI/VOCA	Agriculture Cooperative Development International & Volunteers in Overseas Cooperative Assistance
ADB	African Development Bank
AfT	Agenda for Transformation
ASAP	Adaptation for Smallholder Agriculture Programme
ASRP	Agriculture Sector Revitalization Project
AWPB	Annual Work Plan and Budget
CAADP	Comprehensive Africa Agriculture Development Program
CAAS-Lib	Comprehensive Assessment of the Agricultural Sector in Liberia
CAC	County Agricultural Coordinator
CARI	Central Agricultural Research Institute
CBL	Central Bank of Liberia
CDA	Cooperative Development Agency
CFSNS	Comprehensive Food Security and Nutrition Survey
CGC	County Gender Coordinator
CIAT	International Centre for Tropical Agriculture
CPI	Corruption Perception Index
CPMT	Country Programme Management Team
CRE	County Rural Engineer
CSSV	Cocoa Swollen Shoot Virus
CSTWG	Cocoa Sector Technical Working Group
DAO	District Agricultural Officer
EFSA	Emergency Food Security Assessment
EPA	Environmental Protection Agency
ESMP	Environmental and Social Management Plan
ETU	Ebola Treatment Unit
EU	European Union
EVD	Ebola Virus Disease
FBO	Farmer-Based Organization
FFS	Farmer Field School
FMA	Financial Management Assessment
FO	Farmers' Organization
GAC	Governance and Anticorruption Plan
GALS	Gender Action Learning System
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GMP	Good Management Practices
GOL	Government of Liberia
HDI	Human Development Index
IAS	International Accounting Standards
ICCO	International Cocoa Organization
IFR	Interim Financial Reports
IP	Implementing Partner
ISA	International Standards of Auditing
LAADCO	Liberia Agriculture and Assets Development Company
LACRA	Liberia Agricultural Commodities Regulatory Authority
LASIP	Liberia Agriculture Sector Rehabilitation Program
LBA	Licensed Buying Agent
LDHS	Liberia Demographic and Health Survey
LEC	Liberia Export Council

LISGIS	Liberia Institute of Statistics and Geo-Information Services
LPA	Lead Project Agency
MDG	Millennium Development Goal
MOA	Ministry of Agriculture
MOCI	Ministry of Commerce and Industry
MOU	Memorandum of Understanding
M&E	Monitoring & Evaluation
MFDP	Ministry of Finance and Development Planning
MGSW	Ministry of Gender and Social Welfare
MTR	Mid-term review
NAPA	National Adaptation Program of Action
NGO	Non-Governmental Organization
NSC	National Steering Committee
PCR	Project Completion Report
PDO	Project Development Objective
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
PIU	Project Implementation Unit
PMU	Project Management Unit
PPP	Public Private Partnership
PPP	Project Procurement Plan
PSP	Private Sector Partner
RCFP	Rural Community Finance Project
REDD	Reducing Emissions from Deforestation and Forest Degradation
RIMS	Results and Impact Management System
SECAP	Social, Environmental and Climate Assessment Procedures
SOE	Statement of Expenditures
STCRSP	Smallholder Tree Crop Revitalization Support Project
TCEP	Tree Crops Expansion Project
TOT	Training of Trainers
UNDP	United Nations Development Programme
VMU	Village Maintenance Unit
WEAI	Women's Empowerment in Agriculture Index
YP	Young Professional

Map of the project area

Executive Summary[1]

A. Rationale

i. On the basis of the achievements and lessons learnt from the IFAD co-financed Smallholders Tree Crop Revitalization Support Project (STCRSP), the Government of Liberia (GOL) through the Ministry of Agriculture (MOA) has requested a complementary project to be financed under the 2013-2015 IFAD PBAS cycle to support the smallholder cocoa subsector in Nimba County. A conceptual note was approved by IFAD's Operational Strategy and Policy Guidance Committee (OSC) on 1 April 2014. The detailed and final design missions were undertaken during April to August 2015.

ii. Today, the cocoa subsector in Liberia is still under-performing, with production levels in many districts generally at 20% to 30% of the average yields in West-Africa due to factors that include, but are not limited to, the years of farm neglect, old trees, poor crop husbandry, lack of good seedlings, appropriate disease control and fertilization. Prices are low due to poor post-harvest handling and quality, high transaction costs, small transaction volumes and weak market linkages. In order to make the cocoa subsector attractive to smallholder farmers and private sector exporters, the TCEP will implement a comprehensive value chain approach, developed by STCRSP, to work on cocoa volumes, quality, yields and farm gate prices, while building agribusiness linkages and institutional capacity of key stakeholders. Climate change adaption will be fully integrated in the approach.

iii. The public-private partnership (PPP) model piloted by STCRSP will be used, based on revitalization of plantations. The achievements of STCRSP at mid-term (April 2015) were the following: (a) rehabilitation of 7,769 ha of cocoa and 2,031 ha of coffee plantations; (b) 677 tons of cocoa marketed in 2 campaigns; (c) partnership agreements with one Private Sector Partner and 7 cooperatives (5,706 members); (d) 184 village nurseries established and 1.35 million seedlings produced; (e) 53 solar dryers constructed; and (f) 6 warehouses under construction or rehabilitated.

B. Intervention Area, Value Chains and Target Group

iv. The TCEP will intervene in Nimba County, in at least 8 statutory districts. This geographical expansion will complement the on-going STCRSP in Lofa County, so that economies of scale will be realized.

v. The beneficiaries of TCEP will be 11,000 stakeholders of the cocoa value chain, of which (i) 8,000 cocoa smallholders who are members of kuu groups[2] and Farmer Field Schools (FFS); (ii) approximately 2,400 (30%) other farmers who will also benefit from roads, input supply and market linkages, and (iii) 600 beneficiaries as a result of job creation along the value chain. In order to select the 8,000 cocoa smallholders, the TCEP will be using a self-targeting approach, combined with tools to ensure inclusiveness of youth, women, war wounded and Ebola survivors.

C. Approach

vi. The duration of the TCEP will be 6 years. The TCEP will adopt a value chain approach to link cocoa farmers, organized at grassroots level in kuu groups and Farmers Field Schools (FFS), to markets and services through cooperatives and Private Sector Partners (PSPs). The main innovations in the TCEP design are: (a) the organization of farmers at the grassroots level in order to enhance

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[2] Kuu is a traditional community-based labour group.

their bargaining power, (b) the integration of climate change resilience and related institutional capacity building in the approach; (c) additional focus on the supply chain for new genetic material of cocoa; (c) additional focus on post-harvest aspects and quality of cocoa; (d) additional focus on services delivery by the cooperatives to their members; (e) the combination of basic revitalization of plantations with enhanced revitalization and replanting, (f) additional focus on measures to include women and promote their access to benefits; and (g) the use of a long-term growth path for institutional capacity building of the cooperatives, combined with more systematic institutional capacity building of cooperatives and institutional auditing.

D. Project Development Objective

vii. The goal of TCEP will be "to improve the livelihoods and climate change resilience of rural households in Nimba County. The Project development objective (PDO) of TCEP will be to improve incomes and climate change resilience of smallholder cocoa producers in Nimba County.

E. Outcomes and Components

Component A: Revitalization of cocoa plantations

viii. The expected outcome of Component A will be "increased quantity and quality of cocoa sold and higher price received by smallholders". The revitalization and replanting will take place from PY1 to PY4; the development of the value chain linkages, as well as additional focus on crop husbandry and post-harvest handling will be undertaken from PY1 to PY6. The underlying idea of basic revitalization is to bring cocoa yields to at least 400 kg per ha, a stage that would be reached by 2,000 farmers (25%). Further yield increases to 1,000 kg of cocoa per ha would result from services developed and technology promoted by the FFS, PSPs and cooperatives with project support. This stage would be received by 6,000 or 75% of the farmers. The TCEP will support the establishment and operation of a seed station in Nimba County so as to guarantee availability of improved planting material for farmers, village nurseries and privately-owned nurseries. Diversification of cocoa farms following their revitalization with valuable trees and food crops, specifically banana/plantain, will be pursued for food security, climate resilience and smoothening of cash flow, while simultaneously increasing the role of women in the farming economy.

Component B: Rehabilitation and maintenance of roads

ix. The expected outcome of Component B is "improved access to markets and reduced transportation costs". Approximately 200 km of farm-to-market roads will be rehabilitated in Nimba County, using the implementation methodology that was developed under STCRSP. Regarding maintenance, TCEP will have a three-pronged approach that includes: (i) capacity building in road maintenance; (ii) improvement of the roads maintenance strategy, including development of a financing mechanism; (iii) transition financing of maintenance on a cash-for-work basis.

Component C: Service provision for value chain development

x. The expected outcome of Component C is "improved service provision to cocoa farmers for value chain development". The Component aims at: (i) strengthening the capacity of cocoa farmers' cooperatives at district level; (ii) strengthening the capacity of the Ministry of Agriculture (MOA), the Liberia Agricultural Commodities Regulatory Authority (LACRA) and Cooperative Development Agency (CDA) at County and District levels; (iii) ensuring that climate change adaptation is mainstreamed in the technical support systems for cocoa value chain development, (iv) policy dialogue; and (v) monitoring of deforestation in the cocoa sector.

Component D: Project coordination, monitoring and evaluation

xi. The objective of this component is to ensure an effective and efficient strategic and operational planning, implementation, monitoring and evaluation, as well as knowledge management.

F. Implementation Arrangements

xii. The Ministry of Agriculture (MOA) will have overall responsibility for the implementation of TCEP. A National Steering Committee (NSC) will orient project strategy, oversee planning, review progress and ensure linkages with related entities. Within the Project Management Unit (PMU), the

management, monitoring and evaluation of TCEP will be under the responsibility of the IFAD Project Implementation Unit (PIU) in Monrovia. A County PIU will be established in Sanniquellie, Nimba.

xiii. Implementation arrangements of TCEP will be harmonized with those of the IFAD STCRSP. For the revitalization and replanting of plantations, the County PIU will coordinate the mobilization of kuu groups and FFS. These FFS will be encouraged to become members of the district cooperatives. In addition, Memoranda of Agreement will be signed with PSPs and cooperatives in order to ensure access to markets and services. CARI will be responsible for enhancing the supply chain of improved planting material.

G. Cost and financing

xiv. Total project costs over 6 years, including contingencies, taxes and duties, are estimated at US$ 30.73 million. TCEP will absorb the entire 2013-2015 PBAS allocation of US$ 13 million for Liberia under highly concessional lending terms, as well as US$ 4.5 million ASAP grant funding for climate change resilience activities. In addition, US$ 9.1 million from the 2016-2018 PBAS cycle will be allocated to this project. Co-financing opportunities will be explored by GOL and IFAD. Government of Liberia will finance taxes and duties on imported goods, and value added tax (VAT) for a total amount of US$ 1.86 million. The Private Sector Partners (PSP) are expected to contribute at least US$ 0.96 million in terms of their investments in the marketing chain, as well as working capital for the cooperatives to buy cocoa. The contribution of farmers is US$ 1.35 million and consists of a 40% contribution in terms of labour for the revitalization and replanting of cocoa plantations, the management of village nurseries, as well as the construction of solar dryers.

xv. The ASAP grant will be used to finance: (a) the in-country production of high-quality, climate-adapted and disease-free planting material including through international partnerships, (b) the promotion of farming practices that buffer against the increased climate pressures, (c) the corresponding training to technicians and farmers; (d) the provision of solar driers and the necessary training on their use; (e) participatory land use planning and monitoring of deforestation; (f) institutional capacity building, policy dialogue and knowledge management in the field of climate change resilience.

H. Benefits and impact

xvi. TCEP will have 11,000 beneficiaries of which 8,000 cocoa smallholder farmers, 2,400 farmers (30%) who will benefit from spillover effects and approximately 600 jobs along the value chain. Considering an average household size of 5.9, this adds up to 64,900 household members.

xvii. The ERR of 37.2% over 20 years is profitable from an economic stand point with a Net Present Value of US$ 108.8 million in the same period. The sensitivity analysis indicates a solid resilience to increases in costs and reduction, as shown in the table below. One additional element considered in this analysis are quantified positive environmental externalities with the help of the Ex-Ante Carbon-balance Tool (EX-ACT), which is an appraisal system developed by FAO providing ex-ante estimates of the impact of agriculture and forestry development projects, programmes, and policies on the carbon-balance. The social value of carbon or social value of the effort to reduce carbon emissions starts at US$30 in 2015 and increases to US$80 in real terms by 2050.

I. Sustainability

xviii. *In view of the targeting of existing plantations and rehabilitation of existing roads, the safeguards against indirect deforestation, the measures against environmental risks of the application of agrochemicals, and the careful monitoring of negative social impacts, it is proposed to classify the project as posing moderate socio-environmental risks, category B. A Social, Environmental and Climate Assessment Procedures (SECAP) note has been prepared. In terms of climate risks, a preliminary classification of a moderate climate risk is proposed at this stage.*

Summary of the Economic and financial analysis

LIBERIA **TREE CROPS EXTENSION PROJECT (TCEP)**

EFA summary tables

Tabel A: Models' financial cash flow

Model 1: Basic revitalization

ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		178	178	268	317	752	745	717	687	657	628	601
Total production costs	US$		40	433	176	176	176	176	176	176	176	176	176
Incremental net income	US$		0	-393	-46	3	439	431	403	373	344	314	287
Return to family labour*	**21.5**												
NPV @ 0.1	**997**												
IRR	**43%**												
B/C ratio	**2.40**												

Model 2: Enhanced revitalization

ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		178	178	268	583	1,104	1,613	1,718	1,643	1,569	1,494	1,427
Total production costs	US$		40	459	307	412	432	452	375	465	435	425	375
Incremental net income	US$		0	-419	-177	33	533	1,023	1,204	1,040	995	931	914
Return to family labour*	**78**												
NPV @ 0.1	**2,922**												
IRR	**61%**												
B/C ratio	**2.49**												

Model 3: Replanting

ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$	0	0	0	50	583	1,104	1,613	2,968	2,838	2,708	2,577	2,460
Total production costs	US$	0	40	775	396	412	452	472	445	505	505	445	445
Incremental net income	US$	0	0	-735	-306	211	691	1,181	2,563	2,373	2,242	2,172	2,055
Return to family labour*	**55**												
NPV @ 0.1	**5,867**												
IRR	**62%**												
B/C ratio	**2.84**												

Model 4: Cocoa cooperative

ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		1,250	5,250	15,703	41,034	78,863	118,125	161,875	169,375	169,375	169,375	169,375
Total costs	US$		0	117,225	39,000	18,000	18,000	112,500	38,000	18,000	18,000	18,000	112,500
Incremental net income	US$		0	-113,225	-24,547	21,784	59,613	4,375	122,625	150,125	150,125	150,125	55,625
NPV @ 0.1	**237,986**												
IRR	**34%**												
B/C ratio	**1.76**												

Tabel C1: Main Assumptions

	Without				With project							Average
	Y0	Y1/	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
Cocoa yields (kg/ha)												
Model 1 Basic revitalization	**100**	100	125	150	400	400	400	400	400	400	400	
Model 2 Enhanced revitalization	**100**	100	100	300	600	900	1000	1000	1000	1000	1000	
Model 3 Restocking	**100**	0	0	300	600	900	1200	1500	1500	1500	1500	
% of Famers with acces to each grade by year												
cocoa - grade 1	**0%**	0%	30%	60%	70%	80%	90%	90%	90%	90%	90%	
cocoa - grade 2	**100%**	100%	70%	40%	30%	20%	10%	10%	10%	10%	10%	
Cocoa price paid to farmers (US$/kg)												
cocoa - grade 1	1.22	1.93	1.84	1.83	1.80	1.76	1.68	1.61	1.53	1.46	1.39	1.68
cocoa - grade 2	1.2	1.78	1.70	1.70	1.66	1.63	1.56	1.49	1.42	1.35	1.28	1.56
Cocoa price paid to cooperative (US$/kg)												
cocoa - grade 1	1.22	2.05	1.94	1.93	1.90	1.86	1.78	1.71	1.63	1.56	1.49	1.78
cocoa - grade 2	1.22	1.88	1.80	1.80	1.76	1.73	1.66	1.59	1.52	1.45	1.38	1.66

Tabel C2: Shadow prices

Shadow prices	Factor
Tradable goods	0.90
Labour	US$ 3.5
Pesticides	0.90
Fertilizer	0.9
Output conversion factor	1.10
Social discount rate	4.3%

	Prices Financial	Economic
Cocoa, grade 1	1.65	1.82
Cocoa, grade 2	1.55	1.71
fertilizer	1	0.9
pesticides	40	36
sprayer	60	54
wages, skilled	5.5	3.5
wages, unskilled	3.5	2

Tabel B1: Project costs

Component	Cost IFAD, ASAP million USD	Beneficiaries	Cost US$/Beneficiary
Revitalisation of cocoa plantations	7.1	8,000	888
Rehabilitation and maintanance of roads	9.7	10,400	929
Service provision for value chain development	5.4	11,000	495
Project Coordination, M&E	4.3	11,000	391
Total	26.5	11,000	2,409

Tabel B2: Indicators from the EFA

Outcome	Indicateur	Baseline	MTR	FINAL
Improved incomes and cli;ate change resilience of	Number of farmers who increased their income from cocoa	0	4,250	8,000
8,000 smaalholder cocoa producers	Gross sales per farm	178	583	1,718
Increased quality and quantity of cocoa sold by	% of grade 1	0%	60%	90%
smallholders	Ha of cocoa rehabilitated	0	6,500	10,000
Improved access to markets	Km of roads rehabilitated	0	75	200
	Number of farmers selling their produce through coops	0	3,000	8,000
Improved service provision to cocoa smallholder	Number of farmers receiving inputs from cooperatives	0	4,250	8,000
farmers				

Table D: Phasing

		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Basic revitalization	farmers	250	750	1,375	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Enhanced rvitalization	farmers	750	2,250	4,125	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Replanting	farmers	0	500	1,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total cocoa farmers	farmers	1,000	3,000	5,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Total cocoa plantations	ha	1,000	3,500	6,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Cocoa cooperatives	coops	8	8	8	8	8	8	8	8	8	8

Table E: Project economic cash flow (million US$)

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Incremental net benefit components 1 an	-0.479	-0.390	0.805	5.565	9.013	12.497	11.344	10.844	10.296	9.947
Incremental impact roads (component 2)	0.000	-0.144	-0.117	0.241	1.670	2.704	3.749	3.403	3.253	3.089
Environmental impact	0.027	0.098	0.187	0.297	0.315	0.324	0.333	0.342	0.351	0.360
Total economic benefits	-0.452	-0.436	0.875	6.104	10.997	15.525	15.427	14.589	13.900	13.396
Economic cost project	-4.009	-5.889	-6.987	-7.639	-2.356	-1.541	-0.300	-0.300	-0.300	-0.300
Total net economic incremental benefit	-4.461	-6.325	-6.112	-1.535	8.641	13.985	15.127	14.289	13.600	13.096

Graph G: Project economic cash flow

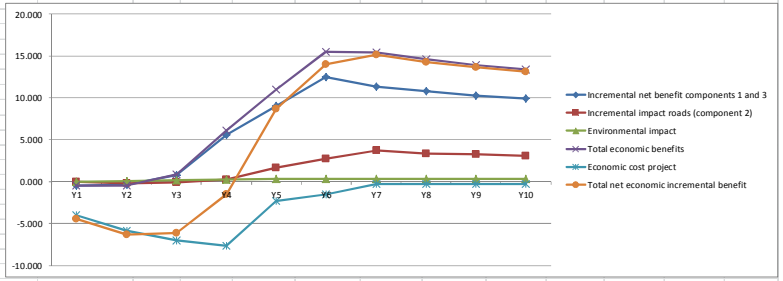


Table F: Sensitivity analysis

		ERR	NPV (mio US$)	Link with risk matrix
Base Scenario		37.2%	108.8	
Project benefits	-20%	31.0%	81.6	Combination of risks affecting output prices, yields and adoption rates
Project benefits	-10%	34.2%	95.2	
Adoption rate	-10%	28.7%	96.2	Extension sservice outreach is limited, low upteak of good practices,
Adoption rate	-20%	25.6%	79.7	
Project costs	10%	34.5%	106.1	Increase of price of service providers, road construction, fertilizer, etc..
Project costs	20%	32.1%	103.4	
1 year lag in benefits		29.9%	97.7	Low implementation capacity, risks affectingadoption rates
2 year lag in benefits		25.0%	87.0	

TCEP Logical Framework

Narrative Summary	Key Performance Indicators				Means of Verification			Assumptions
	Name	**Baseline (Y0)**	**Mid-Term (Y3)**	**End Target (Y6)**	**Source**	**Frequency**	**Responsibility**	
Goal:								
Improve the livelihoods and climate change resilience of rural households in Nimba County	Decreased 0-5 year child malnutrition* (1)	stunted: 36,4%[3] wasted: 3,9%; underweigh:20,7%	TBD	TBD	Secondary data i.e. LDHS	PY1, PY3, PY6	IFAD-PIU	
	Increased food security (reduction in length of hungry season)* (2)	Food insecure: 11% Moderately food insecure: 30%[4]	TBD	TBD	RIMS Baseline/ Completion Survey or secondary data i.e. CFSNS	PY1, PY3, PY6	IFAD-PIU (LISGIS)	
	Improvement in asset ownership* (3)	TBD	TBD	TBD	RIMS Baseline and Completion Survey	PY1, PY3, PY6	IFAD-PIU	
Project Development Objective:								
Improve incomes and climate change resilience of smallholder cocoa producers in Nimba County	# of smallholder farmers who increased the quantity of cocoa sold (4)	0	5,500	8,000	Baseline/Completion survey	PY1, PY3, PY6	IFAD-PIU (LISGIS)	Commitment of all stakeholders (government, donors, private sector) to participate in poverty reduction efforts
	# of smallholder farmers who increased their resilience[5] to climate change [RIMS 1.8.5] (5)	0	550	4,000	Baseline/Completion survey	PY1, PY3, PY6	IFAD-PIU (LISGIS)	
	Gross sales of cocoa per farm (6)	178 US$	583 US$	1,718 US$	Baseline/Completion survey, monitoring data	PY1, PY3, PY6	LISGIS, Coop reports, PSP	
	Farm gates prices as % of ICCO reference price for grade 1 (7)	65%	65%	75%	Monitoring reports	Quarterly	County-PIU	
Component A – Revitalization of cocoa plantations								
Outcome 1: Increased quantity and quality of	# of productive trees per farmer (yielding >10 pods of cocoa per tree) (8)	50	400	1,000	Reports of PSP and cooperatives	Annually	CAC, DAO	Land tenure system in project counties

[3] Liberia Demographic and Health Survey (LDHS), 2013.
[4] Liberia Comprehensive Food Security and Nutrition Survey (CFSNS), 2013.
[5] A household will be considered as more resilient to climate change if it is at least: a) using climate resilient practices (adequate shade, diversification, pest and disease control) and cocoa germplasm promoted by the TCEP; and b) is engaged in a zero deforestation agreement which is monitored. It is estimated that at least 50% of the farmers would reach this level in year 6.

Narrative Summary	Key Performance Indicators				Means of Verification			Assumptions
	Name	**Baseline (Y0)**	**Mid-Term (Y3)**	**End Target (Y6)**	**Source**	**Frequency**	**Responsibility**	
cocoa sold by smallholders	% of grade 1 cocoa (9)	50%	60%	90%	Reports of PSP and cooperatives	Annually	CAC, DAO	does not pose any limitations to project activities
Outputs: Plantation revitalized and climate resilient practices and processing introduced	Ha of cocoa rehabilitated or replanted [RIMS 1.1.17] (10)	0 ha	6,500 ha	10,000 ha	Reports from PSP and Coops	Quarterly	CAC, DAO	Targeted communities are involved and responsive to interventions made
Component B – Rehabilitation and maintenance of roads								
Outcome 2: Improved access to markets **Outputs**: Rehabilitation and maintenance of roads	Km of roads passable all year round after three years* (11)	0 km	200 km	200 km	Reports of CRE	PY1, PY3, PY6	County-PIU, CRE	Targeted communities are involved and responsive to interventions made
Component C – Service provision for value chain development								
Outcome 3: Improved service provision to cocoa smallholder	Tonnes of cocoa sold by farmers through their cooperatives* and/or PSP (12)	0	2,775 tonnes	9,800 tonnes	Reports from Coops and PSP	Quarterly	CAC, DAO	Responsive and interested private sector partners in the cocoa sector
	Average increase of business potential[6](*) (improving service delivery to farmers) for supported cooperatives (13)	3.2 (current average business potential of coops in Nimba)	3.8 for 80% and 4.5 for 20% of selected coops	4.5 for 70% and 5 for 30% of selected coops	Reports of PSP and cooperatives	Annually	CAC, DAO	
Outputs: Sustainable cooperatives for marketing of cocoa and provision of inputs	# of farmers receiving inputs/services from cooperative or private sector * (14)	0	5,500	8,000	Reports from Coops and PSP	Quarterly	CAC, DAO	
	# of groups (FFS) trained in crop production and post-harvesting practices and technologies (15)	0	220 FFS	320 FFS	FFS officer	Quarterly	County-PIU	

[6] Business potential is a composite index to assess the level of development of cooperatives (developed by SCOPEinsight).

I. Strategic context and rationale

A. Country and rural development context

1. In order to enhance economic growth and recover from the Ebola crisis, reduce rural poverty and create opportunities for young people in rural areas, the Government of Liberia (GOL) faces the challenge to modernize its agricultural sector, and in particular the tree crop subsector for which Liberia has comparative advantages and a longstanding tradition. On the basis of the achievements and lessons learned from the IFAD co-financed Smallholder Tree Crop Revitalization Support Project (STCRSP) in Lofa County, the GOL, through the Ministry of Agriculture (MOA), has requested a complementary project to be financed under the 2013-2015 IFAD Performance-based allocation system (PBAS) cycle in order to rebuild the cocoa value chain in Nimba County.

2. Despite positive socio-economic developments since the end of the civil war in 2003, Liberia is still classified as a low-income food deficit country. In 2013, UNDP ranked Liberia 175th out of 187 countries with a Human Development Index (HDI) score of only 0.412, which reflects a deep and broad underlying poverty and immense need for economic growth and social development. In recent years, Liberia's post-war economic growth has been sustained; the real Gross Domestic Product (GDP) growth was 8.9% in 2012 and 8.1% in 2013. The Ebola Virus Disease (EVD) in 2014-2015 crippled the economic growth, as foreign and domestic investments slowed down. The crisis is resulting in flat or negative income growth and creating large fiscal challenges for Government.

3. The agricultural sector is the primary livelihood source for two-thirds of the population, mainly at smallholder and subsistence level. The basic rural institutions, infrastructures and value chains are being rebuilt slowly since 2003. However, primitive subsistence farming and traditional agronomic practices are still widespread and market orientation of agriculture is limited. The country's forest, soil and water resources require effective and sustainable management practices to improve agricultural productivity and increased resilience in the face of climate change. Notwithstanding these challenges, agriculture remains the mainstay of the Liberian economy and focus of the development efforts of Government and its international partners. These efforts also take into consideration that more than 50,000 youth are joining the labour force every year and there is need for employment opportunities in the rural economy. Liberia signed the Comprehensive Africa Agriculture Development Program (CAADP) Compact and has thus committed to the Maputo Declaration of 10% budget expenditure on agriculture, though commits currently only 3%.

4. In December 2012, Liberia launched its second poverty reduction strategy, the Agenda for Transformation (AFT), which has 5 pillars: i) peace, security and rule of law; ii) economic transformation; iii) governance and public institutions; iv) human development, and; v) cross-cutting issues (i.e. gender, youth, and environment). Inclusiveness for a more equal and just society is a transversal underlying goal of the AFT, which requires increasing farm productivity and market access for the majority of rural households that are engaged in smallholder agriculture. Today, substantial progress was made in public financial management and governance, though challenges remain. In particular, public sector capacity at county and district levels is very weak, and its ability to respond to the needs of the rural population is challenging.

5. The tree crops sector was traditionally one of Liberia's biggest employment sectors and an integral part of its social fabric and economy. Primary cash crops included cocoa, coffee, oil palm and rubber. During the Liberian civil wars of 1989-1996 and 1999 -2003, the tree crop sector was devastated and many farmers were displaced from their land. The abandoned farms and plantations degenerated into forest and their associated support structures were damaged or destroyed. Market linkages vanished, while exports dropped to near zero levels. However, rehabilitation and growth in the tree crop sector can do much to increase farmers' incomes, revive the rural economy and contribute towards consolidating peace.

6. A vulnerability analysis of the cocoa subsector to climate change, carried out by CIAT (2014)[7], showed that higher maximum dry season temperatures by the 2030s will put pressure on cocoa productivity due to higher heat stress and seedling mortality. Higher plant water demand will however be partially compensated by a shorter dry season. Disease pressure, especially black pod fungus, is expected to increase due to this shorter dry season and will require better disease control. On-farm cocoa processing will equally be challenged putting greater demand on artificial drying. Under these conditions, Nimba County can remain competitive provided investment is made in germplasms and cropping practices more suitable for a hotter climate and shorter dry season. Current varieties of cocoa in Liberia are not optimal to fit with these future conditions and some parts of the current cocoa belt might shift to other crops without adequate support.

B. Rationale[8]

7. The GOL is prioritizing both structural investments for long-term economic growth and the post-Ebola recovery process. The Liberia RB-COSOP reached its mid-term in 2013 and was reviewed in order to identify the way forward for IFAD support under the 2013-2015 PBAS cycle and beyond. Overall, the mid-term review revealed that the strategic objectives under the RB-COSOP were still relevant, but the transition from emergency to development approach should be more acknowledged, which justifies a stronger focus on support to the cocoa subsector.

8. The proposed Tree Crops Extension Project (TCEP) is part of the Government's strategy to promote export-oriented growth with a deep engagement of private stakeholders in the cocoa value chain. Liberia became member of the International Cocoa Organization (ICCO), for which IFAD contributed to its first membership fees. The TCEP is also highly aligned with the GOL policies, in particular: (a) the Liberia Agriculture Sector Rehabilitation Program (LASIP) of 2009 under the CAADP framework; (b) the Agenda for Transformation (AFT) which was launched in 2012; (c) the National Cocoa Export Strategy 2014-2018, which is a blueprint for increased competitiveness of Liberian cocoa in the global market; (d) the Ebola Recovery Plan for Liberia (2015-2017); (e) the new Land Rights Act that will be enacted in 2015; (f) the restructuring process of the Liberia Agriculture Commodity Regulatory Authority (LACRA) Act that will regulate the cocoa subsector; and (g) the National Adaptation Program of Action (NAPA) for climate change resilience.

Scaling up ongoing approaches

9. The TCEP will build on the achievements of the ongoing IFAD co-financed STCRSP[9]. The TCEP will aim at realising economies of scale and gaining momentum in cocoa value chain development by running as a geographical extension, adopting similar approaches and implementation arrangements, while drawing from lessons learned in order to enhance the impact on the livelihoods of smallholders. This phased design approach is common for projects that extend their geographical coverage and was also successfully used by IFAD's West and Central Africa (WCA) Division for PNAAFA[10] in Guinea and PROPACOM[11] in Côte d'Ivoire.

10. The achievements of STCRSP at mid-term were: (i) revitalization of 7,769 ha of cocoa and 2,031 ha of coffee farms; (ii) 677 tons of cocoa marketed in 2 campaigns; (iii) partnership agreements established with one Private Sector Partner (PSP) and 7 cooperatives (5,706 members); (iv) 184 village nurseries established and 1.35 million seedlings produced; (v) 53 solar dryers constructed; (vi) 6 warehouses under construction or rehabilitated.

11. Based on initial and highly conservative estimates from similar projects, such as RCPRP[12] in Sierra Leone and STCRSP in Liberia, cocoa farm revitalization support combined with replanting,

[7] CIAT. "Climate risk vulnerability assessment of the smallholder cocoa and coffee value chains in Liberia". IFAD/ASAP. January 2015.
[8] A detailed analysis of related policies and institutions is presented in Appendix 1.
[9] The mid-term review of STCRSP was undertaken in April 2015.
[10] *Programme nationale d'appui aux acteurs des filières agricoles (PNAAFA)*.
[11] *Programme d'appui à la production agricole et à la commercialisation (PROPACOM).*
[12] Rehabilitation and Community-based Poverty Reduction Project (RCPRP).

basic disease control and improved post-harvest handling, can increase yields up to 400 kg/ha, decrease the proportion of bad beans from 30% to 10%, reduce transaction costs and increase incomes of smallholders at least threefold. This basic revitalization approach was adopted by ACDI/VOCA[13] in Sierra Leone and Liberia, and IFAD-STCRSP in Liberia. However, enhanced revitalization, achieved through further improvements of crop and post-harvest management, combined with gradual replanting and the use of fertilizer allows increasing yields from 400 kg/ha to 1,000 kg/ha. Replanting of plantations, using high-yielding planting materials, allows achieving yields of 1,500 kg/ha. The approach of TCEP for the revitalization and replanting of cocoa plantations is summarized in the table below. TCEP will provide support to farmers for the basic revitalization, followed by specific support to reach an enhanced revitalization level in the medium term. In parallel, *kuu* groups of interested farmers will be supported to replant plantations using high-yielding planting materials.

Table 1: Approach of TCEP for the revitalization and replanting of cocoa plantations

	Yields	Description of management and use of inputs
Baseline	100 kg/ha	Semi-abandoned plantations with yields limited to 100 kg/ha by over shading and lack of weeding and disease control. The principal activity is the harvesting of pods without any particular management. The trees are from local, unselected germplasm and are 20-40 years old; owing to the mortality of trees the density of productive cocoa trees is often lower than the target of 1000 trees/ha. Poor postharvest handling, informal sales at low prices.
Basic revitalization	400 kg/ha (year 3)	Cleaning and weeding of the plantation, adjusting the shade, applying basic pruning (15%) through new cocoa seedlings. Improved production and post-harvest management, in particular drying. Application of basic disease control, especially against black pod. Installation of Farmer Field Schools (FFS). Marketing support through linkages with cooperatives and private sector partners (PSPs).
Enhanced revitalization	1000 kg/ha (year 6) (1 kg per stem)	After basic revitalization, further improvement of management, using FFS. Gap filling and gradual replacement of trees (5% per annum), using improved varieties. Pest and disease control. Fertilizer application (50 kg) on an acre to try out the yield response on a per farm basis, then if positive recommend annually 150 kg/ha. Structured marketing support and input supply through linkages with cooperatives and PSPs.
Restocking	1500 kg/ha (year 6).	Clearing on areas of poor stocking, restocking or replanting. Grafting improved, high-yielding materials on old trees; Planting hybrid or grafted seedlings; regular fertilization, including micronutrients. Pest and disease control, fertilizer application (150 kg/ha). FFS. Structured marketing support and input supply through linkages with cooperatives and PSPs.

Building pro-poor value chains in partnership with private sector

12. Total cocoa exports of Liberia were estimated at about 10,600 tons[14][15] with an export value of US$ 24.3 million in 2012. Until recently, only a small part of the production was officially exported through Liberian ports, with the remainder being informally exported via neighbouring countries. According to recent estimates, the Liberian cocoa subsector is composed of at least 38,400 smallholders (LISGIS, 2012), with holding sizes of 0.5 to 3 ha, and a total acreage of around 40,000 ha. At least 75% of Liberian cocoa producers are based in Lofa, Nimba and Bong Counties, also called the “cocoa and coffee belt”, where the agro-ecological conditions are favourable and smallholder plantations were traditionally an important source of income and employment.According to most stakeholders, cocoa yields vary generally between 75 and 200 kg/ha, which is only 10% of the

[13] ACDI/VOCA implements the USDA-funded LIFE projects.
[14] The reliability of statistics on cocoa (i.e. production, number of farms, acreage) in Liberia is very low. In addition, export statistics do not capture informal exports to Guinea, Côte d’Ivoire and Sierra Leone.
[15] ICCO statistics, March 2015, 91th Council Meeting in Abidjan.

potential yields and 15-30% of the average yield of 600 kg/ha in West-Africa. However, some smallholders in outgrower schemes achieve yields up to 1,500 kg/ha.

13. During the last decades, **farm gate prices of cocoa** in Liberia were the lowest in West Africa. Relative prices paid to cocoa farmers have improved already in some cases from around 30% of New York prices in 2008 in some cases to 60-65% of those prices in 2015 for grade 1 (ACDI/VOCA). The low farm gate prices are due to: (i) the weak bargaining position of farmers due to monopolistic behaviour of cooperatives and buyers, to lack of price information, to small transactions and low quality; (ii) weak market linkages; and (iii) poor market access due to deteriorated roads. The Liberian cocoa subsector is currently in a vicious cycle of low productivity, high transaction cost, low farm gate prices and low quality. Overall, the incentive to revitalize cocoa plantations in Liberia is currently much greater than it was a few years ago. The favourable international prices of cocoa in 2014 and 2015, up to 3 US$/kg, the growing competition among buyers and the improving ability of farmers to compare prices among various licensed buyers have improved farm gate prices, although volumes remain small. These key bottlenecks will be tackled by the TCEP in Nimba County.

14. The TCEP will implement a **comprehensive cocoa value chain approach** with focus on transaction volume, quality, yields and farm gate prices, while building agribusiness linkages and institutional capacity of key stakeholders, such as cooperatives, germplasm stations, extension services and related public services. Therefore, the TCEP will strengthen farmers at grassroots level while establishing Public-Private Partnerships (PPP), which have been instituted already in Lofa between MOA, a Private Sector Partner (PSP) and the cooperatives of cocoa farmers. The STCRSP approach will be continued, but with adjustments: (i) to ensure due recognition of some imbalances between the PSP, cooperatives and the grassroots level; (ii) to facilitate farmers to reach the enhanced revitalization level; (iii) to enhance supply chains of inputs; (iv) to further enhance post-harvest handling and product quality.

Table 2: Responsibility of partners in the PPP approach

Private sector partner	a) Co-financing for investments upstream in marketing capacity; b) Technical assistance for training in post-harvest handling and product quality; c) Market access through contractual arrangements with cooperatives and FFS; d) Provision of working capital to cooperatives for buying of cocoa.
Contribution of Project	a) Establishing *kuu* groups/FFS and co-financing the basic and enhanced revitalization of cocoa farms; b) Rehabilitating roads to/from major cocoa producing areas; c) Institutional strengthening of cooperatives and public stakeholders; d) Enhancing the required services for value chain development (supply chain of planting material and inputs, know how related to climate change resilience).
Farmers' cooperatives	a) Agribusiness linkages with private sector partner and kuu groups; b) Develop and deliver services to members (extension, grafting, use of inputs, drying marketing, etc..) in order to ensure sustainability of project interventions.
Farmers, organized in FFS and kuu groups	a) Become member of *kuu* groups/FFS, provide labour for revitalization of their cocoa plantations and management of village nurseries. b) Apply improved technology in production, and post-harvest handling; c) Establish linkages with FFS and kuu groups.

15. TCEP will work on **the quality of cocoa** and aims at increasing the percentage of grade 1 cocoa beans to 90%. This will require significant capacity building in disease control, harvesting and post-harvest handling, drying and fermentation, including training through FFS and use of solar dryers. Given the high pressure of pests and diseases in Nimba and the weak capacity of the involved cooperatives, TCEP will not develop organic certified cocoa at the initial stage. Due to the high cost of

third party auditors for certification, the adoption of sustainable production certification standards is not profitable in the short and medium term.

Empowering bargaining power of cocoa farmers

16. In order to enhance the bargaining power of cocoa farmers, the TCEP will build on the *kuu* system, which is a traditional community-based cooperative work group that carries out brushing and cleaning of agricultural plots and a way for farmers to access labour for the revitalization of cocoa farms. This *kuu* system will be promoted by the Project and linked up with FFS in order to provide extension services.

17. Selected cooperatives of cocoa farmers will be partners in the PPP arrangements to build market linkages and input supply systems. The PMU contracted SCOPEinsight[16] to undertake in May-June 2015, with the support of the Cooperative Development Agency (CDA), an assessment of the current business potential of 11 cocoa cooperatives (6,670 members – avg. 606) in Nimba County. This assessment shows[17] that the weakest area is that of *operations*[18] where the Nimba Coops are performing poorly compared to cooperatives in Bong and Lofa Counties as well as the benchmark of 83 coops in East and Southern Africa, due to limited attention given to health and safety issues (lack of a policy document, lack of training and provision of limited health and safety resources). But the Nimba coops implement good agricultural practices which ensure that production volumes are of high quality. On the other hand the Nimba Coops perform very well on enablers[19]. In fact, they seem to have a very good knowledge on legislation and statutes that govern the cocoa sector industry in Liberia and do not breach these. Furthermore, coops have good relationship with the government institutions, community and other players in the cocoa industry. Further improvements will be needed with regards to bargaining power against some of its business partners. Finally, it must be underlined that the total score of the Nimba cooperatives is higher than that of the coops in Bong and Lofa, and in line with the score of the benchmark.

Strengthening climate change resilience of smallholder farms

18. Liberia is strongly engaged in climate change adaptation and mitigation. In 2008 Liberia adopted a National Adaptation Programme of Action (NAPA) whose implementation is led by the Environmental Protection Agency (EPA). IFAD's Adaptation for Smallholder Agriculture Programme (ASAP)[20] will provide earmarked grant funding for TCEP to mainstream climate change resilience and environmental sustainability in smallholder cocoa farms and to respond to the needs identified in the NAPA and the National Cocoa Export Strategy 2014-2018. To respond to the challenges identified in the climate appraisal (CIAT, 2015), an ASAP grant will in particular (i) support a germplasm station able to produce enough improved planting and grafting material that can fit with current and future specific hotter conditions of Nimba County; (ii) promote shading and pruning practices to reduce the vulnerability of cocoa trees to the effects of climate change, (iii) will diversify crops and build capacities for better disease control. This ASAP support will increase the climate resilience of at least 46,400 smallholder households members.

[16] SCOPEinsight is an independent rating agency based in the Netherlands that assesses the business potential of farmer organizations in agriculture, dairy, forestry and aquaculture in developing countries
[17] A summary table is presented in Appendix 1
[18] Operations measures the organization's performance on good agricultural practices, processing, social & environmental practices, logistics, storage, and biological and natural risk management. It also includes oversight on the farmer base.
[19] The organization's relations with and performance related to entities that enable the value chain and/or the organization, e.g. business development services providers, technical assistants, financiers, etc.
[20] ASAP was launched by IFAD in 2012 to make climate and environmental finance work for smallholder farmers. As multi-year and multi-development partner financing window, ASAP provides a new source of co-financing to scale up and integrate climate change adaptation across IFAD's new investments.

II. Project description

A. Project area and target group

Characteristics of project area and cocoa smallholder farms

19. The TCEP will intervene in Nimba County, where the livelihoods of most smallholders traditionally depend on tree crops, such as rubber, cocoa, coffee and palm oil, even to a greater extent than food crops. Like most agricultural activities, the production of these crops nearly stopped during the civil war. The Liberia Comprehensive Food Security and Nutrition Survey 2012 [CFSNS] shows that 25% of households in Nimba grow cocoa, mostly on their own farm as smallholder. These farmers use essentially no agrochemical inputs on their cocoa, which leads to low yields and low quality with pods infested by black pod disease. They currently have very limited or no access to credit or loans. The focus of most ongoing cocoa rehabilitation projects has been on access to improved planting materials and the application of good agricultural practices, in particular basic disease control. Passable roads are a precondition to access markets and create basic conditions for the revitalization of plantations.

Youth, women and vulnerable groups

20. **Women** in Liberia were already a disadvantaged and vulnerable group prior to the outbreak of civil war. Despite progress realized since 2003, MDG 3 related to the promotion of gender equality and women empowerment is far from being achieved. Gender disparities in access to land and other assets seem to be improving. During field visits, significant numbers of women in Nimba stated ownership of land they are farming. The new Land Rights Act to be enacted in 2015 combined with the Inheritance Act linked to property rights will secure the access of women to agricultural land. The widespread community awareness on the Inheritance Act is already having a positive impact for women. Although women are highly involved in cocoa production, their contribution tends not to be valued and their membership in cooperatives is low. Women are currently most active in production and processing, including under-brushing, harvesting, fermentation, drying and transport,) while men dominate in the more profitable levels of marketing.

21. **Youth** (18-35 years) comprise approximately 47 % of the population. As a result of the civil war, they became vulnerable with high illiteracy resulting from low school enrolment and low educational level. They are disproportionally affected by unemployment or informal employment especially in rural areas. Vocational training and apprenticeship opportunities are rare. In the cocoa value chain, male youth are often involved as middle men, buying produce directly from the farmer and transporting to the nearest markets. This role, however, is hampered by the limited access youth have to financial services. Female youth are in the same situation as the adult women, since their participation on the cocoa farm is seen as an extension of the expected reproductive work.

22. **Ebola Virus Disease.** The economic impact of EVD is felt in both affected and non-affected communities and has introduced another level of social and economic vulnerability particularly for the survivors, as well as more widely, linked to travel restrictions limiting the access of traders to markets, along with the closure of Liberia's borders at the peak of the EVD crisis. This resulted in losses particularly for women, who account for 70 % of small-scale and cross-border traders. Households have undertaken various mechanisms to cope with Ebola's socio-economic effects. Many have either sold assets, sold or slaughtered livestock, borrowed money, sent their children to live elsewhere, spent savings or delayed investments — all of which has negative long-term effects on their welfare. Households headed by elderly people, particularly grandmothers, are carrying the burden of providing for children who have lost their parents, with limited access to resources.

Targeting strategy

23. TCEP will intervene in at least eight (8) statutory districts in Nimba County. The criteria for selecting districts will be the following: (i) the number of cocoa farmers; (ii) complementarity with other projects[21] so as to avoid duplication; and (iii) the potential gains from road improvement.

24. The beneficiaries of TCEP will be 11,000 stakeholders in the cocoa value chain, of which 8,000 cocoa smallholders, who are members of the *kuu* groups and Farmers Field Schools (FFS), 2,400 (30%) additional farmers, who will also benefit from the rehabilitated roads, input supply and market linkages, and 600 people as a result of job creation along the value chain. In order to select the 8,000 cocoa smallholders, the TCEP will be using a self-targeting approach together with mechanisms to promote inclusion of women, youth and vulnerable groups.

25. To participate in TCEP, cocoa farmers must (a) be resident in the village; (b) have a cocoa plantation that requires revitalization; (c) be member of a *kuu* group; (d) be willing to revitalize his/her plantation and accept the conditions set forth by the project, namely to provide the required labour and to adopt the project approach. Additional priority will be given to: (i) women-headed households and female farmers; (ii) young farmers between 18 and 35 years old, and; (iii) survivors of EVD.

26. The entry point for TCEP will be the farmers, organized at the grassroots level, rather than the cooperative level. TCEP will select a number of communities in which it will seek the farmers that are interested in the project (self-selection). The farmers will organize themselves into groups and pool their labour to revitalize their farms, following the traditional *kuu* system of reciprocal labour. Farmers will be responsible for the management and monitoring of their own farms, and will keep records and sales on production as part of the regular FFS meetings.

27. In addition to the FFSs, kuu groups and cooperatives, some agribusinesses, input dealers, financial institutions and commercial farmers, involved in the implementation of TCEP, could benefit indirectly from the Project. Their involvement will be crucial to ensure effective access to inputs, capital, services, know-how and markets for the targeted smallholders. The TCEP will develop internal controls, proper governance systems, checks and balances to ensure that these stakeholders and cooperatives do not suffer elite capture.

Targeting tools to ensure inclusiveness

28. The efficiency of reaching out to vulnerable groups, youth and women who traditionally have less voice and power in the Liberian rural society through self-targeting will be ensured by using empowerment and capacity-building measures. These measures will include: (i) information and mobilisation campaigns, using mass media and local information meetings; (ii) organization of traditional *kuu* groups and use of FFS approaches to lower thresholds for these groups and develop their social capital; (iii) matching grants to leverage their investment capacity and growth of their asset base; (iv) access to markets and input supply through cooperatives and PSPs.

29. To strengthen the self-targeting mechanism, TCEP will adopt direct targeting tools to reach out to vulnerable groups, youth and women. As direct beneficiaries, at least 30 % of women and 50 % of youth will be targeted. Similarly, at least 50 % of youth should constitute the labour for routine road maintenance. With regards to cooperatives, the following quotas shall be respected in order to avoid elite capture in particular: (i) at least 25 % of youth and 30 % of women within the management committees and among the cooperatives' members.

30. Gender and youth approaches will be mainstreamed in project implementation with a focus on supporting women, youth and vulnerable groups to overcome constraints including: (i) access to land; (ii) access to rural financial services (iii) access to employment, and; (iv) leadership and entrepreneurial skills.

[21] In particular the World Bank STCRSP (Zogeh, Gbelegai, Saclepea-Mah and Yarwein Menhnesonneh).and ACDI/VOCA LIFE project.

31. **Access to land.** TCEP will facilitate access to land for the target group by: (i) engaging with farmers' organizations to help negotiate land for women and youth in both old and new plantations; (ii) engaging with men to reconsider their role in securing land for their own daughters and wives; (iii) directly supporting women and youth in securing land deeds. Based on lessons learned both in Liberia and elsewhere in the region, TCEP will explore possibilities for agreements with young farmers for rehabilitation in return for long-term land access, e.g. 15 years. Furthermore, approximately 2,000 hectares of the 10,000 ha of cocoa will be replanted, and will be targeted to at least 30% women and 50% young farmers.

32. **Access to rural financial services.** TCEP will support the target group in the project area to build sustainable financial capability, by building and innovating on the Village Savings and Loans Association (VSLA) approach so that both male and female farmers can increase their capital and/or investments at production and household level. VSLAs are widespread in Liberia and have been particularly embraced by women as they build on their existing informal savings groups. In securing this approach, linkages will be established with the IFAD-funded Rural Community Finance Project (RCFP) currently under design. The focus for TCEP is on strengthening the VSLA approach and linking this to the cooperative/FBO with a particular emphasis on savings. A county-based Business Development Officer with experience in developing and promoting female-oriented products will coordinate the development of the approach. 320 groups of 15-20 members will be targeted.

33. **Specific measures for youth.** Using the lessons learned from Lofa, TCEP will support young people to develop their capacity to foster rural enterprises in the cocoa value chain (e.g. nursery establishment and other services), in addition to providing temporary jobs in the rehabilitation of roads. Furthermore, youth will be engaged for specialized tasks such as pesticide spraying and grafting. The Project will explore a youth employment scheme in partnership with GIZ, USAID, WB and other donors which have invested in rural infrastructure. To identify the best strategies to address rural youth needs and opportunities, short-term support will be provided by a youth specialist at the beginning of the project. This will include (i) an assessment on youth participation in the cocoa value chain to help inform specific youth strategies in the context of TCEP, as part of the gender and targeting action plan; (ii) strengthening of staff capacity for targeting youth, especially of the PIU Gender, Youth and Inclusion Specialist and the Business Development Officer at County level.

34. **Gender mainstreaming and women's empowerment.** To support women's empowerment, including for female youth, TCEP will introduce household methodologies (HHM) in the cocoa value chain with links to the VSLAs in order to promote gender-sensitive farm business development through improving intra-household gender relations. The strategy is not only to support women in production but also to move them further up the value chain by engaging them in management (e.g. nurseries) and in marketing.

35. **Ebola response.** A gender, youth and inclusion baseline survey will be conducted in the Project area, which will include identification of households that may require specific support or the need to link them with Ebola response programmes being implemented by other organisations, e.g. WFP and UNICEF[22]. A particular linkage shall be secured with the UN Women Economic Empowerment of Rural Women initiative that is already working with women who have lost their saving and business capacity due to the Ebola outbreak.

36. **Implementation.** TCEP will recruit a Gender, Youth and Inclusion Specialist at PIU level to coordinate gender, youth and targeting-related activities. On the basis of a gender, youth and inclusion baseline survey, the gender and targeting action plan for the Project will be developed in PY1 by a consultant. From PY2, the Gender, Youth and Inclusion Specialist will work in close collaboration with implementing partners and stakeholders to mainstream gender and youth initiatives. The Project will also include: (i) the use of gender- and age-disaggregated indicators to monitor outreach to women and youth; (ii) capacity-building in targeting and gender for staff and implementing partners, with a focus on the Gender Unit Ministry of Agriculture, and; (iii) sensitization of staff at the

[22] For example, UNICEF provides grants for school fees, WFP provides nutritional support.

district and county levels of as well as at the cooperative level. The Gender, Youth and Inclusion Specialist will liaise with the Ministry of Gender and Social Welfare (MGSW), as well as the Gender Unit within MOA. The Project will coordinate with the County Gender Coordinator (CGC) of the MGSW to identify women agriculture and non-agricultural groups to participate in the Project. See Appendix 2 for further details.

B. Development objective and impact indicators

37. The goal of TCEP will be "to improve the livelihoods and climate change resilience of rural households in Nimba County". The Project development objective (PDO) will be to improve incomes and climate change resilience of smallholder cocoa producers in Nimba County.

38. The 15 core indicators tare presented in the logical framework. The key impact and outcome indicators and targets will be: (i) 8,000 smallholders farmers who increased the quantity of cocoa sold; (ii) 4,000 smallholder farmers who increased their resilience to climate change; (iii) gross sales of cocoa per farm increased from 178 US$ in year 1 to 1,718 US$ in year 6; (iv) farm gate prices at least 75% of the ICCO reference price for grade 1; (v) at least 90% of cocoa is paid as grade 1 in year 6; (vi) 200 km of roads passable all year round after three years; and (vii) 9,800 tonnes of cocoa sold through the involved cooperatives and PSPs.

C. Outcomes/Components[23]

Component A: Revitalization of cocoa plantations

39. The expected outcome of Component A will be "increased quantity and quality of cocoa sold by smallholders".

40. **Organization of cocoa smallholders in *kuu* groups and FFS**. Farmers at grassroots level will be mobilized and organized in *kuu* groups of approximately 25 people each, which will also form the basic unit of a Farmers Field School (FFS). Each group will identify a lead farmer who will receive special training and pass it on to the group. These groups will provide the labour to undertake the revitalization of their own farms and will also set up village nurseries. The FFS will cover all thematic areas required to upgrade the cocoa value chains from production to post-harvest handling and management of nurseries. Approximately 320 FFS will be created to reach 8,000 farmers through a phased approach.

41. International and national TA will be provided to establish the FFS approach, including a district-level system for quality control. These pre-project activities will include curriculum development, identification and training of trainers and identification of the initial groups. Each master trainer will train approximately 25-50 farmer facilitators. While not involved in the running of FSS, DACs and staff of the County PIU may also be trained as facilitators to strengthen their role in the monitoring and management of the process.

42. **Basic revitalization of cocoa plantations.** Approximately 8,000 ha of cocoa plantations will be revitalized during PY1 to PY5, at approximately one ha per farmer. The basic revitalization of plantations consists of four activities: (i) under-brushing, sanitation and pruning, which will be undertaken by farmers, using the *kuu* groups; (ii) adjusting shade, which will be undertaken by skilled power-saw operators; (iii) gap-filling and partial replanting, undertaken by the kuu groups themselves using seedlings produced in their village nurseries; (iv) capacity building of farmers in crop husbandry, disease control, harvesting and post-harvest handling. The cost of revitalization[24] includes: (a) tools for the *kuu* groups and their labour, (b) seeds and equipment for setting up village nurseries and production of seedlings, (c) training sessions in crop production, plant protection, harvesting and post-

[23] Detailed description of the Components in Appendix 4.
[24] The matching grants will be used to finance external inputs, planting material and equipment (valued at 60% of the investments), while farmers will provide labour and some local materials (valued at 40% of the investments).

harvest handling; and (d) other equipment and inputs, in particular for disease control. Labour will be considered as an in-kind contribution of the beneficiaries.

43. Considering the high cost of grafted cocoa from commercial suppliers, as well as the risk that free seedlings are not always valued by farmers, village nurseries will be established and managed by the FFS, seeds and small equipment provided, caretakers trained and the seedlings produced for replanting of over-age plantations and gap filling in existing plantations. Until suitable germplasm for grafting has been identified, the replanting will be based on hybrid seeds to be purchased from the nearest sources. Also suckers of banana/plantain and other crops could be multiplied through the FFS. For food and quick income before cocoa comes into production, the TCEP will encourage farmers to interplant their cocoa with plantain, potato, and other annual food crops, which will simultaneously increase the role of women. Banana/plantain are also commonly used for temporary shading of young cocoa trees in West Africa, and are an additional source of income.

44. **Enhanced revitalization of cocoa plantations.** After the basic revitalization in PY1, support will be provided to the *kuu* group/FFS to achieve the enhanced revitalization level with yields up to 1,000 kg per ha (1 kg of cocoa per stem). It is expected that approximately 75% of the cocoa farmers will reach this level. The following support will be provided:

i. support to village nurseries, using improved planting material; a training programme on the improvement of cocoa farms through grafting and the use of hybrid seedlings, for a continuous gradual replacement of stems (5% per annum) and for replanting;

ii. further support to climate change resilient extension services, using FFS techniques, will focus on: (a) revitalization techniques, shade management and pruning, (b) good crop husbandry practices, pest and disease control, use of fertilizer (green and other); (b) good practices in post-harvest handling, fermentation and drying in order to obtain premium quality and prices;

iii. enhanced crop protection; the application of insecticides and fungicides the mechanism of training and equipment of specialized operators; the potential of biological methods will be explored; enhanced disease control should also contribute to better quality cocoa;

iv. promotion of fertilizer use for interested farmers, who will receive one bag of fertilizer to verify the yield response. If positive, the use of three bags per ha per year will be recommend; input supply linkages will be developed with cooperative and PSP support.

45. **Restocking / replanting of cocoa plantations.** Approximately 2,000 hectares of the 10,000 ha of cocoa will be replanted, at 0.5 to 1 ha per farmer. This support will be targeted to at least 30% women and 50% young farmers, in addition to farmers who have been managing their plantations well. Selected farmers will be provided with hybrid or grafted seedlings through the village nurseries, while additional training will be provided. The same implementation mechanisms as for the enhanced revitalization will be adopted.

46. **Improving post-harvest handling and quality**. For marketing of cocoa, the *kuu* group/FFS will enter into contractual agreements with district cooperatives or PSPs. The PSP/cooperative will (i) ensure marketing of produce at an agreed minimum price, currently at least 75% of the ICCO price for grade 1 cocoa, (ii) provide market information to farmers. In addition the FFS will work on all relevant issues related to post-harvest handling, fermentation and drying. The Project will subsidize solar dryers for individual farmers.

47. **Germplasm garden**. The TCEP will support the establishment and operation of a combined germplasm and seed station in Nimba County so as to guarantee availability of improved planting material for farmers, village nurseries and privately-owned nurseries needed for the revitalization and replanting of large areas of cocoa farms as envisioned by the Project and that can identify germplasms better suited to the local hotter climate conditions. This will also be the main centre for collection, screening and multiplication of improved planting material that is well adapted to changing climatic conditions predicted for the cocoa belt. Support will be provided to establish regional

partnerships for the exchange of germplasm, e.g. with Ghana, Côte d'Ivoire, Cameroun and Nigeria. The Central Agricultural Research Institute (CARI) could supervise the setup and running of the seed garden; alternatively, the Center for Women Agriculture Programme (CWAP) in Saclepea, Nimba County, could be involved so as to ensure its sustainability.

Component B: Rehabilitation and maintenance of roads

48. The expected outcome of Component B will be "improved access to markets and reduced transportation costs".

49. **Rehabilitation of roads**. Approximately 200 km of farm-to-market roads will be rehabilitated. These improved roads will encourage farmers in landlocked and remote rural areas to undertake the revitalization of their plantations and private traders to organize buying of cocoa. The selection of roads will be based on a multi-criteria ranking exercise, which takes into account the targeted farmers under TCEP, the priorities from the Nimba CDA and parameters evaluating the technical and economic feasibility of each road segment. Roads will be rehabilitated using the standards and specifications from the Feeder Roads Design Manual (FRWD), developed by the Ministry of Public Works (MPW). TCEP will, in line with the approach of MPW, adopt Labour-based work methods as championed by the International Labour Organization (ILO)[25]. These methods seek to maximize the use of local labour and materials, thus creating employment opportunities and increasing local participation in road development. Most roads will be low-volume (less than 50 vehicles per day) gravel roads. Specific attention will be given to the appropriate design of drainage structures, which are of crucial importance for the sustainability of these type of roads and will render them more climate resilient. Climate vulnerability appraisal suggests that rain intensity will remain stable or will decrease in the coming years. Then no specific climate proofing works are necessary: resilience of the infrastructure to the current climate will be sufficient.

50. TCEP will use the implementation mechanism developed by STCRSP, namely: (a) recruitment of engineers in the County-PIU that will be responsible for preparation of tender documents, supervision of works and putting in place a maintenance programme; and (b) support to the MPW in order to undertake supervision missions. Private companies will be contracted through a competitive process for the works, making use of the Contractors Classification and Certification System developed by MPW. The Environmental Protection Agency (EPA) will be responsible for assessing the environmental impact, which will be limited as only existing roads will be rehabilitated.

51. **Maintenance of roads**. Maintenance of roads is crucial to the sustainability of investments and impact. Development of a sustainable road maintenance system including a financing mechanism is a long-term effort with multiple development partners involved. TCEP will build on the work of MPW in collaboration with SIDA, GIZ and the ILO, and adopt a three-pronged approach:

i. capacity building in road maintenance. TCEP engineers will train local youth to be employed on a cash-for-work basis, and will provide necessary tools. Where required, technical assistance will be provided to contractors on the use of labour-based work methods;

ii. improvement of the roads maintenance strategy, including development of a sustainable financing mechanism, building on the achievement of a SIDA-funded project in the County. TCEP will engage technical assistance;

iii. transitional financing of maintenance on a cash-for-work basis by local communities. In the initial years after rehabilitation, TCEP will finance routine maintenance of rural roads until a sustainable financing mechanism has been developed.

Component C: Service provision for cocoa value chain development

52. The expected outcome of Component C will be: "improved service provision to cocoa farmers for value chain development".

[25] See http://www.ilo.org/global/topics/employment-intensive-investment/

53. **Strengthening cooperatives of cocoa farmers.** In order to ensure the sustainability of the revitalization efforts and access to markets and to inputs, selected cooperatives will be strengthened and linked up with the kuu groups and FFS. The main innovation in the field of cooperative development are: (a) the bottom-up approach, based on the grassroots level kuu groups; (b) the elaboration of a long-term growth path for institutional capacity building of grassroots groups and cooperatives, combined with an enhanced focus on transparency and accountability of cooperatives in particular with respect to cocoa prices paid to their members, (c) the use of performance-based partnership agreements in terms of marketing and other services delivered. The institutional screening by SCOPEinsight will be used as baseline and will be updated regularly in order to monitor institutional progress towards economic sustainability and to provide tailored support. The approach with SCOPEinsight includes identifying capacity gaps in the current cooperative trainings and developing the training curriculum.

54. The TCEP will select cooperatives in the selected districts according to: (i) willingness to work with the FFS and kuu groups; (ii) financial transparency, in particular with respect to the cocoa price paid to farmers; (iii) acceptable internal democracy and governance; (iv) open for new members, in particular youth, women and EVD survivors. After the selection of the cooperatives, Memoranda of agreement will be signed. The following activities will be eligible for Project financing: (i) institutional audits, business plan development and monitoring of implementation; (ii) institutional capacity building in cooperative and financial management; (iii) development of linkages to financial services, input suppliers and markets; (iv) support in terms of equipment and infrastructure; (v) development of an internal technical extension capacity, in particular in the field of FFS; (vi) development of marketing capacity; (vii) decreasing operational support, mainly staff and operating costs.

55. **Institutional capacity building of public services**. Institutional support will be provided to the Ministry of Agriculture (MOA) at county and district levels, in particular the services that will be involved in the implementation of the Project. The County Agricultural Coordinator (CAC) and District Agricultural Offices (DAOs) will be enhanced in areas of tree crop development and monitoring of Project activities. In complementarity with the interventions of other donors, the Project will provide training to key frontline staff, office refurbishment, equipment, and vehicles/motorcycles based on needs identified. The Project will also assist the Tree Crops Division of MOA to review guidelines and recommended best practices, produce standard operating procedures, and provide specialised training in tree crop management for qualified decentralised officers.

56. TCEP will provide support to build the institutional capacity of the Cooperative Development Agency (CDA) at County level.

57. The Liberia Agriculture Commodity Regulatory Authority (LACRA) will be supported to build its institutional capacity at central and Nimba County level. The support will include office equipment, a motorcycle and the deployment of a Young Professional (YP). LACRA will be contracted to ensure that the cocoa from the selected cooperatives and groups accords with international standards.

58. **Policy dialogue (ASAP)**. Within the ambit of the new LACRA Act (when enacted) and the REDD+[26] policy development in Liberia, the TCEP in collaboration with other development partners will support a National round table on climate friendly cocoa, and the potential expansion of cocoa production towards the wetter counties as part of a country-wide climate change adaptation strategy. Other items that could be discussed: (a) switching to farm gate pricing with a prescribed minimum; (b) stimulating the cocoa sector through quality premiums and enforced minimum standards; (c) bilateral agreements with Ghana and Côte d'Ivoire for technical exchanges, exchange of germplasm, multiplication strategies, control of diseases and child labour issues.

59. **Institutional capacity building in climate change resilience (ASAP)**. The TCEP will mobilize national and international technical assistance in order to (i) mainstream climate change resilience in all the tools, manuals, approaches and procedures, used by the Project and MOA; (ii) participate initially in the definition of the protocols for farm revitalization to ensure that climate

[26] United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation .

resilience is taken into account; (iii) monitor training programmes of the FFS with respect to climate change; (iv) prepare and organize training of trainers (TOT) for all institutional partners of the Project at local, district, county and national levels in topics related to climate change and diversification; (v) provide support for the setting up of a seed garden in Nimba County including the collection of promising local germplasm from farmer fields and the production of planting material for farm diversification and shading; (vi) provide training in the improvement of cocoa trees through grafting including the identification of suitable materials.

60. **Monitoring of climate change resilience and deforestation (ASAP).** In order to mitigate the risk of deforestation, the Project will introduce a simple land use planning and monitoring tool to serve as a safeguard against the risk of cocoa farming directly or indirectly causing deforestation, which might jeopardize the positioning of these products on international markets that become ever more demanding in terms of environmental sustainability as well as Liberia's prospects in international Reducing Emissions from Deforestation and Forest Degradation (REDD+) negotiations. This activity will be implemented by a national or international NGO with experience in remote sensing and geographical information systems. It will conduct planning workshops with the communities participating in the project, map main land uses (especially forest/non-forest) of the community lands on the basis of satellite images, and monitor forest encroachment and deforestation in the target communities of the project. It will involve agreements between communities and the project about forest conservation and the non-encroachment of agriculture into forest, either by project beneficiaries or non-beneficiaries.

Component D: Project coordination, management and M&E

61. The objective of Component D is to ensure an effective operational planning, implementation, monitoring and evaluation, and knowledge management of the TCEP. The existing PMU/PIU structure used in the STCRSP will be maintained and complemented by a County-PIU in Sanniquellie, Nimba County. Details are presented in Chapter III, Appendix 5 and 6.

D. Lessons learned and adherence to IFAD policies

62. The TCEP design was guided by experiences from the IFAD co-financed STCRSP in Lofa, including past supervision missions, mid-term review, sectoral information, interviews and other cocoa development experiences in West-Africa. Key lessons are the following:

i. strengthened farmer-trader agribusiness linkages and involvement of PSPs are the catalyst to bring about the change needed in productive capacity, productivity and quality of cocoa through appropriate crop husbandry, post-harvest handling, planting material and inputs;

ii. an enhanced focus on quality aspects; the ongoing projects did a good job training farmers in grades and standards for cocoa; however, these need to become the norms of the subsector that oblige farmers to deliver quality produce; support is planned for LACRA;

iii. a functioning supply chain for new cocoa genetic material is a key success factor for long-term development, including a germplasm programme, a germplasm station in Nimba combined with village nurseries; the genetic material supply chain will include locally produced seeds and seedlings as well as imported germplasm;

iv. the partnership agreements with cooperatives will take into account aspects related to transparency and accountability of the cooperatives; cocoa prices paid to farmers in relation to the margin of cooperatives are a core performance indicator; the representatives of the target groups at grass-roots will be empowered for ownership and should reduce side-selling;

v. market information has begun to find its way into the villages; however, it does not always appear to be moving to the grassroots association members efficiently; the grassroots level will be enhanced to ensure that farmers are aware of price and market information; this will bring transparency, trust and build confidence amongst farmers in the association and encourage improving their produce quality;

vi. TCEP will do much more for gender equity with an aggressive approach to bring about the needed changes in the rural livelihood systems; ensure that women are involved, especially as they are the principal source of agricultural labour.

63. The design of TCEP is compliant with the relevant IFAD policies, including IFAD's Strategic Framework 2011-2015, Rural Enterprise Policy, Private Sector Development and Partnership Strategy, Rural Finance Policy, Gender Policy, Youth Policy Brief, Targeting Strategy, and the Social, Environmental and Climate Change Review Policy. Compliance with these policies is discussed in Appendix 12. The SECAP note is presented in Appendix 14.

III. Project implementation

A. Approach

64. The duration of the TCEP will be 6 years. The approaches and manuals, developed under STCRSP, will be updated and its implementation arrangements will be harmonized with those of TCEP. The TCEP will build on the existing expertise and human resources of the STCRSP.

65. The TCEP will adopt a value chain approach to link cocoa farmers, organized at grassroots level in kuu groups and FFS, to cooperatives and PSPs. The main innovations in the TCEP design with respect to STCRSP are: (a) the organization of farmers at the grassroots level in order to enhance their bargaining power in the value chain, (b) the integration of climate change resilience and related institutional capacity building; (c) additional focus on the supply chain for new genetic material of cocoa; (c) additional focus on post-harvest aspects and product quality; (d) additional focus on services delivery by the cooperatives to their members; (e) the combination of basic revitalization with enhanced revitalization and replanting, (f) additional focus on measures to include women and promote their access to benefits; and (g) institutional monitoring of coops on the basis of a long-term development strategy.

66. The basic revitalization and replanting will take place in PY1 to PY4; the development of the value chain linkages, as well as additional focus on crop husbandry and post-harvest handling will be undertaken from PY1 to PY6. Replanting will be undertaken from PY2 to PY4. The underlying idea of basic revitalization is to bring cocoa yields to at least 400 kg per ha, a stage that is expected to be reached by 2,000 farmers (25%), while 6,000 farmers (75%) will reach yields of 1,000 kg/ha. Further yield increases to 1,000 kg of cocoa per ha will result from services developed by the *kuu* groups and cooperatives with project support. The financial models (see chapter IV) indicate that the targeted yields are required to ensure a financial viability of a cocoa smallholder farm with a minimal level of professionalism. Regarding the supply chain of improved planting material, the Project will shift to grafted seedlings for cocoa as early as possible and only purchase hybrid seedlings at the beginning until suitable material for grafting has been identified and some people for grafting have been trained in the various FFS. The use of village nurseries will bring the cost down and be more sustainable than purchasing seeds from abroad.

67. The rehabilitation of roads will take place in PY2 and PY3. Preparatory works will start already in PY1.

68. Regarding Component C, the approach to enhance the institutional capacity of cooperatives will be less supply-driven, more bottom-up, while defining also clear responsibilities of the cooperatives in their partnership with the Project and with the grassroots groups. Previous mapping and capacity assessments of farmers' cooperatives in Liberia have lacked sufficient discrimination on which to select for project inclusion. The TCEP will benefit from the assessment of coops in Nimba by SCOPEinsight.

B. Organizational framework

69. The Ministry of Agriculture (MOA) is designated as Lead Project Agency for TCEP. The MOA shall have the overall responsibility for implementing the Project and shall ensure linkages to other

relevant Ministries and Agencies. The Lead Project Agency will work closely with the CDA and LPMC/LACRA under their respective mandates.

70. The National Steering Committee (NSC) of STCRSP will also serve as NSC for TCEP. The NSC shall orient the strategy of the Project, oversee planning, review progress and impact and ensure linkages with related projects, government services and relevant value chain stakeholders. The PMU will be the secretariat of the NSC.

71. The Programme Management Unit (PMU), which is anchored to the Planning and Development Department of MOA, is in charge of implementing all donor funded projects in agriculture. Within the PMU, the coordination, management, monitoring and evaluation of TCEP will be under the responsibility of the Project Implementation Unit (PIU) in Monrovia that has responsibility for all IFAD-funded projects in Liberia. The IFAD-PIU will ensure day-to-day management of TCEP. In addition, the TCEP will also establish a County PIU in Sanniquellie, Nimba County.

72. The main implementing partners (IP) of the TCEP will be: (a) the selected cooperatives who will engage in business agreements with the *kuu* groups and FFS; (b) at least two PSPs, who will engage in PPPs with the Project and the cooperatives; (c) the Central Agricultural Research Institute (CARI); (d) other specialized service providers, including national and international consulting firms and NGOs, commercial financial institutions and others.

73. At the County level, the TCEP will liaise with the decentralized establishment of the MOA and CDA. The County Agricultural Coordinator (CAC) and District Agricultural Officers (DAOs) will monitor implementation of Component A and C. The capacity of the CAC and DAOs in the targeted counties will be strengthened to ensure: (i) overall project monitoring and data collection, oversight and guidance; (ii) technical support to the cooperatives, kuu groups and FFS. The County resident engineer (CRE) will liaise with the Project for implementation and monitoring of Component B. A MOU will be signed with the Project in order to define roles and responsibilities.

Revitalization of cocoa plantations (Component A)

74. The FFS officer of the County PIU will coordinate the establishment of kuu groups and FFS and mobilize the required international and national technical assistance to develop the tools and build the required capacity. Partnership agreements will be signed with these kuu groups and FFS, which will specify mutual responsibilities and roles in revitalization and replanting of cocoa farms, setting up and management of FFS and village nurseries, as well as activities related to post-harvest handling.

75. In order to facilitate market linkages for the FFS and kuu groups, to improve transparency of pricing and to create awareness and capacity on cocoa quality, drying and fermentation, the TCEP will establish partnerships with at least two PSPs and some district cooperatives. The selection of PSPs will be done competitively on the basis of Invitation for Expression of interest. The selection criteria for the PSP will be: (i) willingness to co-finance the TCEP and enter in agribusiness agreements with the selected cooperatives and groups; (ii) have the capacity to work with cocoa smallholders and the required professional, technical and logistical support; (iii) the company must have officially registered in Liberia. The agreement will be explicit with regards to the role of each party and the terms of the contracts (the amount of investment, the modalities of delivering inputs and services, the cocoa prices at farm gate, connected to the quality and the payment delays/conditions) between the cooperatives, FFS and PSPs to avoid misunderstanding and possible misconduct from both sides. The agreement will specify the minimal price to be paid for cocoa (currently at 70% of the ICCO price for grade 1 cocoa). A transparent complaints mechanism will be established to encourage mutual trust and confidence.

76. The Project will sign an Agreement with the Central Agricultural Research Institute (CARI) for all issues related to the provision of improved planting material, germplasm screening, the development of a seed station in Nimba, as well as backstopping to village nurseries and TOT.

Rehabilitation and maintenance of roads (Component B)

77. For rehabilitation and maintenance of roads, the TCEP will use the same implementation mechanism as the STCRSP. The TCEP will engage the services of local contractors via open or restricted tendering. In preparing the bid documents, TCEP will take note of the capacity of community residents to undertake road works (line culvert construction, road side brushing etc.) and ensure contractual provision for their employment.

78. The Project civil engineers (PCE) and the procurement team of PIU will: (a) make an assessment of roads for design of rehabilitation works; (b) prepare the tender documents; (c) assist in the procurement process; (d) facilitate preparation of contracts; (e) supervise works and prepare progress reports; (f) assist the County resident engineer (CRE) where needed to support implementation of Component B.

79. The County resident engineer (CRE) will: (i) participate to the selection of roads jointly with the TCEP civil engineers; (ii) work in collaboration with a service provider for the training of the selected contractors; (iii) with the TCEP engineer, organize the maintenance system through the establishment of maintenance committees at village level, the training of youth and local contractors in maintenance, the provision of maintenance tool kits, and the overall supervision; (iv) conduct regular site visits and maintain an updated database of roads in the County; and (v) provide quarterly reports to the Monrovia PIU on activity progress and associated indicators.

80. If environmental permits will be issued for the whole project and not individual components of the Project, then local contractors can benefit from contract awards via coordination between MOA, TCEP Engineers and MPW. Local contractors must satisfy the current guidelines being utilized by MOA/IFAD STCRSP – Lofa (Business registration, MPW road works certificate, updated tax clearance, etc.).

Service provision for cocoa value chain development (Component C)

81. The selected cooperatives will sign annual performance-based Memoranda of Agreement with the Project, so as to provide market access and services to the kuu/FFS groups. Public or private service provider could be contracted to ensure institutional capacity building. International expertise will be procured to ensure monitoring of the institutional learning and development curve of the targeted cooperatives.

82. The Project will procure the services of international and national consultants in order to (i) mainstream all issues related to **climate change resilience** in activities and protocols; (ii) organize capacity building and training of trainers in all partner institutions; (iii) facilitate the organization of the National round tables.

83. For the activity on **deforestation mapping**, the Project will contract an NGO with experience in participatory mapping and GIS. This NGO will hold initial meetings with each community that intends to participate in the project to agree on zero-deforestation of old-growth and protected forest. The community will then be responsible for ensuring that no encroachment of agriculture into these forest areas occurs. This will be monitored through periodic visits by the NGO staff. All maps will be included in a GIS where the supported farm sites, rehabilitated roads and other relevant information of the project can be collected.

Partnerships with other initiatives

84. The Project will develop partnerships with other on-going initiatives in cocoa value chain development in Nimba County, in particular the LIFE project and the World Bank STCRSP, and build on their knowhow.

85. **STCRSP (financed by World Bank)**. In order to guarantee complementarities and avoid overlaps, the following measures are proposed: (i) a strong coordination mechanism between the TCEP and STCRSP at the level of the PMU and at the level of the County PIU; (ii) an harmonization

of implementation arrangements; (iii) sharing of lessons learned; (iv) no geographical overlap in districts, as TCEP will not intervene in the four STCRSP districts.

86. **LIFE Project.** ACDI/VOCA has implemented a series of three USDA-funded projects known as LIFE I, LIFE II and LIFE III[27] since February 2008. LIFE III will run until September 2016 and is targeting 26,200 cocoa farmers in the Counties Bong, Nimba, Lofa, Gbarpolu, Grand Gedeh and River Gee. Similarly to the IFAD-financed STCRSP, the focus of the LIFE projects has been initially on access to improved planting materials (hybrid seedlings) and the application of good agricultural practices. They also integrated FFS, solar driers and partnerships with cooperatives. Their work on quality improvement resulted in farmer prices increasing on average 300% from 2007/8 to 2012/13.

C. Planning, M&E, learning and knowledge management[28]

Planning

87. The Monrovia PIU will consolidate an Annual Work Plan and Budget (AWPB) for each project year, on the basis of proposals from the County PIU. The AWPB will include: (i) a detailed description of planned project activities during the coming project year, and the sources and uses of funds thereof; (ii) an 18-months procurement plan for items to be procured through IFAD financing, and (iii) indicators and associated targets extracted from the logical framework. The draft AWPB will be submitted to the National Steering Committee (NSC) for clearance and then submitted to IFAD for comments and final non-objection. If required, the PMU/PIU may propose adjustments in the AWPB during the relevant project year.

Monitoring and evaluation

88. The logical framework of TCEP will form the basis for measuring outputs, outcomes and impacts of the Project. The results of the TCEP (together with other donor programmes focusing on agriculture) will then feed into the MOA subsector contribution to the national Agenda for Transformation (AFT) M&E system. The TCEP M&E system will take targeting of women and youth into account by, as a minimum, disaggregating data by gender and age. Furthermore, indicators will be developed to measure results of specific activities targeting the most vulnerable segments of the target population (youth, women, war wounded and survivors of EVD).

89. Baseline data will be collected prior to project implementation to ensure an effective M&E system is developed, and that results are closely monitored to continuously improve outreach, relevance and effectiveness of the interventions. To this end, SCOPEinsight[29] has carried out in June 2015 an assessment of 15 cocoa/coffee cooperatives in Nimba and Bong counties to diagnose capacity gaps in order for the project to better develop tailored training curricula to specific needs identified. This exercise will be repeated in PY3 and PY6 of TCEP. Furthermore, the PMU has reached out to the CARI to carry out a mapping exercise of cocoa/coffee farms in Nimba County with which the project will potentially work[30]. Finally, TCEP will apply IFAD standard reporting procedures during implementation, and amongst other activities, will conduct a RIMS baseline, mid-term and completion survey of beneficiary households (including socio-economic indicators), complementing such effort with existing secondary data.

90. Monitoring and evaluation will be undertaken at multiple levels (central, county and district level) and by multiple stakeholders (MOA, CAC, CDA, DACs, coops, PSPs, etc.) to support effective implementation, and will be RIMS compliant and aligned with MOA's M&E system. M&E indicators

[27] Livelihood Improvement for Farming Enterprises (LIFE)
[28] Detailed description in Appendix 6.
[29] SCOPEinsight is an independent rating agency based in the Netherlands that assesses the business potential of farmer organizations in agriculture, dairy, forestry and aquaculture in developing countries.
[30] MOA/PMU is exploring other partnerships that could support the implementation of M&E activities under TCEP (i.e. YPs; LISGIS; County Community Colleges).

have been developed during project design and will be further refined as project activities become more detailed.

91. Forest cover and forest deforestation risks will be monitored on TCEP target areas through a GIS (ASAP).

Learning and knowledge management

92. Knowledge management (KM) plays a central role in IFAD's scaling up agenda. However, IFAD-supported projects in Liberia have thus far been performing relatively weakly in this area. In fact, they do not have a well-defined knowledge management strategy, nor have KM roles and responsibilities been clearly assigned at various levels. There has been some degree of knowledge sharing amongst different projects in Liberia, and with other IFAD-supported project in the region (i.e. Sao Tome exchange visit), but this has been done in an ad hoc and informal manner. For this reason under TCEP specific attention will be given to KM by developing, at project start-up, a KM action plan. This plan will outline activities to be undertaken, as well as roles and responsibilities of project staff and IPs, to ensure that the high quality data collected through the M&E system forms the basis for in-depth analysis and the creation of knowledge products to build the evidence-base for contributing to the policy dialogue on the cocoa subsector.

D. Financial management, procurement and governance

Financial management[31]

93. A remote Financial Management Assessment (FMA) has been undertaken as part of programme design. The objective of FMA is to provide assurances that the Lead Project Agency (LPA), the Ministry of Agriculture (MOA), will have sufficiently strong financial management systems and controls in place to properly manage, control and report on programme finances. The FMA involves assessing: (i) the inherent risk at country level which was found to be medium; and (ii) the project specific risk which is expected to be low after proper implementation of mitigation actions.

94. According to the latest Public Expenditure and Financial Accountability (PEFA) Assessment conducted in 2012, Government of Liberia (GOL) has made significant improvements since the previous assessment (2007) but the overall state of the Public Financial Management (PFM) remains moderately weak. Main improvements have taken place in areas such as revenue administration, arrears, debt management, procurement, and accounts reconciliation. In addition, on-going reforms in internal audit, budget classifications and chart of accounts, and in the implementation of the IFMIS are likely to yield further improvements in the short to medium term. Yet, significant deficiencies remain in the GOL's PFM system, including accounting, recording, and reporting and external scrutiny and audit, which can only be addressed through steady and continuous implementation of PFM reforms. To mitigate the inherent risk, the proposed programme will take advantage of the PMU and the IFAD PIU under the MOA with an established track record in implementing IFAD Projects. In 2015, the PIU showed moderately satisfactory performance with regards to Financial Management and according to the risk assessment the PIU was rated as medium risk. Project Audit reports have been received with minor delays and have been unqualified.

95. **Use of country systems.** At present very few donors are channelling funds completely through the country PFM systems, due to concerns about the strength of fiduciary controls. Most projects are stand-alone projects and do not rely on government financial management or procurement systems. IFAD will follow the same approach and use a special implementation unit imbedded in the MOA. The PIU will follow IFAD financial management and procurement guidelines and procedures. IFAD may decide to adopt national procedures to the extent that they are compatible with IFAD procedures and standards.

[31] Detailed description in Appendix 7.

96. **Financial management system.** The PIU will integrate TCEP in the existing financial management system including records, accounts and preparation of related financial statements in accordance with accounting standards acceptable to IFAD. The Financial Statements will be audited in accordance with international auditing standards. The Audited Financial Statements for each period shall be furnished to IFAD not later than six (6) months after the end of the project fiscal year.

97. **Disbursement arrangements**. Disbursements under the TCEP will follow IFAD's disbursement guidelines. Direct Payment and Designated Account methods, as well as Statement of Expenditures (SOE) mechanism will apply as appropriate. SOE thresholds will be established based on risk criteria and specified in the Letter to the Borrower. Two designated accounts, one for the IFAD loan and one for the ASAP-grant will be opened in the Central Bank of Liberia (CBL) to facilitate payment for eligible expenditures. The signatories to the designated accounts are foreseen to be as follows: Category A: Deputy Minister for Administration (MOA) and Director for PMU; Category B: Project Coordinator and Financial Controller (IFAD-PIU). Similarly it is foreseen that the Withdrawal Applications will be approved by a representative of the Ministry of Finance and PMU (Project Coordinator and Financial Controller). All payments to service providers will be handled through bank accounts. Payments at field level, if any, will be made through bank transfers to minimize the use of petty cash transactions. Disbursement procedures will be described in detail in the Administrative, Accounting and Financial Manual, Letter to the Borrower and the IFAD Disbursement Handbook. The allocation of the Designated Account will cover approximately six months expenditures. The minimum value of applications for replenishment is 30 % of outstanding advance made to the designated account.

98. **Conditions for first withdrawal.**, The following conditions related to financial management are to be met before the first withdrawal can be realized:

i. IFAD has received from the Minister of Finance a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s);

ii. IFAD has received documentation evidencing the opening of (a) the bank accounts designated to receive IFAD Loan and grant proceeds in advance; and (b) the project accounts in local currency with advice of the persons/titles authorized to operate these accounts;

iii. Key staff including the Project coordinator, Finance controller, and Procurement officer have been duly appointed;

iv. An updated Project Implementation Manual including the Financial Administration and Accounting manual, has been approved by IFAD;

v. The IFAD no-objection on the first AWPB and procurement plan for the first 18 months of the Project has been obtained.

vi. The MOU format to be used with the Implementing partners has been approved by IFAD.

99. **Flow of funds.** Two Project Designated Accounts, one for the IFAD loan and one for the ASAP-grant will be opened in Central Bank of Liberia. It is not envisaged to open an operational account in Liberian Dollars as all transactions will be effected in US$. However, there will be two operational accounts in US$ opened in a commercial bank acceptable to IFAD.

100. **Counterpart funds.** Government co-financing for TCEP will be limited to payment of taxes and duties, and office facilities. Full tax exemption from import duties and taxes will be provided for all purchases under TCEP. Consequently, no cash contribution will be required from Government. The application of this general approach will be subject to ongoing monitoring of the tax policies and how taxes will be applied to TCEP.

101. **Budgeting arrangements.** The government fiscal year runs from 1st July to 30 June. The budgeting process to develop the AWPB will be clearly defined in the updated FM Manual. Project transactions will be recorded in the accounting software to ensure the comprehensiveness of the

budget execution reports. The AWPB will be submitted to IFAD's non-objection at 2 months before the beginning of the fiscal year, in a format acceptable to IFAD.

102. **Accounting policies and procedures.** Accounting software in use in PIU for on-going IFAD-financed projects will be customized to meet project needs and generate IFRs and financial statements. Project accounts will be maintained on a cash basis, supported with appropriate records and procedures to track commitments and to safeguard assets. Annual financial statement will be prepared by the PIU in accordance with International Public Sector Accounting Standards (IPSAS – cash basis). Accounting and control procedures will be documented in the Administrative, Accounting and Financial Manual. To this effect, the existing Financial Manual will be updated as necessary.

103. **Reporting and monitoring.** Interim un-audited Financial Reports (IFRs) will be prepared by the PMU, integrating financial information from the County office, if any. The IFR will include sources and uses of funds by project expenditures classification. It will also include a comparison of budgeted and actual project expenditures (commitment and disbursement) to date and for the quarter. The PMU will submit copies of the IFRs to IFAD within 45 days following the end of each quarter.

104. The PIU will produce Annual Financial Statements, in accordance with International Public Sector Accounting Standards and IFAD requirements. The financial Statement will include at least the following reports: i) sources and uses of funds by financier ii) incurred expenditures by component and financier, iii) actual expenditures vs budgeted expenditures by financier by component, iv) designated account reconciliations, v) Statement of Expenditures - Withdrawal Application Statement, vi) a fixed asset register, and vii) implementing partner report disclosing expenditures incurred by the different implementing partners and any advances still unjustified. The PMU will produce quarterly progress reports detailing both technical and financial progress, including: budget to actual statements, including explanations of variances; analysis of physical and financial progress achieved as compared to project completion stage; and comparative analysis of physical results achieved vs. planned objectives.

105. Implementing Partners will submit quarterly financial reports on both physical and financial progress. In addition, they will provide the PMU with monthly expenditure reports by expense category, and by activity, as well as any supporting documentation as required by the PIU so as to facilitate the preparation of withdrawal applications each month, and the preparation of quarterly progress reports.

106. **Audit arrangements.** The Financing Agreement will require the submission of Audited Financial Statements for the PMU to IFAD within six months after year-end. External auditors with qualification and experience satisfactory to IFAD will be appointed to conduct an annual audit of the project's consolidated financial statements. An opinion on the Audited Project Financial Statements in compliance with International Standards on Auditing (ISA) will be required. An opinion on the utilization of the Designated Account, Statements of Expenditures and internal control systems will also be required. The external auditors will prepare a Management Letter giving observations and comments, and providing recommendations for improvements in accounting records, systems, controls, compliance with financial covenants in the Financing Agreement and compliance with previous year's auditors' recommendations.

Procurement[32]

107. Liberia adopted a Public Procurement and Concessions Act in September 2005. The Act does conflict with some Procurement Guidelines of some International Financial Institutions, such as the World Bank. For this reason, Liberia Public Procurement and Concessions Act (2005) has not been accepted for use as a Country Procurement System by the World Bank. Most donors, therefore, make use of their own procurement rules and guidelines and not Liberia's public procurement system. While progress has been made since the establishment of the Public Procurement and Concessions Commission (PPCC) in 2006, weak government capacity to manage the procurement process

[32] Detailed procurement arrangements are outlined in Appendix 8.

remains a challenge. Challenges also remain in implementing the procurement law to improve compliance and ensure transparency. Support for building capacities is critical to advancing progress in this area, and it is known that several partners plan to scale their support to public procurement through increased support for training and capacity building at the ministries' levels.

108. Procurement for the proposed Project will be carried out in accordance with IFAD Procurement Guidelines. Each contract to be financed by IFAD proceeds will be included in the Project Procurement Plan (PPP) prepared by the PMU and agreed with IFAD. Regardless of the type and value of the contract, the PMU will be responsible for carrying out procurement. As a procuring entity for the TCEP, the PMU will establish a procurement unit in charge of, inter alia, procurement planning, handling of the bidding process, conducting bid openings and evaluations of bids, and contract monitoring. A Procurement Committee will be established at the PMU to review and/or approve the following documents or actions: procurement plan, draft advertisements and bidding documents, evaluation reports and contract award recommendations, rejection of bids, contracts or contract amendments above pre-defined thresholds.

Governance

109. In the Transparency International's Global Corruption Perception Index (CPI) for 2014, Liberia was ranked as 94th country in the world on a total of 175 countries. Its rating was 37 in 2014, compared to 24 in 2008. No specific Governance and Anticorruption (GAC) strategy is included in the design of TCEP as the IFAD threshold is 30. Nevertheless, design includes measures to enhance good governance in implementation.

110. The primary responsibility of detecting fraud and corruption lies with the borrower. However, it should be noted that IFAD's applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive actions in projects financed through its loans and grants. 'Zero tolerance' means that IFAD will pursue all allegations falling under the scope of this policy and that appropriate sanctions will be applied where the allegations are substantiated. This policy applies to IFAD-funded activities whether supervised directly by IFAD or by a cooperating institution. IFAD shall take all possible actions to protect from reprisals individuals who help reveal corrupt practices in its project or grant activities and individuals or entities subject to unfair or malicious allegations.

E. Supervision

111. The IFAD financed activities of TCEP will be directly supervised by IFAD. IFAD will undertake twice yearly supervision to assess project implementation status, in collaboration with Government and partners. In addition, IFAD will be responsible for: (a) reviewing withdrawal applications for IFAD proceeds; (b) reviewing and approving on a no-objection basis all procurement under the Project financed by IFAD funds; (c) monitoring compliance with the Financing Agreement, recommending remedies for any substantial non-compliance; and (d) carrying out all other functions needed to administer the Financing and supervise the Project.

F. Risk identification and mitigation

112. This section identifies the risks with the greatest likelihood of occurring and the highest potential impact on the achievement of the Project Outcomes. The identified risks were used in the sensitivity analysis.

Table 3: Risks and Mitigation Measures

Risk	Implications	Mitigation Measures
Weak governance and institutional capacities, including financial management capacities	Slow disbursement, lower project benefits, delays in implementation	Direct contracting procedures; use of IFAD procurement guidelines; strengthening of training and control systems related to financial management; regular supervision missions; external audits; use of accounting software already in place; technical assistance; ad hoc technical audits; and

Risk	Implications	Mitigation Measures
		well-focused, specific capacity-building plans linked to business plans
Weak cooperatives and weak market linkages.	Farmers will continue side-selling, cooperatives don't offer a competitive price	Kuu groups and FFS in order to enhance the capacity and bargaining power of farmers. Market linkages through PSPs and cooperatives. Institutional support to cooperatives.
Increased disease pressure due to shorter dry season Increasing maximum dry season temperatures	Lower yields and quality, lower revenues	Setting up and training of pesticide application gangs in the cooperatives and the FFS Promoting the use of shade from valuable trees, diversification of farming systems
Increased profitability of cocoa directly or indirectly causing deforestation	Negative impact on the environment, erosion, deforestation	Interventions restricted to existing farms; forest conservation agreements and participatory land use monitoring to control deforestation risks
Increased use of pesticides and fertilizers	Soil and water contamination as well as health risks	Fertilizer application promoted will be in doses too low to cause environmental harm; (bio) pesticides will be applied through specially set up, trained and equipped spraying teams thereby reducing the risk of inappropriate uses.
Planting material not sufficient and not adapted to specific and changing climate conditions	Targeted yields are not obtained.	Setting up of a station for collection, screening and multiplication of seeds and bud woods for grafting
Low quality of cocoa	Lower prices and lower profitability	Introduction of solar driers for individual farmers, combined with solar driers at cooperative level. Implication of LACRA in quality control.

IV. Project costs, financing, benefits and sustainability

A. Project costs

113. Total project costs over 6 years, including contingencies, taxes and duties, are estimated at US$ 30.73 million, as presented in the table below. The core investments will take place in (i) revitalization of cocoa plantations and putting in place the supply chain for improved planting material (component A) with 32.6% of total Project cost; and (ii) rehabilitation and maintenance of access roads (component B) with 33.3%. Component C (capacity building of public and private cocoa value chain actors) will cost 19.8%.

B. Project financing

114. TCEP will absorb the entire 2013-2015 PBAS allocation of US$ 13 million for Liberia under highly concessional lending terms, as well as US$ 4.5 million ASAP grant funding for climate change resilience activities. In addition, US$ 9.1 million from the 2016-2018 PBAS cycle will be allocated to this project, mainly to finance rehabilitation of roads (component B). Further co-financing opportunities will be explored by GOL and IFAD.

115. The IFAD funds will be allocated to (i) the organization of farmers at grassroots level and the revitalization of cocoa plantations; (ii) rehabilitation of roads (Component B); (iii) institutional capacity building of stakeholders (Component C), (iv) project coordination, management, knowledge management and monitoring and evaluation (Component D).

116. The ASAP grant will be used to finance: (a) the in-country production of high-quality, climate-adapted and disease free planting material including through international partnerships, (b) the promotion of farming practices that buffer against the increased climate pressures (higher shade, more intensive plant management including grafting and pruning, income diversification through

various tree crops), (c) the corresponding training to technicians and farmers; (d) the provision of solar driers and the necessary training; (d) participatory land use planning and monitoring based on satellite imagery to ensure that increased profitability of the tree crop sector and improved road access to remote areas do not lead to deforestation; (e) institutional capacity building, policy dialogue and knowledge management in the field of climate change resilience.

117. Government of Liberia will finance taxes and duties on imported goods, and value added tax (VAT) for a total amount of US$ 1.86 million (6.1%).

118. The Private sector partners (PSP) are expected to provide credit of at least US$ 0.96 million. The amount represents their investments in the marketing chain, as well as working capital that could be provided to the cooperatives to buy cocoa.

119. The contribution of farmers is US$ 1.35 million (4.4%) and consists of a 40% contribution in terms of own labour for the revitalization and replanting of cocoa plantations, as well as their contribution to the small solar dryers.

120. The cost of components by financier is presented in the table below.

Table 4: Project costs by component

	(Local '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
A. Revitalization of cocoa plantations								
1. Revitalization of cocoa plantations	351,197	471,836	823,033	3,594	4,828	8,422	57	29
2. Supply of improved planting material	93,045	30,941	123,985	952	317	1,269	25	4
Subtotal	444,242	502,777	947,019	4,546	5,145	9,691	53	34
B. Rehabilitation and maintenance of roads								
1. Rehabilitation and maintenance of roads	638,273	249,683	887,956	6,531	2,555	9,086	28	31
Subtotal	638,273	249,683	887,956	6,531	2,555	9,086	28	31
C. Service provision for cocoa value chain development								
1. Strengthening cooperatives of cocoa farmers	268,362	98,159	366,522	2,746	1,004	3,751	27	13
2. Capacity building of value chain stakeholders	151,865	55,262	207,126	1,554	565	2,120	27	7
Subtotal	420,227	153,421	573,648	4,300	1,570	5,870	27	20
D. Project coordination, monitoring and evaluation								
1. Coordination and management	296,515	40,054	336,569	3,034	410	3,444	12	12
2. Monitoring, evalution and know ledge management	73,929	881	74,810	757	9	766	1	3
Subtotal	370,444	40,935	411,379	3,791	419	4,210	10	15
Total BASELINE COSTS	1,873,187	946,815	2,820,002	19,168	9,689	28,857	34	100
Physical Contingencies	55,983	23,993	79,976	573	246	818	30	3
Price Contingencies	580,486	265,200	845,687	734	324	1,058	31	4
Total PROJECT COSTS	2,509,656	1,236,009	3,745,664	20,475	10,258	30,733	33	107

Table 5: Project costs by financiers

	Private Sector Partner		ASAP		Beneficiaries		IFAD1		IFAD2		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Revitalization of cocoa plantations														
1. Revitalization of cocoa plantations	964	11.1	2,445	28.0	1,352	15.5	3,231	37.0	147	1.7	589	6.7	8,728	28.4
2. Supply of improved planting material	-	-	983	75.3	-	-	261	20.0	12	1.0	48	3.7	1,305	4.2
Subtotal	964	9.6	3,428	34.2	1,352	13.5	3,492	34.8	159	1.6	637	6.4	10,033	32.6
B. Rehabilitation and maintenance of roads														
1. Rehabilitation and maintenance of roads	-	-	-	-	-	-	639	6.3	8,902	87.1	679	6.6	10,220	33.3
C. Service provision for cocoa value chain development														
1. Strengthening cooperatives of cocoa farmers	-	-	15	0.4	-	-	3,609	93.1	-	-	251	6.5	3,876	12.6
2. Capacity building of value chain stakeholders	-	-	1,056	48.0	-	-	1,009	45.9	-	-	134	6.1	2,200	7.2
Subtotal	-	-	1,072	17.6	-	-	4,619	76.0	-	-	385	6.3	6,075	19.8
D. Project coordination, monitoring and evaluation														
1. Coordination and management	-	-	-	-	-	-	3,506	97.3	-	-	98	2.7	3,604	11.7
2. Monitoring, evalution and know ledge management	-	-	-	-	-	-	744	93.0	-	-	56	7.0	800	2.6
Subtotal	-	-	-	-	-	-	4,251	96.5	-	-	154	3.5	4,405	14.3
Total PROJECT COSTS	964	3.1	4,500	14.6	1,352	4.4	13,000	42.3	9,061	29.5	1,855	6.0	30,733	100.0

C. Summary benefits and economic analysis[33]

Project benefits

121. TCEP will have 11,000 beneficiaries of which 8,000 cocoa smallholder farmers, 2,400 additional farmers (30%) who will benefit from spillover effects and approximately 600 jobs along the value chain. Considering an average household size of 5.9 in the project area, this adds up to 64,900 household members. The indirect beneficiaries are households in rural areas, who will benefit from better roads, stronger cooperatives, market linkages, availability of improved planting material and better input supply systems. The Project is expected to lead to increase in cocoa production, marketing and exports as a result of: (a) revitalization of abandoned plantations; (b) replanting of new trees on existing plantations; (d) higher yields at smallholder farmers level thanks to improved production practices promoted through dedicated extension systems; and (e) higher quality of cocoa as a result of improved post-harvest handling and marketing. Benefits from Component B, rehabilitation of farm to market roads will procure access to markets, reduce the time and cost to reach the local market and limit the post-harvest losses due to bad transportation conditions. Regarding Component C, the strengthening of cooperatives will contribute to increase their bargaining power in the setting of price when negotiating with buyers. It will also contribute to the delivery of quality services to cocoa farmers and guarantee the sustainability of the approach, in particular dissemination of improved planting material, extension services, access to inputs and output markets.

Financial analysis

122. The following table summarizes the five (5) financial models that were developed to simulate the interventions of the TCEP. Models 1, 2 and 3 simulate the different scenarios for revitalization and replanting of cocoa plantations (Component A). The fourth model simulates the income, cost and cash flow of a cooperative of cocoa producers (Component C). The fifth model is a small summary of an FFS. Only bananas/plantain was included in the financial models as diversification, because (a) currently no market demand exists for coffee, (b) additional tree crops would deepen the financing gap of households during the first 3 to 4 years, (c) bananas can be harvested already in year 2 and provide additional revenues and food security to the farming households, while increasing the role of women in the farming economy.

123. The financial models are based on information collected by the ongoing IFAD project and the TCEP design team in April and July 2015. The financial crop models capture: (i) increases in cocoa yield, (ii) increases in quality; (iii) increases in prices for higher quality, as well as a better bargaining power of farmers. The yield assumptions are based on information from other projects in Liberia and the region. Cocoa price assumptions are based on World Bank price information and projections (constant 2015 prices). Assumptions regarding grades are based on experiences of ongoing projects.

Table 7: Financial models

	Yields	**Farmers**
Baseline	100 kg/ha	
Model 1: Basic revitalization	400 kg/ha (year 3)	4,000 farmers (50% of those who revitalize)
Model 2: Enhanced revitalization	1000 kg/ha (year 6) (1 kg per stem)	4,000 farmers (50% of those who revitalize)
Model 3: Restocking	1500 kg/ha (year 6).	2,000 farmers

[33] Details are presented in Appendix 10.

Model 4: Cocoa cooperative		1,000 members in year 4
Model 5: Farmers Field School		25 members

124. The table below summarizes the key financial flows (total revenue, total costs, incremental cash flow) of the 4 models over a period of 10 years, as well as key financial performance indicators (IRR, return to family labour, NPV and B/C ratio). The detailed models of revitalization show that the cash flow after financing would be positive from year 1 onwards. In order to achieve this, the Project will use the following tools: (a) a subsidy in kind (seedlings, labour for revitalization, etc.) of 250 US$ per ha and subsidized solar dryers, for which the farmer contributes his/her labour; (b) a subsidized bag of fertilizer as farm-level demonstration in the enhanced revitalization model. The analysis also shows the importance of encouraging farmers to go for enhanced revitalization (NPV of US$ 2,922), compared to NPV of US$ 997 for the basic model. The NPV of the replanting model is even US$ 5,909. Overall, the approach of the project is financially sound. In each of the models, the production of bananas contributed to the incremental cash flow. Models 1, 2 and 3 (replanting) is sound because farmers ensure the bulk of labour and where planting material is provided through village nurseries. Model 5 indicates that an FFS is sustainable after the initial investment phase if members contribute 7 US$ per annum, which is realistic. Farmers cannot afford to pay the initial investment in technical assistance.

Table 8: Key financial parameters of the financial models

			Model 1 (Ha)	**Model 2 (Ha)**	**Model 3 (Ha)**	**Model 4 (Ha)**	**Model 5 (FFS)**
Total revenue	Year 6	US$	717	1,718	2,968	161,875	175
Total production costs	Year 6	US$	176	375	445	38,000	105
Incremental net income	Year 6	US$	403	1,204	2,563	122,625	86
Return to family labour		US$/day	21.5	78	55		
NPV @ 0.1		US$	997	2,922	5,867	237,986	
IRR		%	43%	61%	62%	34%	
B/C ratio			2.49	2.49	2.84	1.76	

Economic analysis

125. An economic analysis has been carried out to assess the economic viability of the project as a whole from the perspective of the country's economy and of the general interest. The analysis was conducted over a 20-year period and in constant 2015 prices. (i) incremental net economic benefits from production and marketing of cocoa and bananas; (ii) the incremental net economic benefits from the cocoa cooperatives that would be supported; (iii) the economic impact of rehabilitation of roads on other farmers (30% or 2,400 additional farmers in the same communities); (iv) environmental externalities; (v) maintenance of roads (3% per annum of initial investment cost. Financial prices and costs and benefit streams derived from cocoa crop models have been transformed into economic values.

126. The Project economic cash flow represents the overall project aggregation. It includes the net incremental benefits of each financial model in economic terms, converted with shadow prices, and multiplied by the number of direct beneficiaries of each category. The net economic incremental benefit from year 8 onwards is around US$ 13.6 million per annum. The decrease of total economic benefits reflects the decreasing future price projections of cocoa.

Table 9: Project economic cash flow

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Incremental net benefit components 1 an	-0.479	-0.390	0.805	5.565	9.013	12.497	11.344	10.844	10.296	9.947
Incremental impact roads (component 2)	0.000	-0.144	-0.117	0.241	1.670	2.704	3.749	3.403	3.253	3.089
Environmental impact	0.027	0.098	0.187	0.297	0.315	0.324	0.333	0.342	0.351	0.360
Total economic benefits	-0.452	-0.436	0.875	6.104	10.997	15.525	15.427	14.589	13.900	13.396
Economic cost project	-4.009	-5.889	-6.987	-7.639	-2.356	-1.541	-0.300	-0.300	-0.300	-0.300
Total net economic incremental benefit	-4.461	-6.325	-6.112	-1.535	8.641	13.985	15.127	14.289	13.600	13.096

127. The ERR of 37.2% over 20 years is profitable from an economic stand point and generates a total of US$ 108.8 million in the same period (social discount factor: 4.3%). The sensitivity analysis indicates a solid resilience to (i) increases in costs due to a combination of risks affecting output prices, yields and adoption rates; (ii) lower adoption rates due to a limited outreach of extension services; (iii) increases of project costs due to higher prices of service providers, road construction and inputs.

D. Sustainability

Social, environmental and climate assessment

128. In view of the targeting of existing farms, the safeguards against indirect deforestation, the measures against environmental risks of the application of agrochemicals, and the careful monitoring of negative social impacts, it is proposed to classify the project as posing moderate socio-environmental risks at this design state, category B. Laws of the Republic of Liberia with regard to social and environmental safeguards will be applied. To ensure environmental and social safeguards compliance, Environmental and Social Management Plans (ESMPs) will be developed and monitored for all road works. The carbon balance of the project was evaluated through the ExAct tool of FAO. The social value of carbon or social value of the effort to reduce carbon emissions starts at US$30 in 2015 and increases to US$80 in real terms by 2050. A Social, Environmental and Climate Assessment Procedures (SECAP) note is presented in Appendix 14.

129. Safeguards against these climate vulnerabilities are built into the project through the activities supported by ASAP, notably the establishment of a germplasm and seed station for selecting and multiplying planting material specifically adapted to the conditions of the northern part of the cocoa growing zone, the promotion of farm practices that buffer the crops against climate extremes and reduce the risk of crop failure, the formation of spraying gangs, and the construction of solar driers. However, for certain of these elements it is not currently known how well they will be adopted by the farmers (e.g. shade practices, considering that across the border in Côte d'Ivoire low-shade practices are in use). Therefore, a preliminary classification of a **moderate climate risk** is proposed with respect to climate change.

Exit strategy

130. The exit strategy of TCEP is based on the following design features: (i) a focus on formalized value chain linkages between PSP and cooperatives; (ii) the market-driven approach as well as its intervention through PSPs, cooperatives and other service providers; (iii) support that is mainly provided to smallholders on commercial terms; (iv) focus on agribusiness activities that will be fully integrated in the local and regional market economy; (v) risk mitigation through institutional capacity building of value chain stakeholders.

131. The development of training materials and programs on climate change adaptation in the tree crop supply chains has the potential to influence farmers and stakeholders beyond the project beneficiaries, including as the training materials are adopted and training sessions attended by technicians from other tree crop projects.

Appendix 1: Country and rural context background

A. Cocoa value chains[34]

Liberian cocoa subsector

1. The tree crops sector was traditionally one of Liberia's biggest employment sectors and an integral part of its social fabric and economy. Primary cash crops included cocoa, coffee, oil palm and rubber. During the Liberian civil wars of 1989-1996 and 1999 -2003, the tree crop sector was devastated and many farmers were displaced from their land. The abandoned farms and plantations degenerated into forest and their associated support structures were damaged or destroyed. Market linkages vanished, while exports dropped to near zero levels. However, rehabilitation and growth in the tree crop sector can do much to increase farmers' incomes, revive the rural economy and contribute towards consolidating peace.

2. Large-scale plantations grow rubber and palm oil, with rubber accounting for 90% of exports and substantial interest from international companies in oil palm development. In comparison, cocoa contributed a modest 5.1% to Liberia's agriculture and forestry exports in 2005, while the contribution of coffee exports was negligible[35]. However, the cocoa sector is dominated by smallholders. UNDAF (2013) estimate the number of households engaged in smallholder agriculture at 330,000. In 2008, rice and cassava, the two staple food crops of the country, contributed 22% and 23% to agricultural GDP, while tree crops (rubber, cocoa) accounted for 34% in the same year (CBL, 2009).

3. According to the Liberia Institute of Statistics and Geo-Information Services (LISGIS, 2012), a total of 38,350 households are involved in growing cocoa throughout the country. Nimba County accounts for the highest number of cocoa growing households (13,470 or 35.1%), followed by Lofa County (12,120 or 32%) and Bong County (3,930 or 10.2%)[36]. Cocoa accounts for as much as 12.6% of total employment in the agriculture sector (Rep. Liberia 2010). Most of those cocoa producers are in Lofa, Nimba and Bong counties (the "cocoa belt").

4. Although cocoa is an important crop for many households in Liberia, the country is only a minor player in the global cocoa market, accounting for <1 % of global sales (ranked 21st globally among cocoa exporters in 2012). Total cocoa production of Liberia is estimated at about 7,500 tons from about 30,000 ha[37]. Until recently, only the smaller part of this production was officially exported through Liberian ports, with the remainder being exported informally via neighboring countries.

5. Compared to cocoa, coffee is currently insignificant as smallholder crop in Liberia. Most coffee in the country is Robusta. Only 124 tons were reported to have been exported in 2008, perhaps due to cross-border trading. According to information from ACDI/VOCA, farm surveys in Liberia have shown that coffee is less profitable for the farmer than alternative crops including cocoa. This would be in line with developments observed in neighbouring Côte d'Ivoire where coffee farmers have shown a strong tendency to switching to more profitable crops such as cocoa. Almost all coffee farms are planted from unimproved local material (CAAS, 2007). Coffee farms are also commonly 20-40 years old, with very few young coffee farms. The marketing system for coffee is failing.

Cocoa farm

6. The cocoa sector in Liberia is composed of smallholders, with average holding sizes of 0.5 to 3 ha. According to the CAAS (2007) survey, most cocoa farmers work their own farm. Sharecropping is not common in Liberia, different from cocoa farmers in Côte d'Ivoire and Ghana that have received large migrant flows in the past. This may reduce certain forms of conflict over land that act as a disincentive to farm intensification in those countries. The same survey found that cocoa farm labour

[34] Details presented in Working Papers 2 and 4.
[35] CAAS, 2007
[36] 2012 LISGIS/MOA/FAO Production Estimate of major crops and animal
[37] ICCO statistics, March 2015 91th Council Meeting held in Abidjan

is not as dominated by old people as is often the case in Côte d'Ivoire and Ghana, with many young people present on the farms. Whether the presence of children on farms indicates an unacceptable child labor problem requires project attention. Similar to Ghana and especially Côte d'Ivoire, tree crop production in Liberia is a relatively male dominated enterprise in terms of access to benefits, while women are traditionally tasked with tending food crops for household consumption and surplus sales. However, women are highly involved with cocoa production, particularly in production and processing, while men dominate at the marketing level.

7. Cocoa farms in Liberia are mostly old, established with unimproved local planting material, have often been neglected or abandoned for prolonged periods during the war resulting in mortality of many trees, and are thus in need of replanting. Especially in Lofa county, trees are commonly 20 to 50 years old (i.e. of an age close to the upper limit of a profitable tree crop cycle and, with lower response rates than younger crops) because farmers were not able to plant new trees during the war. In Nimba, on the other hand, the rural areas were relatively safe after 1991, and therefore more young cocoa farms can be found. However, even here the available tree stock for cocoa was limited mostly to what was available from local seeds or saplings collected in the farms and of low genetic potential.

Use of inputs

8. The focus of the ACDI/VOCA projects and STCRSP has been initially on access to improved planting materials (hybrid seedlings) and the application of good agricultural practices. Some data suggest that without the use of agrochemical inputs this approach would not be cost effective. Experiences in neighboring Côte d'Ivoire and Ghana show that fertilizer use in cocoa is only worthwhile once basic management practices such as pruning, weeding, disease control and replanting of missing trees in the stand have been performed. Once good management practices are being applied to improved planting stock, the use of fungicides to control diseases (especially black pod) will become more important, and the option of organic chemical free crops becomes less economically viable. Liberian cocoa farms use currently very few inputs such as fertilizer or pesticides. This implies that so far there are few health concerns related to the use of pesticides, although the use of fungicides, insecticides and possibly herbicides is likely to increase as farms get rehabilitated and intensified.

Cocoa value chain

9. The farm gate price in Liberia has remained the lowest in West Africa. Relative prices paid to cocoa farmers have improved already in some cases from around 30% of New York prices in 2008 in some cases to 60-65% of those prices in 2015 for grade 1 (ACDI/VOCA). The low farm gate prices are due to: (i) the weak bargaining position of farmers due to monopolistic behaviour of cooperatives and buyers, to lack of price information, to small transactions and low quality; (ii) weak market linkages; and (iii) poor market access due to deteriorated roads. The Liberian cocoa subsector is currently in a vicious cycle of low productivity, high transaction cost, low farm gate prices and low quality.

10. Quality of cocoa is determined during the fermentation and drying stages. Harvesting of immature seeds for quick money is also a part of the quality issue. If the beans are not allowed to dry sufficiently they will mold, if they are dried too quickly then the beans taste acidic. Now, farmer groups use solar driers, first introduced by ACDI/VOCA and also promoted by the company LAADCO, apparently with good success.

11. A large part of the ability to market cocoa in Liberia is determined by infrastructural constraints. Villages that are far from buying centers or that are located in remote areas of the countryside face a limited or non-existent market in which to sell their cocoa. Farm-to-market roads are also of essence. The window of access may be restricted by seasonal rain, and farmers, desperate to sell, commonly accept lower prices from, for example, cross-border traders.

12. There are now between 10 and 20 exporters of cocoa in Liberia.

Access to credit

13. The availability of credit is a severe constraint to farming activities in the cocoa subsector of Liberia. Credit is mostly provided by the trader, as is common elsewhere in West Africa. There are indications that farmers often invest credit money not in their farms but on medication, food, school fees, or even in non-agriculture business such as gold mining, suggesting that (i) the access to finance is a general constraint in the region; and (ii) agriculture is not always seen as the highest priority to use available income.

B. Farmers' cooperatives

14. The PMU contracted SCOPEinsight[38] to undertake, with the support of the Cooperative Development Agency (CDA), an assessment of the current business potential of 11 cocoa cooperatives (6,670 members – avg. 606) in Nimba County[39] (May-June 2015). The assessment shows that the weakest area is that of *operations*[40] where the Nimba Coops are performing poorly compared to both Bong and Lofa Counties as well as the benchmark of 83 East and Western coops, due to limited attention given to health and safety issues (lack of a policy document, lack of training and provision of limited Health and safety resources), but however, implement good agricultural practices which ensure the production volumes are of high quality. On the other hand the Nimba Coops perform very well on enablers[41]. In fact, the cooperatives seem to have a very good knowledge on legislation and statutes that govern the cocoa sector industry in Liberia and do not breach these. Furthermore, coops have good relationship with the government institutions, community and other players in the cocoa industry. Further improvements would be needed with regards to bargaining power against some of its business partners such as millers and marketers. Finally, it must be underlined that the total score of the Nimba Cooperatives is higher than that of the coops in Bong and Lofa, and in line with the score for the 83 coops in East and Southern Africa.

Table 1: SCOPEinsight assessment of coops (2015)

	Nimba Coops (n=11)	Lofa Coops (n=7)	Bong Coops (n=8)	Benchmark (n=83)
Total Score	**3.2**	**3.0**	**2.9**	**3.2**
Internal Management	3.3	3.3	3.5	3.1
Operations	2.6	3.1	2.8	3.3
Financial Management	3.1	2.8	3.2	2.8
Sustainability	3.4	3.2	3.4	3.7
Supply	3.2	3.0	3.0	3.5
Market	3.1	2.4	2.3	2.7
External Risks	2.5	1.8	2.4	3.6
Enablers	3.9	2.9	2.6	3.3

[38] SCOPEinsight is an independent rating agency based in the Netherlands that assesses the business potential of farmer organizations in agriculture, dairy, forestry and aquaculture in developing countries
[39] The assessment was also undertaken in the other 2 counties part of the 'cocoa belt' – in Lofa County on the 7 cooperatives involved in the IFAD-supported STCRSP and 8 coops in Bong County.
[40] Operations measures the organization's performance on good agricultural practices, processing, social & environmental practices, logistics, storage, and biological and natural risk management. It also includes oversight on the farmer base.
[41] The organization's relations with and performance related to entities that enable the value chain and/or the organization, e.g. business development services providers, technical assistants, financiers, etc.

C. Policy and legal environment[42]

15. The **Liberia Agriculture Sector Investment Programme** (LASIP, 2009) presents the strategic choices Liberia has made for agricultural growth over a ten year period (2009-2018). LASIP was the first post-conflict attempt to address the challenges and constraints impeding the agricultural sector. The proposed TCEP resonates well with following sub-programmes: (i) Smallholder Tree Crops and Agroforestry Development; (ii) Rehabilitation and Expansion of Rural Roads; (iii) Rebuilding the Ministry of Agriculture and Agricultural Parastatals; (iv) Revitalizing Agricultural Research Technology Dissemination and Adoption; (v) Renewing Agricultural Education and Training; and (vi) Promoting and Strengthening Farm-based Organizations.

16. LASIP specifically identifies the need to restructure some key institutions such as (a) MOA Tree Crops Division at county and district levels; (b) Cooperative Development Agency (CDA); (c) Central Agricultural Research Institute (CARI); (d) Liberia Produce Marketing Corporation (LPMC) and its successor, Liberia Agriculture Commodity Regulatory Authority (LACRA).

17. As a successor to Liberia's first Poverty Reduction Strategy, the **Agenda for Transformation** (AfT, 2012) was launched as a first step towards a long term vision of "Rising 2030". This Agenda recognises Agriculture as central to attaining that Vision, and identifies similar constraints as LASIP.

18. **The National Cocoa Export Strategy, 2014-18**[43] is a blueprint for the increased competiveness of Liberian cocoa in the global market. On the basis of an in-depth diagnostic, the Strategy proposes 15 structural interventions in the cocoa value chain, of which at least 8 will be addressed by TCEP. These structural interventions are: (i) speed up efforts to rehabilitate cocoa farms abandoned during the civil war and organize farm operations better; (ii) improved land management practices, aligned with Global GAP and GMP standards, especially at the smallholder and cooperative level; (iii) increase availability of inputs by development of a locally manufactured supply chain of inputs, as well as improve access to imported inputs; (iv) high quality saplings / seedlings used through collaboration with research institutes in Côte d'Ivoire, Ghana and the United Kingdom, among other countries; (v) increased levels of mechanization, leading to increased capabilities of sector stakeholders in transformation and processing; (vi) better trained local buying agents engaging in best practices and ensuring they are maintained at the farm-gate level; (vii) increased support to women cross-border traders and other female groups and actors active in the sector in mentoring, improved negotiation skills, technical support, and access to efficient grievance mechanisms; (viii) in-market support / national promotion branding; (ix) develop centralized warehousing infrastructure in Gbarnga; (x) quality management (control and certification) by providers capable of providing certification services of a significant scale; (xi) improvement in availability and service delivery of transport services; (xii) ability to penetrate new markets due to product diversification (including certification) and improvements in supply /consistency levels; (xiii) regional technology transfer / networking initiatives between Liberia and other West African countries; (xiv) joining ICCO; (xv) increased support to CDA and cooperatives.

19. The **Ebola Recovery Plan for Liberia (2015-17).** The Economic Stabilization and Recovery Plan (ESRP), which is due to be implemented over the next two years, has three broad strategic interventions, the first of which applies directly to the TCEP, namely: "Recovering Output and Growth", which seeks to revitalize growth to pre-crisis levels whilst ensuring that it is more inclusive by creating more and better jobs. Activities under this Strategic Intervention will be conducted in private sector development, including SMEs and agriculture.

20. **New Land Rights Act (2015).** Based on the National Land Rights Policy (May 2013), a draft Act was finalised in July 2014, and is awaiting enactment in 2015. It fully recognises Customary Land, which must be confirmed by a survey within 3 years of effectiveness, but is in no way contingent on paper documentation. The categorization of Customary Land is based on customary practices and long period of use, as well as consensus reached by members of the Community. One recognised

[42] Details are presented in Working Paper 5.
[43] Developed with support from the International Trade Centre

land use category is Agricultural, and every member of a community is entitled to carry on agricultural activities on as much of the Customary Land appropriate for and dedicated to agriculture, and which in fact is accepted and used for farming and other agricultural activities by members of the community. Prior to this new draft law, land use (e.g. cocoa farms) was recognised in law through a Private Deed or Tribal Land Certificate, although lack of these was unlikely to dispossess a resident farmer. The new law would fully recognise both. Under the new proposed law, the rights and protection of cocoa farmers will be enhanced, with significant implications for women, which will encourage long term investment and possibly commercial bank lending.

D. Public institutions

21. The **Ministry of Agriculture** (MoA) is also responsible for the implementation of the LASIP, which concentrates on cocoa, rice and oil palm. The Ministry structure includes a Tree Crops Department under the Technical Services Division at headquarters, which is represented at decentralised level by the County Agricultural Coordinator (CAC) and District Agricultural officers (DAOs). They have three crucial roles - Technical Advisory, Extension Services Delivery and Regulatory Oversight, including Monitoring & Evaluation. Although reasonably capacitated at central level, the MOA experiences some gaps at decentralised levels in terms of staffing, training, offices, rural staff accommodation, vehicles and operating budget.

22. In Nimba County, there is an experienced CAC assisted by three DAOs, but no other technical staff. Lack of field staff is systemic in the MoA, and actual staff is few to cover the number of agricultural districts which are large and may encompass two or more administrative districts. The CACs have assigned vehicles, but these have exceeded their economic working lives. There are some motorcycles available for DAOs, but these have short working lives in rural conditions. In each county, the CACs are well equipped in terms of office accommodation and equipment. These decentralised staff are therefore acting as generalists over an extended geographic area, responsible for a wide range of deliverables (e.g. technical advisory, regulatory, extension services and M&E), exceeding their individual capacities. The capacity gap is filled in some cases by NGOs.

23. The **Cooperative Development Agency** (CDA) is the main instrument of Government through which support is provided to cooperatives in the country. CDA is active in the main cocoa producing counties of Nimba. It has successfully collaborated with donor projects wishing to engage with farmers' cooperatives. For example, CDA has provided capacity building training in the areas of: (i) good governance, primarily directed at the cooperative boards; (ii) financial management, directed at the management teams; and (iii) cooperative member education and group collective marketing, for the management teams and members in general. The CDA has supported the cooperative societies in developing their constitutions and by-laws. It actively helped 5 of the 7 cooperative societies to democratically elect their leaderships, and completed annual audits of 4 others. The CDA further facilitated cooperative general assembly (GA) meetings, and participated in the recruitment of their management teams: business managers, project financial accountants, institutional capacity building officers, etc. The CDA is currently poorly staffed and equipped at decentralised level, and is only able to readily respond to the requirements of donor funded projects. It is staffed at county level in Nimba, where it has received support from the World Bank STCRSP, but cannot easily function at district level.

24. **Liberia Produce Marketing Corporation (LPMC) and its successor, Liberia Agriculture Commodity Regulatory Authority (LACRA).** LPMC certifies Licensed Buying Agents (LBAs), who are the main collection sources of cocoa at the farm-gate level. LPMC was originally set up as a marketing organization, but is due to be replaced by LACRA when the enabling legislation has been signed into law. The Liberia Agriculture Commodity Regulatory Authority (LACRA) Act will be an independent authority, which will administer and enforce regulations and other related laws. The purpose is to empower LACRA to regulate, govern and promote the production, processing and marketing of high quality agricultural commodities. This will be done through a well regulated market for fair competition among all actors in the value chain, facilitating standardization of quality in

accordance with established international standards. This will result in enhancing income generating and earning capacities and improving the general socio-economic welfare and wellbeing of public and private stakeholders and service providers involved.

E. Private sector

25. There are between 10 and 20 companies exporting cocoa from Liberia on a significant scale. However, only a handful is of sufficient size to be considered as a Private Sector Partner (PSP) for the TCEP project. The design mission identified potential PSPs with the necessary financial resources and possible interest in partnering the Government in the revitalisation of the cocoa value chain in Nimba County.

26. Under the STCRSP in Lofa County, the private partner exporter LAADCO has entered directly into contracts with cooperatives to buy and commercialise the produce mobilised by the cooperative. This arrangement is very innovative in the context of Liberia when compared to the usual implementation by Government extension entities. Today more than 677 MT have been commercialised from five cooperatives. This is a significant result given that in the previous year some cooperatives were not able to formally commercialise any produce.

27. LAADCO has respected its contractual commitments, including: (i) provision of capacity building including training in cocoa processing and handling; (ii) provision of production inputs; (iii) pre-financing working capital to cooperatives, which allows them to engage in the competitive cocoa market, and (iv) a commission payment of US$ 25/MT. All of the cooperatives are working with the company for the supply and commercialization of cocoa produce by members and non-members alike.

28. The following concerns were identified:

i. The marketing agreement with LAADCO clearly showed its pre-determined producer prices of cocoa; which were not negotiated but imposed on the cooperatives.

ii. The MTR found that prices offered by private buyers and cross-border traders were higher than LAADCO prices. Nevertheless, LAADCO prices invariably exceeded Reference Prices set by LPMS.

iii. Quality and moisture deductions from the price made by LAADCO before payment were a source of misunderstanding and possible dispute. Moreover, the rejection and retention of substandard beans without payment by LAADCO lacks transparency.

iv. Transportation of beans to Monrovia before valuation imposes a risk of moisture change, theft and deterioration upon the cooperatives.

F. Projects in the cocoa value chain

World Bank STCRSP

29. Under the lead of the MOA, two different and complementary approaches were developed in 2010 with the aim of testing models in tree crop rehabilitation and development: (i) one approach financed by IFAD in Lofa County, focused on cocoa rehabilitation with small holder farmers, farm to market roads as well as local capacity building of FBOs and MOA; and; (ii) the second approach financed by the World Bank in 6 counties, including 4 districts in Nimba in which it is focussed on cocoa, while also focusing on other cash crops in other counties. The World Bank targets small and larger farmers, plantations or rehabilitation investments, and has a stronger focus on institutional capacity building at national level.

30. Its Institution Building Component aims to: (i) strengthen MOA technical delivery at HQ and County levels, and also the CDA; (ii) elaborate a national strategy for FO development; (iii) secure land rights for targeted smallholders, and (iv) develop adaptive tree crop research and long-range tree

crop development. Under this component, assistance with offices, furniture and office equipment has been provided at County level to MOA and CDA. Farmer capacity building is to be provided through cooperative services to members. The project works with three main actors: CDA, an INGO (SOCODEVI) and the Land Commission, as well as the Environmental Protection Agency for social and environmental safeguards.

31. This project is currently in the first year of implementing the pilot phase of a longer-term and larger-scale tree crop development program, targeting 6,000 ha for cocoa and 1,500 for coffee over 3 years. It is expected to scale up to all cocoa-producing counties, based on lessons learned from the pilot over the next 1-2 years.

32. Due to delays with the project start-up, lessons learnt from the World Bank-STCRSP project are limited. Issues relating to the delays included procurement processes for selection of operators, as well as farm site selection in compliance with World Bank safeguards (e.g. sites with the least social and environmental issues such as land conflict, and high inclusion of women and youth).

Livelihood Improvement for Farming Enterprises (LIFE)

33. ACDI/VOCA has played a key role in rehabilitating and modernising the cocoa sector in Liberia. It has implemented a series of three USDA-funded projects known as LIFE I, LIFE II and LIFE III.[44] Beginning in in February 2008, LIFE has now reached its 3rd phase, which will run until September 2016, and has targeted 26,200 cocoa farmers in Bong, Nimba, Lofa, Gbarpolu, Grand Gedeh and River Gee counties.

34. Similarly to the IFAD-financed STCRSP, the focus of LIFE projects has been initially on access to improved planting materials (hybrid seedlings) and the application of good agricultural practices. Liberian farmers use essentially no agrochemical inputs on their cocoa. The LIFE projects have covered a wide range of interventions and represent a repository of Liberian skills and experience. This includes improved planting materials, farmer field schools, solar driers, working with cooperatives, etc. Their work on quality improvement resulted in farmer prices increasing an average of 300% from 2007/8 to 2012/13. During the same period, their average percentage of world market prices (all grades) increased from 22% to over 60%. During the period 2010/11 to 2013/14, the cocoa sales of their project-supported farmers rose from 229 to 930 MT. The average farm size in 2014 is 1 ha and the average marketed yield was 180 kg/farm. Side selling and other issues are likely to have lowered the yield recorded at the community cocoa warehouse. Middlemen buyers were a particular problem during 2014 when the Ebola epidemic prevented registered buyers from maintaining their established buying from cooperatives and groups until early 2015.

44 Liberia Livelihood Improvement for Farming Enterprises.

Appendix 2: Poverty, targeting and gender[45]

A. Poverty and vulnerability in Liberia

1. Despite significant positive socio-economic developments since the end of the civil war in 2003, Liberia is still very much a fragile state, characterized by relatively weak institutions, policies and governance. In 2013, UNDP ranked Liberia 175th out of 187 countries with a Human Development Index (HDI) score of only 0.412, which reflects a deep and broad underlying poverty and immense need for economic growth and social development. In recent years, Liberia's post-war economic growth has been sustained; the real Gross Domestic Product (GDP) growth was 8.9% in 2012 and 8.1% in 2013. The Ebola Virus Disease (EVD) in 2014-2015 crippled the economic growth, as foreign and domestic investments slowed down. The crisis is resulting in flat or negative income growth and creating large fiscal challenges for Government.

B. Nimba County

2. Nimba County is situated in the Northeastern Liberia and shares borders with Cote d'Ivoire in the East, and the Republic of Guinea in the Northwest. Nimba is bordered by the counties of Bong, River Cess and Bassa. The county has a total population of 732,000 inhabitants. Nimba's natural vegetation is composed of tropical rainforest. The original vegetation was cut down primarily for farming purposes and the cultivation of cash crops such as cocoa, coffee, oil palm and rubber. Subsistence farming and small-scale agriculture is currently the main source of income of Nimba. The typical farming pattern is slash-and-burn and annual bush fallowing. The main food products are rice, cassava, plantain, banana, yam, and sweet potatoes. Tree crop production has however high potential for growth and job creation. Like all other agricultural activities, the production of these crops ground nearly to a halt during the civil war.

3. Cocoa farming systems in Nimba have been described in Appendix 1.

C. Women, youth and vulnerable groups

Women

4. Women in Liberia were already a disadvantaged and vulnerable group prior to the outbreak of civil war. Despite progress realized since 2003, MDG 3 related to the promotion of gender equality and women empowerment is far from be achieved. Although women are highly involved in cocoa production, their contribution tends not to be valued and their membership in cooperatives is low. Women are currently most active in production and processing of cocoa (including under-brushing, harvesting, fermentation, drying and transport) while men dominate in the more profitable levels of marketing. Women may be involved in limited marketing in village markets. Despite the amount of work they do, women also reported 'stealing' cocoa beans from their husband's yields to side sell and use the proceedings to buy items for the household (e.g. soap, fish, oil, rice) or pay for school fees or health-related costs. Women's low participation in the cocoa and coffee of the value chain is linked to the limited access to productive resources such as land and financial resources for investments. Many women, as well as many male farmers, have little knowledge on the prevailing cocoa price and accept whatever the buyer proposes especially when in desperate need for cash. During field visits, women were vocal in stating how hard the work has also been in the past for their mothers and grandmothers, with the resulting benefits remaining with the men.

5. Rehabilitation and maintenance of old cocoa farms is done by the *kuu* system in which farmers join together and work in their individual farms providing reciprocal labour. Because of women's high involvement in food crops, their participation in cocoa production adds to their already heavy workload. Cash crops, which are usually bigger plots and are controlled by men, are also known as

[45] Details are presented in Working Paper 1.

the family land. Women have smaller plots for food crops. Priority is always given to the family plot so most often, women will first work in the family plot and then later to her own food crop, sometimes with the help of the children or other women.

6. During field visits, women reported interest in participating in all levels of the cocoa value chain. They specifically requested training in fermenting and drying the cocoa beans.

7. **Land.** Gender disparities in access to land and other assets seem to be improving. During field visits, significant numbers of women in Nimba stated ownership of land they are farming and some were joining cooperatives with the requirement to own land to plant trees. The new Land Rights Act to be enacted in 2015 combined with the Inheritance Act linked to property rights will secure the access of women to agricultural land. The widespread community awareness on the Inheritance Act is already having a positive impact for women, and women's groups are taking on land ownership by securing land from the community.

Youth

8. Youth (18-35 years) comprise approximately 47 % of the population. As a result of the civil war, they became vulnerable with high illiteracy resulting from low school enrolment and low educational level. They are disproportionally affected by unemployment or informal employment especially in rural areas. Vocational training and apprenticeship opportunities are rare. In the cocoa value chain, male youth are often involved as middle men, buying produce directly from the farmer and transporting to the nearest markets. This role, however, is hampered by the limited access youth have to financial services. Female youth are in the same situation as the adult women, since their participation on the cocoa farm is seen as an extension of the expected reproductive work.

9. During field visits, youth confirmed having more interest in the fast money gained in the mining industry or riding motorbikes, than engaging in cocoa production. Findings in Nimba showed that availability of youth for labour is not a problem, but rather reliable labour.

Ebola Virus Disease

10. The economic impacts of EVD are felt in both affected and non-affected communities, and have intensified existing issues, including food security. This has introduced another level of social and economic vulnerability particularly for the survivors, as well as more widely, linked to travel restrictions limiting the access of traders to markets, along with the closure of Liberia's borders at the peak of the EVD crisis. This resulted in losses particularly for women, who account for 70% of small-scale and cross-border traders. Overall, those in the informal economy, including small-scale traders and farmers, are among the hardest hit, having little financial capacity to deal with shocks. The shocks to income as well as prices will likely increase the vulnerability of the poor and the marginalized, especially in rural areas. As reported by UNDP, the most severe impact of loss in per capita income is on people in the lowest quintile. Households across Liberia have undertaken various mechanisms to cope with Ebola's socio-economic effects. Eighty percent of those surveyed had either sold assets, sold or slaughtered livestock, borrowed money, sent their children to live elsewhere, spent savings, or delayed investments— all of which can have negative long-term effects on their welfare.

11. Survivors of EVD have become vulnerable. Many have lost property and family members, and often face tremendous stigma after being released from the Ebola Treatment Units (ETU). Members of this new group face depression, trauma and financial strains. Landlords may terminate their leases, and some lost their jobs. To make their voices heard, survivors have formed a network under the umbrella of Liberia's Ministry of Health and Social Welfare. Households headed by elderly people, particularly grandmothers, are carrying the burden of providing for children who have lost their parents, with limited access to resources.

D. Targeting strategy

12. TCEP will intervene in at least eight (8) statutory districts in Nimba County. The criteria for selecting districts will be the following: (i) the number of cocoa farmers; (ii) complementarity with other projects[46] so as to avoid duplication; and (iii) the potential gains from road improvement.

13. The beneficiaries of TCEP will be 11,000 stakeholders in the cocoa value chain, of which 8,000 cocoa smallholders, who are members of the *kuu* groups and Farmer Field Schools (FFS), 2,400 (30%) additional farmers, who will also benefit from the rehabilitated roads, input supply and market linkages, and 600 people as a result of job creation along the value chain. In order to select the 8,000 cocoa smallholders, the TCEP will be using a self-targeting approach together with mechanisms to promote inclusion of women, youth and vulnerable groups.

14. To participate in TCEP, cocoa farmers must (a) be resident in the village; (b) have a cocoa plantation that requires revitalization; (c) be member of a *kuu* group; (d) be willing to revitalize his/her plantation and accept the conditions set forth by the project, namely to provide the required labour and to adopt the project approach. Additional priority will be given to: (i) women-headed households and female farmers; (ii) young farmers between 18 and 35 years old, and; (iii) survivors of EVD.

15. The entry point for TCEP will be the farmers, organized at the grassroots level, rather than the cooperative level. TCEP will select a number of communities in which it will seek the farmers that are interested in the project (self-selection). The farmers will organize themselves into groups and pool their labour to revitalize their farms, following the traditional *kuu* system of reciprocal labour. Farmers will be responsible for the management and monitoring of their own farms, and will keep records and sales on production as part of the regular FFS meetings.

16. In addition to the FFSs, kuu groups and cooperatives, some agribusinesses, input dealers, financial institutions and commercial farmers, involved in the implementation of TCEP, could benefit indirectly from the Project. Their involvement will be crucial to ensure effective access to inputs, capital, services, know-how and markets for the targeted smallholders. The TCEP will develop internal controls, proper governance systems, checks and balances to ensure that these stakeholders and cooperatives do not suffer elite capture.

Targeting tools to ensure inclusiveness

17. The efficiency of reaching out to vulnerable groups, youth and women who traditionally have less voice and power in the Liberian rural society through self-targeting will be ensured by using empowerment and capacity-building measures. These measures will include: (i) information and mobilisation campaigns, using mass media and local information meetings; (ii) organization of traditional *kuu* groups and use of FFS approaches to lower thresholds for these groups and develop their social capital; (iii) matching grants to leverage their investment capacity and growth of their asset base; (iv) access to markets and input supply through cooperatives and private service providers.

18. To strengthen the self-targeting mechanism, TCEP will adopt direct targeting tools to reach out to vulnerable groups, youth and women. As direct beneficiaries, at least 30 % of women and 50 % of youth will be targeted. Similarly, at least 50 % of youth should constitute the labour for routine road maintenance. With regards to cooperatives, the following quotas shall be respected in order to avoid elite capture in particular: (i) at least 25 % of youth and 30 % of women within the management committees of the cooperatives, with provision of leadership training based on need; and (ii) at least 25 % of youth and 30 % of women among the cooperatives' members.

19. Gender and youth approaches will be mainstreamed in project implementation with a focus on supporting women, youth and vulnerable groups to overcome constraints including: (i) access to land; (ii) access to rural financial services; (iii) access to employment, and; (iv) leadership and entrepreneurial skills.

[46] In particular the World Bank STCRSP (Zogeh, Gbelegai, Saclepea-Mah and Yarwein Menhnesonneh) and ACDI/VOCA LIFE project.

20. **Access to land.** TCEP will facilitate access to land for the target group by: (i) engaging with farmers' organizations to help negotiate land for women and youth in both old and new plantations; (ii) engaging with men to reconsider their role in securing land for their own daughters and wives; (iii) directly supporting women and youth in securing land deeds. Based on lessons learned both in Liberia and elsewhere in the region, TCEP will explore possibilities for agreements with young farmers for rehabilitation in return for long-term land access, e.g. 15 years. Furthermore, approximately 2,000 hectares of the 10,000 ha of cocoa will be replanted, and will be targeted to at least 30% women and 50% young farmers.

21. **Access to rural financial services.** TCEP will support the target group in the project area to build sustainable financial capability, by building and innovating on the Village Savings and Loans Association (VSLA) approach so that both male and female farmers can increase their capital and/or investments at production and household level. VSLAs are widespread in Liberia and have been particularly embraced by women as they build on their existing informal savings groups. In securing this approach, linkages will be established with the IFAD-funded Rural Community Finance Project (RCFP) currently under design. The focus for TCEP is on strengthening the VSLA approach and linking this to the cooperative/FBO, with a particular emphasis on savings. A county-based Business Development Officer with experience in developing and promoting female-oriented products will coordinate the development of the approach. 320 groups of 15-20 members will be targeted, with a target of at least 30% men and male youth, owing to the attraction of the model to women (see Working Paper 1 for further details).

Specific measures for youth. Using the lessons learned from Lofa, TCEP will support young people to develop their capacity to foster rural enterprises in the cocoa value chain (e.g. nursery establishment and other services), in addition to providing temporary jobs in rehabilitation of roads. Furthermore, youth will be engaged for specialized tasks such as pesticide spraying and grafting. The Project will explore a youth employment scheme in partnership with GIZ, USAID, WB and other donors which have invested in rural infrastructure. To identify the best strategies to address rural youth needs and opportunities, short-term support will be provided by a youth specialist at the beginning of the project. This will include (i) an assessment on youth participation in the cocoa value chain to help inform specific youth strategies in the context of TCEP, as part of the gender and targeting action plan; (ii) strengthening of staff capacity for targeting youth, especially of the PIU Gender, Youth and Inclusion Specialist and the Business Development Officer at County level (See draft Terms of Reference for the gender, youth and inclusion assessment below).

Additional measures for gender and targeting.

22. **Gender mainstreaming and women's empowerment.** To support women's empowerment, including for female youth, TCEP will introduce household methodologies (HHM) in the cocoa value chain with links to the VSLAs in order to promote gender-sensitive farm business development through improving intra-household gender relations. IFAD has been promoting HHMs in its project activities in several countries, generating positive and promising results, including proven success in promoting change in more equitable distribution of household and farm work as well as access to benefits. The strategy is not only to support women in production but also to move them further up the value chain by engaging them in, management (e.g. nurseries) and in marketing

23. Implementation of the HHMs will involve conducting training of community trainers, selected from the farmers organisations involved with the project and NGOs supporting women farmers, service providers supporting farming and business plan development and credit procedures. The project will hire an international expert in HHMs to train the trainers/facilitators who will further train more facilitators to become mentors. The facilitators/mentors will roll-out the methodology to the communities employing both group-based approaches at the VSLA groups or as identified at the implementation process. (See Working Paper 1 for details).

24. **Ebola response.** Prior to project implementation a gender, youth and inclusion baseline survey will be conducted in the Project area, which will include identification of households that may require

specific support or the need to link them with Ebola response programmes being implemented by other organisations, e.g. WFP and UNICEF[47]. A particular linkage shall be secured with the UN Women Economic Empowerment of Rural Women initiative that is already working with women who have lost their saving and business capacity due to the Ebola outbreak.

Implementation.

25. TCEP will recruit a Gender, Youth and Inclusion Specialist at PIU level to coordinate gender, youth and targeting-related activities, working in complementarity with the overall PIU M&E, Gender, and Targeting Officer (see Working Paper 1, Annex 3 for draft terms of reference). On the basis of a gender, youth and inclusion baseline survey, the gender and targeting action plan for the Project will be developed in PY1 by a consultant. From PY2, the Gender, Youth and Inclusion Specialist will work in close collaboration with implementing partners and stakeholders to develop yearly gender action plans, with quantifiable targets and indicators defined based on the project's gender strategy and outcomes. The plan will include: (i) the use of gender- and age-disaggregated indicators to monitor outreach to women and youth; (ii) capacity-building in targeting and gender for staff and implementing partners, with a focus on the Gender Unit Ministry of Agriculture, and; (iii) sensitization of staff at the district and county levels of as well as at the cooperative level. The Specialist will liaise with the Ministry of Gender and Social Welfare (MGSW), as well as the Gender Unit within MOA. The Project will coordinate with the County Gender Coordinator (CGC) of the MGSW to identify women agriculture and non-agricultural groups to participate in the Project. Gender, youth and inclusion guidelines will be reflected in the Project Implementation Manual.

26. **Communication strategy.** TCEP will seek the support of traditional structures, women county and community leaders, women's informal networks, and local NGOs that work with women and engage men in the dissemination of the project objectives. A partnership with local radios will help to develop specific programs addressed to women, youth and men, facilitating the debate around the challenges of engaging the target group and disseminating successful stories that will encourage others to be part of it. TCEP will link up with UN Women – Women Economic Empowerment program that is already using radio to reach cross-border female traders. The project will also produce information material e.g. posters that help the dissemination of the Land Act, as well as spreading awareness amongst youth on the long term benefits of cocoa production versus the short term gains from other competing livelihood activities.

27. **Knowledge management.** Best practices will be well documented and shared for learning opportunities, e.g. through 'domestic study tours'. For example, the successful female-led cooperative in the STCRSP in Lofa, which combines the earnings of all seven cooperatives and close to three times the earnings of its closest competitor.

28. **Monitoring and Evaluation.** The PMU will include and assess regularly a number of gender, youth and other target group specific indicators, at output, outcome and impact level, in particular capturing the improvement of access to the outputs, their use by the target groups and their satisfaction with these outputs. All proposed interventions require gender-disaggregated data. The collection, analysis and use of sex and age disaggregated data at all levels will be the responsibility of the professional officers to be cross-checked by M&E. The M&E system will be developed accordingly.

[47] For example, UNICEF provides grants for school fees, WFP provides nutritional support.

Gender, Youth and Inclusion Baseline Survey for the Cocoa Value Chain

Draft Terms of Reference[48]

Rationale:

1. Establishing a baseline on the situation of youth, women and vulnerable groups prior to project implementation is key to ensuring that they are appropriately targeted to benefit from the opportunities brought by the project.

Objectives of the Survey:

1. Assess the skills development needs that will support the engagement of both male and female youth in the cocoa value chain and related agro-business opportunities;
2. Assess the involvement of youth, women and vulnerable groups in FBOs, including cooperatives linked to the project, and to help identify the opportunities they may have in these structures;
3. Assess vocational institutions in the area and their ability to play a role in the skills development approaches selected;
4. Assess the national instruments that promote youth, women and vulnerable groups' economic empowerment and its implementation mechanisms;
5. Assess emerging or on-going youth, women and other vulnerable groups' support strategies and/or interventions in the country and particularly in Nimba County;
6. Assess the will of female and male youth to engage in agriculture-related activities (production, processing, marketing, training);
7. Develop a poverty ranking profile to help identify those in most need of project support;
8. Assess the number and size of cocoa farms owned or managed by women;
9. Assess the presence of savings and/or lending schemes being practiced and the stakeholders involved;
10. Assess the PIU needs to engage with youth in a strategic way;
11. Assess the capacity of service providers to implement youth empowerment measures in rural areas;
12. Identify activities/strategies in the context of the TCEP to alleviate the constraints to youth acquiring skills, accessing productive assets and benefiting from employment opportunities.

Deliverables:

1. Report on the findings including a SWOT analysis for youth, women and vulnerable groups' economic empowerment through the cocoa value chain and related agro-business initiatives, in the context of the TCEP.
2. Provision of at least 3 different alternatives that could help the PIU to address the youth, women and vulnerable groups' situation in the context of the TCEP, with a focus on interventions at both Meso and Micro levels;
3. A brief analysis of policies, strategies and implementation mechanisms that provide legal and formal-informal support to youth, women and vulnerable groups' interventions;
4. A list of organizations, institutions and individuals working on youth, women and vulnerable groups and their area of expertise;
5. The identification of youth, women and other vulnerable groups' champions already active.

Operationalization of the Survey:

- The survey may be carried out by an individual consultant; a team of consultants or an institution with experience in working with youth and women's empowerment;
- The survey will take maximum 30 working days, including report writing;
- To enable a broader range of information, the survey will be conducted in two counties: Nimba and Lofa.

[48] To be further developed by the project team, supported by the Gender, Youth and Inclusion Specialist.

Table 1: Targeting checklist for project design

Targeting checklist	Design
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	Yes, the project targets mainly male and female smallholder farmers and youth who are amongst the poorest of the poor, as well as disadvantaged, including the Ebola survivors.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences? (Matrix on target group characteristics completed?)	Yes, the social and economic status of the targeted group have been identified and described by subgroups, women.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence? (Matrix on analysis of project components and activities by principal beneficiary groups completed?)	Yes, activities have been identified for all beneficiaries, including farmers, women, youth and the disadvantaged.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, *involving some or all of the following measures and methods:*	
4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or programmes, geographic areas (and within these, communities) with high concentrations of poor people	Yes, Nimba ranks second with the highest food insecure household due to poverty and the impact of the Ebola epidemic.
4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households	Yes women, youth and EVD survivors have been identified. It also makes a statement about the situation of children in cocoa farming.
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	Yes
4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power	Yes different approaches are suggested as a way to create the necessary environment to facilitate empowerment.
4.5 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building	Yes. Capacity building of service providers is included and on the other hand the suggestion to use HHM as the main mobilization and organization process have the potential to develop win-win opportunities for the different stakeholders.
4.6 Attention to procedural measures - that could militate against participation by the intended target groups	Yes
4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers	Yes
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	Yes, all stakeholders and beneficiaries will be trained in participatory monitoring and evaluation processes, including collecting disaggregated data**.**

Table 2: Gender checklist for project design

	SCORE (1-6)	Issues
1. *The project design document contains – and project implementation is based on gender-disaggregated poverty data and analysis of gender differences in the activities or sectors concerned.*	5	Yes, the design contains disaggregated data on poverty, and analysis of gender differences in the tree crop sector. However poverty data is outdated.
2. The project design report articulates – or the project implement – actions with aim to: • Expand women's economic empowerment through access to and control over fundamental assets ; • Strengthen women's decision-making role in community affairs and representation in local institutions; and • Improve women's knowledge and well-being and ease their workloads by facilitating their access to basic rural services and infrastructure.	5	For this project, women have limited access to land, a major asset for agriculture development. The project will advocate for the passing of the Land Rights Acts and the Inheritance Act, that will give women more access to and control over land. Furthermore the project will facilitate access to financial services and business capacity building as a strategy for income diversification. The project will advocate with the IFAD-funded RCFP the use of VSLA to ensure women's participation in decision making at community level. Women's knowledge will be enhanced in the cocoa value chain, in monitoring and evaluation, and in mitigating effects of climate change. Improved roads will facilitate easier movement for women from farms to markets.
3. *The design document describes - and the project/programme implements - **operational measures** to ensure gender- equitable participation in, and benefit from, project activities. These will generally include**:***		
3.1 Allocating adequate resources to implement the gender strategy;	5	All gender-mainstreaming activities are adequately budgeted for.
3.2 Ensuring and supporting women's active participation in project-related decision-making bodies and committees;	6	The design is ensuring that women participate in all aspects of the value chain, in monitoring and evaluation of the project, on membership and boards of cooperatives. A quota is set for women.
3.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference, etc.) reflect attention to gender equality and women's empowerment concerns;	6	Preference will be given to women candidates when they are equally qualified. All job application will state that women are encouraged to apply.
3.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited.	5	At least 25 percent of women have been targeted. A strategy has been employed to ensure that this target is achieved. Hard to reach communities have been targeted to improve access.
4. The project's logical framework and monitoring and evaluation (M&E) system specify in design – and project M&E units collect – gender-disaggregated performance and impact data.	6	All data will be disaggregated by gender to assess the project impact on both men and women and where possible age.
AVERAGE SCORE	5.4	

Appendix 3: Country performance and lessons learned

A. Country performance

1. IFAD re-started its activities in Liberia in 2009, following a 20-year suspension in a situation brought on by the country's prolonged civil war. Today, IFAD has 2 ongoing projects in Liberia:

2. The **Agricultural Sector Rehabilitation Project (ASRP)** was approved in 2009 with IFAD financing in the amount of US$ 5 million. It is co-financed by the African Development Bank. This project also marks the re-engagement of IFAD in Liberia. The project centers on recapitalisation of households and focusses on the improvement of the production at farm level. Restoration of agricultural assets is broadly being achieved through the project, which has been effectively implemented and has disbursed 98% of its original financing. In July 2013 IFAD's EB approved additional financing of USD 2.5 million with a two-year extension of the ASRP. As of 26 August 2015 this additional financing is disbursed at 29%. Thus far ASRP has achieved most of its targeted outputs (10,090 households have been reached receiving improves rice seeds, cassava cuttings, etc. through 504 CBOs). However, the outbreak of EVD has slown down Project activities and will most probably limit the extent to which these outputs will translate into outcomes/impact.

3. The **Smallholder Tree Crop Revitalization Support Project (STCRSP)** in the amount of US$ 24.9 million, with IFAD financing of US$ 16.8 million approved in December 2011. It follows a value-chain approach and supports the rehabilitation of feeder roads and the rehabilitation of cocoa and coffee plantations. A strong public-private partnership has also been established, the first of its kind; the private sector partner is providing significant co-financing, technical assistance for increased production and quality, and has entered into agreement with cooperatives for commercialisation of their cocoa and coffee. STCRSP aims at strengthening the financial management and institutional development of 7 cooperatives and the capacity building of the Ministry of Agriculture (MOA) at the decentralized level to enable the cooperatives to benefit from extension services, bargaining power and lower transaction costs. Since STCRSP became operational, more than 4300 ha of smallholder plantations (equivalent to an outreach to 4300 households) have been rehabilitated through youth groups (representing employment creation and income generation to more than 2000 individual youths). As of 26 August 2015 STCRSP is 65% disbursed. From the middle of 2014 to date, due to the EVD outbreak, the project was unable to meet all set targets. However, despite the many challenges, the team has been gearing up to resume activities so that the delays encountered so far, with regards for instance to rehabilitation, are mitigated.

B. Lessons learned with respect to rehabilitation of tree crop farms

4. **Monitoring of the revitalization**. Under STCRSP, cocoa farms to be rehabilitated are identified in partnership with cooperatives, the implementing partner and the PIU based on prior knowledge or/and interviews. In the process, there is little profiling of the farmer, no soil testing, and a cursory measure of the size of the farm. Once farms have been rehabilitated, monitoring remains a challenge. Firstly, the CAC, YPs or cooperatives are not always available to conduct inspections. Secondly, some farms are hardly accessible or if they are, because of the distance, only one farm can be inspected on a given day. Preliminary evidence, suggest that some rehabilitations are not done according to the protocol agreed upon or that regular maintenance post rehabilitation is not done. All these issues will presumably have an impact on the expected yield. Project outcomes would benefit from a more rigorous approach to farm selection and monitoring involving the use of technology such as GPS. The Memorandum of understanding between the DACs, CAC, YPs and Cooperatives should include some traceable indicators with the use of the technology for accountability.

5. **Efficiency of village nurseries**. Farm rejuvenation is intrinsic to farm rehabilitation. Until April 2015, about 600 000 quality seedlings and 150 000 coffee seeds have been procured principally from the Sierra Leone Agricultural Research Institute (SLARI) which later have been planted in central and village nurseries. About 4,800 farms have been provisioned and 450,000 seedlings remain to be

distributed in June and October. Late procurement (February rather than November/December) has been an issue and has had consequence on the quality of the seedling, which is further challenged by difficulty in their transportation. The establishment of smaller nurseries at the village would ensure timely distribution, lower transport cost and less damage to the seedlings. Similarly, partnerships could be explored with the commercial small nurseries set up with the support of ADCI/VOCA. These nurseries would be managed by a lead farmer and monitored and supported by MOA YPs or cooperatives.

6. **Use of inputs**. The STCRSP makes no systematic use of agricultural inputs on rehabilitated farms. Hence the project has no direct experience with inputs suppliers. The TCEP proposes to use agrochemical inputs to control pests and diseases on rehabilitated farms. Prior to project implementation, due diligence is required to understand sourcing, prices, market and delivery mechanisms for alternatives to agrochemical products. Inputs such as bags and plastic sheets are procured by the Project or the implementation partner. Alternative procurement mechanisms will need to be considered for sustainability. Overtime, cooperatives should be able to source all the necessary inputs on the market at a reasonable price on behalf of their members.

C. Lessons learned with respect to partnership with a private sector partner

7. **Advantages.** LAADCO, the largest cocoa exporter in Liberia and is the private sector partner (PSP) of the STCRSP for 4 years. This partnership has many benefits. Firstly, the 3 cooperatives are receiving pre-financing to buy cocoa from farmers. This is essential, particularly for restructuring cooperatives which are 100% dependent on project support to operate as functioning cooperatives. Secondly, they receive from LAADCO technical advice on post-harvest handling as well as processing, storage services, and transport assistance. Finally and most importantly, cooperatives have an assured market per the agreement signed between LAADCO and the Project. For the 1st marketing campaign, LAADCO directly purchased 300 MT of cocoa from 7 cooperatives. It is worth noting that some cooperatives were not able to formally commercialise any produce prior to this arrangement. From LAADCO's perspective, this relationship is beneficial because the capacity building expenses associated with increasing commercialisation volumes of the cooperatives are shared with the project. Since LAADCO does not own plantations, as a trader, LAADCO is totally dependent of cooperatives for its volumes. From the Government/Project's perspective, this arrangement is beneficial because the increase in production is pulled by the market which is one of the surest way to incentivise farmers to produce more and in turn receive a higher income. This also supports the development of the rural economy by having more money flowing into communities.

8. **Challenges: quality issues, transparency, working capital**. Despite its advantages, this partnership has many challenges. The main one from LAADCO's perspective is the "side selling" by farmers contributing in part to sub-optimal volumes of produce delivered from cooperatives, making it commercially challenging to make profits. Farmers are in pursuit of the highest spot prices offered by private buyers, many crossing the border from Sierra Leone, despite the contractual commitments to sell to LAADCO though their cooperative. And recovery of pre-finance under the repayment mechanism exacerbates the degree of side-selling. The final grading of the produce is often the subject of dispute and does not reconcile with the grading done by the cooperative. Transportation of beans to Monrovia before valuation imposes a risk of moisture change, theft and deterioration upon the cooperatives. Volumes sold by cooperatives are regularly the subject of quality and moisture deduction before payment going up to a price discount of 20%. Moreover, the rejection and retention of sub-standard beans without payment by LAADCO lacks transparency and fairness according to the cooperatives. The final grading done by LAADCO at its Monrovia station does not reconcile with the grading done by the cooperative. The Government position is that LAADCO should pay cooperatives 10% commission for the volume traded and 70% of the CIF price. LAADCO argues that because it provides working capital to cooperatives it should be exempt of the 10% commission and should be allow developing its own set of incentives. Currently LAADCO offers an average of USD 25/MT. These issues have led to numerous discussions among all stakeholders and have led to some preliminary conclusions. While the Government has a role to play in curtailing "side selling", the flow of funds

between LAADCO -> Cooperatives -> Farmers has to be expedited so farmers have cash readily available and as needed. For that to happen, continued discussions are required as well as close monitoring. An option is to directly provide the rehabilitation funds to cooperatives. Large dissemination of quality and grading standards as well as price is also required. Cooperatives should, in the long run, have other options than rely on the private partner for working capital and be ultimately capable of choosing the right business partner for buying the production of its members. In addition to implementing the above, the TCEP will also strength the relationship between cooperatives and licence buyers. This dynamic seems to be well entrenched in Nimba where there is a lot of cross border trading between Cote d'Ivoire and Liberia.

D. Lessons learned regarding institutional strengthening of cooperatives

9. As a result of implementation delays, the re-assessment of cooperatives to be supported in Lofa could only be done in October 2012 instead of being conducted at the early stages of the STCRSP implementation. This further delayed implementation. Once conducted, however, the assessment led to the development of capacity and business plans for each cooperative serving as the basis for the provision of support by the project. Regular monitoring of cooperative performance has been credited with the increase in the volume commercialized, the relative good management of funds, as well as leadership change in some cooperatives.

10. There is need to improve the partnership and collaboration with the Cooperative Development Agency (CDA) to provide institutional support to cooperatives. The CDA with its mandate, has oversight responsibility on the cooperatives, and has authority to ensure that cooperatives are accountable to their members and adhere to good governance practices. As the CDA has limited capacity at the County level, the STCRSP has entered into an Agreement with CDA to provide support to improve their mobility (motorbike, fuel and incentive lump sum); capacitated, the CDA collaborates with the project to provide support and advisory services to cooperatives, as well as to audit them, and accompany the cooperatives through their general assemblies and election processes. However, the capacity of the CDA could be further strengthen to address the complex issue of cooperative growth and long term sustainability. To date, the monitoring of cooperatives in Lofa has largely rested on the shoulders of the PIU despite the contracting relationship with the CDA and the 3 CDA officers. This is primarily due to the lack of qualified staff in relation to the complex nature of the support required to simultaneously address operational issues (timely collection of produce from farmers), organizational issues (use and distribution of funds, staff to hire) and strategic issues (contractual relationships, price negotiations, increasing membership). Timely international expertise should be used to strengthened CDA staff along with Project staff to adequately support the development of cooperatives and monitor progress.

E. Lessons learned with respect to a more sectoral approach

The STCRSP has established a number of institutional relationships with the relevant sub-sectoral institutions such as LPMC, CDA, CSTWG, DAOs/YPs, CAC and CARI. There is an opportunity to collaborate across donors to have a sectoral approach to development of the tree crops subsector. Currently there is little coordination across donors with regard to support to the institutions. Similarly to the collaborative efforts, which lead to the co-financing of the EFSA, support and funding for LACRA, CDA, DAOs, CAC, Community Colleges (Agriculture Department) and CARI should also be coordinated. Now that Liberia has again joined the ICCO, efforts and resources should be mobilized to collect and monitor primary data on tree crop farms and develop sets of standards to be enforced. The MOA has the opportunity to take a lead role in setting technical standards in accordance with market demands, issuing guidance on farm management and introducing M&E.

Appendix 4: Detailed project description

1. The TCEP will adopt a value chain approach to link cocoa farmers, organized at grassroots level in traditional kuu groups that will be combined with FFS, to markets and services through cooperatives and Private sector partners (PSP).

Component A: Revitalization of cocoa plantations

2. The expected outcome of Component A is “increased quantity and quality of cocoa sold by smallholders”.

A. Establishment of kuu groups and Farmer Field Schools

3. Farmers at grassroots level will be mobilized and organized in *kuu* groups of around 25 people, which will also form the basic unit of a Farmer Field School (FFS). These groups will undertake the revitalization and replanting on their own farms and will also set up village nurseries. The FFS will cover all thematic areas required to upgrade the cocoa value chains. This FFS will also focus on practices to make farms more resilient to climate change, specifically shade management, diversification, and tree management. National and international technical assistance will be mobilized in order to develop the implementation capacity. The Project will create approximately 320 FFS with 25 participants each to reach the 8,000 targeted beneficiary farmers.

4. The kuu approach will link up with the extension and training system through the FFS. These two elements - kuu and FFS - will not run in parallel but be part of a single approach. Each kuu group will elect their lead farmer who will receive special training and pass it on to the kuu group. The lead farmers from all kuu groups in an area will meet at certain intervals with their technician at a specified field site and receive training in specific activities relevant to cocoa management at this time of the year. These groups could be composed of 10-20 lead farmers. The technician will meet with the lead farmers every 2 weeks to provide specific training. These trainings will not always be held at the same place, but will rotate among villages and farms, possibly each time going to the farm of one of the lead farmers of the group. The lead farmers will be the ones who receive special training and equipment in application of pesticides, fertilizer etc. By meeting each time in a different farm they will learn how to apply their knowledge to different farm situations. The curriculum of these trainings will follow the cropping calendar. It will use only a minimum of printed material because the training should take place on the farm itself and the majority of farmers is illiterate.

5. Back in their kuu group, the lead farmers will pass their acquired knowledge on to the other members of the group. The kuu groups will meet preferably in the various farms of their members and so the new knowledge will be demonstrated and applied in each farm, rather than being taught in one specific "demonstration farm". Whatever gets tried out (e.g., applying a bag of fertilizer to an acre and seeing the response) will be applied to each farm so that each farmer can observe the effect on their specific farm.

B. Basic revitalization of cocoa plantations

6. The basic revitalization and replanting will take place in PY1 to PY4; the development of the value chain linkages, as well as additional focus on crop husbandry and post-harvest handling will be undertaken from PY1 to PY6. The underlying idea of basic revitalization is to bring cocoa yields to at least 400 kg/ha, a stage that is expected to be reached by 2,000 farmers (25%). Further yield increases to 1,000 kg/ha will result from services developed by the *kuu* groups and cooperatives with project support (see: enhanced revitalization).

7. Approximately 8,000 ha of cocoa plantations will be revitalized during years 1 to 5, at one ha per farmer. The basic revitalization of plantations consists of four activities: (i) under-brushing, sanitation and pruning, which will be contracted to farmers, using the traditional *kuu* labour system; (ii)

adjusting shade, which will be undertaken by skilled power-saw operators; (iii) gap-filling and partial replanting, undertaken by the kuu group themselves using seedlings produced in village nurseries; (iv) capacity building of farmers in crop husbandry, disease control, harvesting and post-harvest handling. The cost of revitalization includes: (a) tools and labour for the *kuu* groups, (b) seeds and equipment for setting up village nurseries and production of seedlings, (c) training sessions in crop production, plant protection, harvesting and post-harvest handling; and (d) other equipment and inputs, in particular for disease control. Labour will be considered as contribution of the beneficiaries.

Table 1: Phasing of revitalization and replanting (ha)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Cocoa revitalization	1,000	2,000	2,500	2,500			8,000
Cocoa replanting	0	500	1,000	1,000			2,000
Total	**1,000**	**2,500**	**3,500**	**3,500**		**0**	**10,000**

8. **Village nurseries.** Most plantations will not have a complete set of productive plants (~1000 plants per ha). Approximately 16% of cocoa will be replanted as part of the revitalization process. For the production of planting material, approximately 320 village nurseries will be established, seeds and small equipment provided, caretakers trained and the seedlings produced by the farmers for replanting of over-age plantations and gap filling in existing plantations. Until suitable germplasm for grafting has been identified, the replanting will be based on hybrid seeds to be purchased from the nearest sources.

9. **Crop diversification and climate change resilience.** Two key approaches will used by the Project to reduce the risk of temperature extremes which negatively affect cocoa yields. These are: (a) to promote systematic shading (~30-40%) of the tree crops by suitable companion trees that will be selectively retained from the existing tree stand at the time of revitalization, with focus on native timber and fruit trees; and (b) to diversify cocoa farms following their revitalization with valuable trees and food crops, specifically banana/plantain, to reduce the risk of crop failure while simultaneously increasing the role of women in the farming economy and improving nutrition of households. Suckers of banana and plantain for multiplication through the mini-set method would be multiplied. Banana and plantain are also commonly used for temporary shading of young cocoa trees in West Africa. Suitable planting arrangements with non-cocoa trees along the farm boundaries can also increase the resistance of the farming landscape to the spread of the mealybugs that carry the Cocoa swollen shoot virus (CSSV), a potential risk to cocoa production in Liberia.

C. Enhanced revitalization of cocoa plantations

10. After the basic revitalization, support will be provided to all *kuu* group/FFS to achieve the enhanced revitalization level with yields up to 1,000 kg per ha (1 kg of cocoa per stem) in the medium-term. It is expected that 75% of the cocoa farmers (6,000) will reach this enhanced level. The following support will be provided to all farmers:

i. support to village nurseries, using improved planting material; a training program on the improvement of cocoa farms through grafting and the use of hybrid seedlings, for a continuous gradual replacement of stems (5% per annum) and for replanting;

ii. further support to climate change resilient extension services, using FFS techniques;

iii. enhanced crop protection; the application of insecticides and fungicides the mechanism of training and equipment of specialized operators;

iv. the promotion of fertilizer use for interested farmers;

v. promotion of improved post-harvest handling.

11. **Gradual replacement using improved planting materials**. The Project will support significant replanting of farms with hybrid or grafted seedlings as well as the grafting of unproductive trees with

improved planting material. The Project will implement a training program on the improvement of cocoa farms through grafting. The objective is selecting and grafting of the more performing trees in the plots to increase average productivity per tree, reduce the risk of introducing diseases or strains not adapted to local conditions. The Project will train 50 farmers (at least 50% women) per cooperative per year (2,000 farmers in total) in grafting and the identification of suitable cocoa germplasm through 1-week courses (2 courses of 25 participants per cooperative per year) and provide the necessary follow-up visits. During these trainings, the farmers will also learn how to monitor their farms for CSSV and avoid spreading the virus through grafting. Farmers trained in grafting may later provide this service to other members of their community or cooperative as demand for it increases.

12. **Pest and disease control**. A decreasing length of the dry season is expected to increase fungal disease pressures, and this trend could be reinforced by the need for relatively dense shading to protect the cocoa plants from temperature extremes. In West Africa, and especially its wetter parts, the need to control fungal diseases (black pod) with fungicides is already high, and climate change may reinforce this need. The Project will support investments in the training and equipment of specialized spraying groups of young people at the level of the cooperatives, which will provide these services. The potential of biological methods will be explored.

13. **The promotion of fertilizer use** for interested farmers, who will receive one bag of fertilizer to try out the yield response, then if positive recommend annually three bags per ha. In the medium term, input supply linkages will be developed with cooperative and PSP support.

14. **Promotion of good practices in post-harvest handling and drying**. The projected shortening of the dry season could have negative effects on post-harvest processing and thus on the quality and price of cocoa. Specifically, a shorter dry season could mean that a larger part of the cocoa yield will be harvested during the rainy season when sun drying is problematic or impossible. Harvesting during the rainy season also means an increased need for safe storage of the product before it is taken to the market.

15. The FFS will work on all relevant issues related to post-harvest handling, fermentation and drying.

16. For marketing of cocoa, the *kuu* group/FFS will enter into contractual agreements with district cooperatives or PSPs. The PSP/cooperative will (i) ensure marketing of produce at an agreed minimum price, currently at least 70% of the ICCO price for grade 1 (even 75% is targeted), (ii) provide market information to farmers; (iii) link the groups up with services and input supply; (iv) provide specialized extension services if required.

17. The Project will promote two types of solar dryers: (i) a larger capacity solar dryer at central warehouse and/or mini-warehouse level, owned and managed by farmers' organizations and cooperatives (see: Component C); (ii) small solar dryers, owned and managed by the individual farmer (matching grant of 60% to purchase external input, beneficiary contribution in kind of 40%). The Project will provide the necessary training for their use and maintenance. The support to establish small solar dryers will be organized through the FFS approach, one year after the initial revitalization.

D. Restocking / replanting of cocoa plantations

18. Approximately 2,000 ha of the 10,000 ha of cocoa will be replanted, at 0.5 to 1 ha per farmer. This support will be targeted to at least 30% women and 50% young farmers, in addition to farmers who managed their plantations well. Selected farmers will be provided with hybrid or grafted seedlings through the village nurseries. Basically, the same approach as for the enhanced revitalization will be used, as the targeted farmers will also be members of the established FFS.

E. Establishment of a germplasm station

19. As long-term strategy to develop the cocoa subsector in Liberia, there is a need to ensure that improved planting materials for cocoa are continuously made available for replanting by farmers through village nurseries or nurseries owned by private sector and cooperatives. Currently, Liberia has hardly any infrastructure for producing its own germplasm for planting and distribution to farmers, and cocoa germplasm brought in from other countries may not be ideally suited to the current and future conditions in Liberia's cocoa belts that differ in some important aspects from those in other major cocoa producers in the region.

20. With Project support, a germplasm station will be established in Nimba County to provide seeds and/or bud sticks to all cocoa producing districts and possibly Grand Gedeh, River Gee and rural Maryland Counties. The station will also serve as a training site for technicians and have a simple agro-meteorological station. The station will be developed and managed in partnership with the Central Agricultural Research Institute (CARI) of the MOA and be handed over to CARI either during or at the end of the Project. TCEP will finance equipment and operating costs of this station.

21. The establishment of regional partnerships for the exchange of germplasm, e.g. with Ghana, Côte d'Ivoire and Nigeria, will be supported. Plant varieties will be selected for yield, disease resistance and shade tolerance. Furthermore, researchers will screen germplasm for suitability to a certain climate or monitor disease pressure possibly in partnership with a national university. This will give momentum on climate resilient cocoa practice so as to influence sectoral policies on tree crop development.

Component B: Rehabilitation and construction of roads

22. The expected outcome of Component B is "improved access to markets and reduced transportation costs".

A. Rehabilitation of Roads

23. Approximately 200 km of farm-to-market roads will be rehabilitated. Improved roads will encourage farmers in landlocked areas to undertake the revitalization of their plantations and private traders to organize buying of cocoa. The selection of roads will based on a multi-criteria ranking exercise, which takes into account the targeted farmers under TCEP, the priorities from the Nimba CDA and parameters evaluating the technical and economic feasibility of each road segment (see: table below). TCEP will, in line with the approach of Ministry of Public Works (MPW) and other development partners, adopt Labor-Based Work methods as championed by the International labour organization (ILO)[49]. Labour-based work methods seek to maximize economic use of local labour and materials, thus creating employment opportunities and increasing participation in road development. Most roads will be low-volume (less than 50 vehicles per day) gravel roads as specified in the FRWD, which have an average unit cost of 40,000 USD/km. Specific attention will be given to the appropriate design of drainage structures, which are of crucial importance for the sustainability of these type of roads and will render them more climate resilient.

24. The Department of Feeder Roads (DFR), Bureau of Rural Development at the MPW is saddled with the responsibility of regulating the design, construction delivery and maintenance of all rural roads infrastructures within Liberia. The standards and specifications for such works have been reduced into a Feeder Roads Design Manual.

25. TCEP will use the implementation mechanism developed by STCRSP, namely: (a) recruitment of engineers in the County-PIU that will be responsible for preparation of tender documents, supervision of works and putting in place a maintenance programme; (b) support to the Ministry of Public Works (MPW) in order to undertake supervision missions of the rehabilitation and maintenance works. Private companies will be contracted through a competitive process for the works, making use

[49] See http://www.ilo.org/global/topics/employment-intensive-investment/

of the Contractors Classification and Certification System developed by MPW. The Environmental Protection Agency (EPA) will be responsible for assessing the environmental impact, which will be limited as only existing roads will be rehabilitated.

26. The selection criteria for roads that will have been earmarked for rehabilitation have been developed in three categories: (i) statutory category, which seeks to ensure compliance with statutory regulations or institutional procedures as pertain with the MOA, MPW and County Administration; (ii) technical category, which considers the physical and functional conditions of the existing road together with the approach secondary or primary road and other technical requirements expected after rehabilitation; (iii) socio-economic category, which seeks to incorporate expected socio-economic impact that the intervention will make on the livelihood of farmers and other neighboring settlements.

27. Works will be carried out by local contractors that may benefit from project capacity building support. Private companies will be contracted through a competitive process for the construction of culverts, bridges and gravel works. The unit cost of works includes the required infrastructure (bridges, culverts, etc.).

B. Maintenance of roads

28. Maintenance of roads is crucial to the sustainability of investments and impacts on the ground. Development of a sustainable road maintenance system including financing, is a long-term effort with multiple development partners involved. TCEP will build on the work of MPW in collaboration with notably SIDA, GIZ and the ILO, and adopt a three-pronged approach to roads maintenance:

a. capacity building in road maintenance. TCEP Engineers will train local youth to be employed on a cash-for-work basis, and will provide necessary tools. Where required, technical assistance will be provided to contractors on the use of labour-based work methods;

b. improvement of the roads maintenance strategy, including development of a sustainable financing mechanism, building on the achievement of a SIDA-funded project in the county. TCEP will engage technical assistance;

c. transition financing of maintenance on a cash-for-work basis. In the initial three years after rehabilitation, TCEP will finance maintenance of rural roads until a sustainable financing mechanism has been developed. This maintenance work will be carried by local communities on a cash-for-work basis.

Table 2: Proposed road maintenance

Type	Description
Routine maintenance	Applicable to small and seasonal recurrent defects on the road. To be carried out annually on a repeated cycle and most suitable for execution by small scale contractors, work gangs or individuals. Routine maintenance includes: - Bush clearing on road shoulders, in side ditches and in tailwater and approach channels of culverts and bridges. - Desilting of side ditches, culverts and approach and tailwater channels. - Repair of minor scour in road shoulders, side ditches and at culverts
Periodic maintenance	Applicable to major and destructive defects on the road. To be carried out within 5-8 years with good construction and routine maintenance practice. Most suitable for execution by medium to large scale contractors. Periodic maintenance operations will mainly entail the following in addition to routine maintenance requirements: - Re-grading of scoured carriageway sections. - Re-shaping of scoured side ditches - Re-gravelling of damaged carriageway - Repair of structural defects on culverts and bridges.

Component C: Service provision for cocoa value chain development

29. The expected outcome of Component C is “improved service provision to cocoa smallholders”.

A. Strengthening cooperatives of cocoa producers

30. In order to ensure access to markets and to inputs, selected cooperatives will be strengthened and linked up with the kuu groups and FFS. The main innovation with respect to cooperative development in the TCEP design is the stronger focus on: (a) the kuu groups who will enhance the bargaining power of the grassroots level in the cooperatives; (b) a long-term growth path for institutional capacity building of the cooperatives with be derived from the SCOPEinsight audit; the institutional screening by SCOPEinsight will be used as baseline and will be updated regularly in order to monitor institutional progress and to provide tailored support; (c) transparency, accountability and responsibility of cooperatives in particular with respect to overhead costs and cocoa prices paid to their members in the performance-based partnership agreements.

31. After the selection of the cooperatives, Memoranda of Agreement will be signed and institutional support will be provided to enhance the capacity of these cooperatives. The following activities will be eligible for financing; (i) institutional audits, business plan development and monitoring; (ii) institutional capacity building in cooperative and financial management; (iii) development of linkages to financial services, input suppliers and markets; (iv) support in terms of equipment and infrastructure; (v) development of an internal technical extension capacity; (vi) development of commercial and marketing capacity; (vii) decreasing operational support, mainly staff and operating costs.

32. In order to increase the sustainability of the operations promoted under Component A, the kuu groups/FFS will be linked up with viable cooperatives that will provide services to the cocoa farmers. These services could for example include:

i. Facilitation of access of farmers to improved planting material through linkages with the germplasm station, training in grafting, assistance to the set up village nurseries or development of cluster nurseries owned by the cooperative (see also: Component A);

ii. Facilitation of access of farmers to agro-chemicals and fertilizers;

iii. Facilitation of access of farmers to financial services through the organization of VSLA groups;

iv. Extension services in FFS rehabilitation, crop management, harvesting and post-harvest handling;

v. Centralized handling, drying, bulking and storage of produce;

vi. Access to market information and joint marketing of produce.

33. **Business plan development**. Each cooperative will be supported to have a well-defined business plan and exit strategy, on which to base project support. A capacity-building plan will be defined in order to enable them to implement their business plan. For each cooperative four generic programmes have been identified focusing on: (i) strengthening the organisational and institutional capacity; (ii) provision of advisory support to cocoa farmer members in production and post-harvest handling; (iii) provision of inputs, including access to improved varieties; (iv) purchase and marketing of cocoa to local exporters.

34. **Institutional capacity building support** would be provided to the selected cooperatives to strengthen financial and institutional management. CDA, or other providers if required, will provide training in areas of: (i) governance, primarily directed at the cooperative boards members; (ii) financial management, directed at the management teams; and (iii) cooperative member education and group collective marketing, for the management teams and members in general. Decreasing support will be provided for the organization of General assemblies (GA).

35. In order to **equip the selected cooperatives**, the Project will provide each of them with office and warehouses (construction or refurbishment), solar dryers, motorcycles, power saws, and other equipment for post-harvest handling and marketing.

36. The **technical extension capacity** of the cooperatives will be developed. The Project will (a) embed one MOA extension agent with each selected coop, and train members of the cooperative, focussing on all technical skills required of farmers; (b) train a specialised cooperative crew in agri-chemical management, application, storage and safety; (c) set up a service programme for member farmers; and (d) train extension agents in farm practices to reduce climate change vulnerability (shading, diversification, pruning and grafting to increase productivity and reduce water demand). The Project will train and build the capacity of youth groups specialized in cocoa grafting (on farm) and the production of grafted cocoa seedlings for sale, as well as the production of fruit tree seedlings for farm diversification (hybrid oil palm, plantain, etc.).

37. The **marketing capacity of cooperatives** will be developed as an income generating activity. This will include: (a) the provision of specialized training in product quality, market access and pricing to a member of cooperative management; (b) working on fair and transparent pricing.

B. Strengthening of MOA and CDA at decentralized level

38. TCEP will provide support to build the institutional capacity of the **Ministry of Agriculture (MOA) at county and district levels**. The CAC and DAOs will be enhanced in areas of: (a) technical management of tree crops; (b) agricultural extension services, in particular FFS; (c) monitoring of Project activities. In complementarity with the interventions of other donors, the Project will provide training to key frontline staff, office refurbishment, equipment, and vehicles/motorcycles based on needs identified.

39. The Project will also assist the Tree Crops Division to review guidelines and recommended practices, produce Standard Operating Procedures, and provide specialised training in tree crop management for decentralised officers through a special course arranged through Cuttington University in Bong County and other colleges. All decentralised MOA technical staff involved with the TCEP will require this re-fresher training in tree crop agronomy, as well as in extension techniques (FFS) and M&E.

40. TCEP will provide support to build the institutional capacity of the **Cooperative Development Agency** (CDA) at county levels. TCEP will provide support for the Assistant Registrar and their Deputy in areas of: (i) governance, primarily directed at the cooperative boards members; (ii) financial management, directed at the management teams; and (iii) cooperative member education and group collective marketing; and, (iv) arrangements for general assemblies (GA). The Project will provide each selected Assistant Registrar and each Deputy with a motorcycle.

41. The Liberia Agriculture Commodity Regulatory Authority (LACRA) will be supported to build its institutional capacity at central and Nimba County level. The support will include office equipment, a motorcycle and the deployment of a Young Professional (YP). LACRA will be contracted to ensure that the cocoa from the selected cooperatives and groups accords with international standards.

C. Policy and Legal Environment

42. The TCEP in collaboration with other development partners will support a National round table on climate friendly cocoa, and the possible expansion of cocoa production towards the wetter counties as part of a country wide climate change adaptation strategy. Other items that could be discussed: (a) switching to farm gate pricing with prescribed minima; (b) stimulation of cocoa through quality premiums and enforced minimum standards; (c) bilateral agreements with Ghana and Côte d'Ivoire for technical exchanges, exchange of germplasm, multiplication strategies, control of diseases (CSSV), and child labor issues.

43. Within the ambit of the REDD+ Policy development, the TCEP will support one National Round Table on Climate friendly cocoa, and the planned and controlled expansion of cocoa production towards the wetter counties as part of a country wide Climate Change adaptation strategy.

D. Institutional capacity building in climate change resilience

132. The TCEP will mobilize international and national technical assistance in order to (i) mainstream climate change resilience in all the tools, manuals, approaches and procedures, used by the Project and MOA; (ii) participate initially in the definition of the protocols for farm revitalization to ensure that climate resilience is considered; (iii) monitor training programs of the FFS with respect to climate change; (iv) prepare and organize training of trainers (TOT) for all institutional partners of the Project at local, district, county and national levels in topics related to climate change and diversification; (v) provide backstopping support for the setting up of a seed garden in Nimba County including the collection of promising local germplasm from farmer fields and the production of planting material for farm diversification and shading; (vi) provide training in the improvement of cocoa trees through grafting including the identification of suitable materials.

E. Mitigation of the risk of deforestation

44. Even without climate change, there will be a considerable risk of an expansion of smallholder cocoa production in a still largely forested country like Liberia to lead to farm encroachment into forest. Cocoa and to a lesser extent coffee have played a major role in the dramatic forest loss in West Africa over the past half-century and the ongoing encroachment of remaining forest reserves by tree crop farmers. Increasing deforestation in the landscape can reinforce climate change by removing the microclimatic protection of forest, while the use of fire for forest clearing is a threat to tree crop farms.

45. In order to mitigate the risk of deforestation, the Project will introduce a simple land use planning and monitoring tool to serve as a safeguard against the risk of cocoa farming directly or indirectly causing deforestation, which might jeopardize the positioning of these products on international markets that become ever more demanding in terms of environmental sustainability as well as Liberia's prospects in international Reducing Emissions from Deforestation and Forest Degradation (REDD+) negotiations and in the end can carry a reputational risk for TCEP and its stakeholders. This activity will be implemented in partnership with a national or international NGO with experience in remote sensing and geographical information systems. It will conduct planning workshops with the communities participating in the project, map main land uses (especially forest/non-forest) of the community lands on the basis of satellite images, and monitor forest encroachment and deforestation in the target communities of the project. It will involve agreements between communities and the project about forest conservation and the non-encroachment of agriculture into forest, either by project beneficiaries or non-beneficiaries.

Component D: Project coordination, management and M&E

Coordination and management

46. The objective of Component D is to ensure an effective operational planning, implementation, monitoring and evaluation, and knowledge management of the TCEP. The existing PMU/PIU structure will be maintained and complemented by a County-PIU in Sanniquellie, Nimba County. Details are presented in Chapter III and Appendix 5. The performance indicators of this component will include quality and timely execution of annual work plan and budgets, timely submission of progress reports and annual audit reports, and operational M&E able to document key indicators and actual levels of disbursements in line with planning.

Monitoring and evaluation, knowledge management

47. The Project will finance (i) the development and operation of an M&E system; (ii) knowledge management and communication activities. A detailed description of M&E and Knowledge management is presented in Appendix 6.

Appendix 5: Institutional aspects and implementation arrangements

A. Overall Responsibility and Orientation

Ministry of Agriculture (National Level)

1. The Ministry of agriculture (MOA) is designated as Lead Project Agency (LPA) for TCEP. The MOA shall have the overall responsibility for implementing the Project and shall ensure linkages to other relevant Ministries and Agencies.

2. The specific roles and responsibilities of the MOA are described hereafter: (i) chair the National Steering Committee (NSC); (ii) provide support to the PMU for design, implementation and coordination of project interventions; (iii) supervise the PMU, participate in review and evaluation missions; (iv) control and timely release funds received from the Ministry of Finance and Development Planning (MFDP); (v) report to the MFDP; (vi) be member of the project procurement committee; (vii) conduct staff appraisal of the Project Coordinator and the Financial Controller; (viii) mobilize resources and provide technical, administrative & financial support to the PMU; (ix) provide feedback on project reports; (x) facilitate collaboration with its national and decentralized services; (xi) coordinate donor interventions under its jurisdiction and with other Ministries; and (xii) facilitate MFDP's approval & signature of project disbursement requests.

National Steering Committee

3. The National Steering Committee (NSC) of the STCRSP will also serve as NSC for the TCEP. The NSC shall orient the strategy of the Project, oversee planning, review progress and impact and ensure linkages with related projects, government services and relevant value chain stakeholders. The NSC will have the following responsibilities: (i) provide conceptual support to the PMU for implementation and coordination of project interventions; (ii) ensure conformity with Government policy and strategy in this sector; (iii) approve the AWPBs and the semi-annual progress reports; (iv) endorse changes negotiated between donors and the GOL; (v) endorse changes to the project concept proposed by the MOA or PMU; (vi) resolves implementation problems or conflicts; and (vii) assist the PMU in obtaining, whenever needed, the GOL's assistance and contribution to the project. The PMU will be the secretariat of the national steering committee. The NSC shall be chaired by the MOA and shall meet at least twice a year.

B. Project Coordination and Management

Project Management Unit (PMU) and Project Implementation Unit (PIU) in Monrovia

4. The Programme Management Unit (PMU) was set-up under the supervision of the MOA and anchored to the Planning and Development Department of MOA. The PMU is a shared unit in charge of implementing all donor-funded projects in the agricultural sector, which are under MOA. The PMU will be responsible for (i) overall coordination of activities and information exchange among Partners, line ministries and other stakeholders in the agriculture sector; (ii) ensuring synergy amongst the different Project implementation units (PIU) for each donor; (iii) undertaking a permanent dialogue with Government on issues such as policy dialogue, maintenance of roads, etc.

5. Within the PMU, the responsibility of the IFAD Project implementation unit (PIU) in Monrovia has responsibility for all IFAD-funded projects in Liberia, including TCEP, STCRSP and ASRP. This IFAD-PIU in Monrovia will share some transversal functions with all IFAD-funded projects. Due to the increase responsibilities of the PIU, the following additional staff will be financed by TCEP: (i) a procurement specialist, (ii) an administrator, (iii) a senior M&E officer, and (iv) drivers. In the third year when the

STCRSP and ASRP will be phased out, the TCEP will take on the cost of the project coordinator, the financial controller, the procurement officer and project accountant.

6. The PIU will be strengthened with 2 new staff members to develop and coordinate gender, youth and inclusion related capacities and monitor implementation: (i) a complimentary position to the PIU M&E, Gender and Targeting Officer, to be recruited as a full time Gender, Youth and Inclusion Specialist at the national level to provide strategic support; (ii) a Business Development Officer at County level to develop and follow up on implementation of the TCEP VSLA approach[50].

7. The IFAD-PIU will ensure day-to-day management of TCEP. Its specific responsibility will consist in: (i) providing overall planning, supervision, monitoring and coordination of project activities; (ii) providing guidance in terms of project implementation; (iii) producing the project's communication strategy; (iv) preparing the AWPB and the associated 18 month Project procurement plan (PPP), (v) coordinating & consolidating periodical reports from implementing units & partners; (vi) providing logistical, administrative and technical backstopping to implementing partners/agencies and keep linkages with the beneficiaries; (vii) keeping the MOA informed on progress & problems and discuss proposed solutions; (viii) establishing and maintaining linkages with other government Ministries, donors and service providers; (ix) contracting out specified activities to IPs selected through a competitive process and/or direct contracting; (x) monitoring progress of project activities and evaluate performance of the contractors; (xi) carrying out or controlling financial management and procurement of goods and services done through the IPs; (xii) operating the management information and reporting systems; (xiii) reporting regularly to the development partners; and (xv) disseminating information about the project rationale, concept and detailed content to the stakeholders and interested parties.

Project Implementation Units at County Level

8. At county level, TCEP will establish a County-PIU in Sanniquellie, Nimba County[51]. The County PIU team will be composed of (i) 2 Project civil engineers, (ii) a tree crops officer, (iii) a FFS officer, (iv) an institutional officer, (v) a M&E officer, (vi) an accountant, and (vii) three drivers.

9. The County PIU will be responsible for: (i) planning field activities and preparation of a County-level AWPB; (ii) ensuring implementation of activities; (iii) monitoring implementation and providing guidance to the implementing partners, in particular the selected cooperatives and PSPs; (iv) liaise with the County Agricultural Coordinator (CAC), District Agricultural Officers (DAOs) and the County Resident Engineer (CRE) on a regular basis; (iv) identifying opportunities and challenges, and proposing solutions, (v) providing feedback to the IFAD-PIU in Monrovia, which will feed the PMU with information; (vi) taking part in trainings, (vii) ensuring internal monitoring of activities in the sites and preparation of progress reports.

C. Implementing partners

10. The main implementing partners (IP) of the TCEP will be: (a) the selected Cooperatives who will engage in business agreements with the *kuu* groups and FFS; (b) at least two (2) Private sector partners (PSPs), who will engage in PPPs with the Project and the cooperatives; (c) the Central agricultural research institute (CARI); (d) other specialized service providers, including national and international consulting firms and NGOs, commercial financial institutions and others.

11. Implementing Partners (IPs) will be contracted directly on clear terms of reference indicating the responsibilities and duties of each partner and performance indicators. The responsibilities of the IPs will include: (i) implement project activities in accordance with the Memoranda of agreement or performance-based contracts.

[50] Detailed job descriptions are presented in Working Paper 1.
[51] STCRSP has a similar County-PIU in Lofa

D. Role of decentralized services of MOA

12. At the County level, the TCEP will liaise with the decentralized establishment of the MOA and CDA. The County agricultural coordinator (CAC) and District agricultural officers (DAOs) will monitor implementation of Component A and 3, buttressed by new approaches involving communities. The capacity of the CAC and DAOs in the targeted counties will be strengthened to ensure: (i) overall project monitoring, oversight and guidance, and data collection; (ii) technical support to the cooperatives, kuu groups and FFS. The County resident engineer (CRE) will liaise with the Project for implementation and monitoring of Component B, as well as for routine maintenance. A MOU will be signed with the Project in order to define roles and responsibilities.

E. Implementation of Component A

13. The FFS officer of the County PIU will coordinate the establishment of kuu groups and FFS and mobilize the required international and national technical assistance to develop the tools and build the required capacity. Partnership agreements will be signed with these kuu groups and FFS, which will specify mutual responsibilities and roles in revitalization and replanting of cocoa farms, setting up and management of FFS, setting up and management of nurseries, and post-harvest handling.

14. In order to facilitate market access and linkages for these grassroots groups, to improve transparency of pricing and to create awareness and capacity on cocoa quality, drying and fermentation, the TCEP will establish partnerships with at least two Private sector partner (PSPs) and some district cooperatives. The selection of PSPs will be done competitively on the basis of Invitation for Expression of interest. Selection criteria for the PSP will be: (i) willingness to co-finance the TCEP and enter in agribusiness agreements with the selected cooperatives and groups; (ii) have the capacity to work with cocoa smallholders and the required professional, technical and logistical support; (iii) the company must have officially registered in Liberia. The agreement will be explicit with regards to the role of each party and the terms of the contracts (especially concerning the amount of investment, the modalities of delivering inputs and services, the cocoa prices connected to the quality and the payment delays/conditions) between the cooperatives/FBO and the PSP to avoid misunderstanding and possible misconduct from both sides. The agreement will specify the minimal price to be paid for cocoa (currently at 70% of the ICCO price for grade 1 cocoa). A transparent complaints mechanism will be established to encourage mutual trust and confidence.

15. The Project will sign an Agreement with the Central Agricultural Research Institute (CARI) for all issues related to the provision of improved planting material, germplasm screening, the development of a seed station in Nimba, as well as backstopping to village nurseries and TOT.

F. Implementation of Component B

16. For rehabilitation and maintenance of roads, the TCEP will use the same implementation mechanism as the STCRSP. The TCEP will engage the services of local contractors via open or restricted tendering. In preparing the Bid documents, TCEP will take note of the capacity of community residents to undertake road works (line culvert construction, road side brushing etc.) and ensure contractual provision for their employment.

17. The Project civil engineers (PCE) and the procurement team of PIU will (a) make an assessment of roads for design of rehabilitation works; (b) prepare the tender documents; (c) assist in the procurement process; (d) facilitate preparation of contracts; (e) supervise works and prepare progress reports; (f) assist the County resident engineer (CRE) where needed to support implementation of the Component.

18. The County resident engineer (CRE) will: (i) participate to the selection of roads to be rehabilitated jointly with the TCEP civil engineers; (ii) work in collaboration with a service provider, especially for the training of the selected contractors; (iii) with the TCEP engineer, organize the maintenance system

through the establishment of maintenance committees at village level, the training of farmers and youth in maintenance, the provision of maintenance tool kits, and the overall supervision of the system; (iv) conduct regular site visits and maintain an updated database of roads in the county; and (v) provide quarterly reports to the Monrovia PIU on activity progress and associated indicators.

19. If environmental permits will be issued for the whole project and not individual components of the project, then local contractors can benefit from contract awards via coordination between MoA, TCEP Engineers and MPW. Local contractors must satisfy the current guidelines being utilized by MoA/IFAD STCRSP – Lofa (Business registration, MPW road works certificate, updated tax clearance, etc.).

G. Implementation of Component C

Strengthening cooperatives

20. The selected Cooperatives will sign annual performance-based Memoranda of agreement with the Project, so as to provide market access and services to the kuu/FFS groups. Public or private service provider could be contracted to ensure institutional capacity building in areas of : (i) cooperative governance, primarily directed at cooperative boards members; (ii) financial management, directed at the management teams; and (iii) cooperative member education and group collective marketing, for the management teams and members in general. International expertise will be procured to ensure monitoring of the institutional learning and development curve of the targeted cooperatives.

21. International expertise will be procured to ensure monitoring of the institutional learning and development curve of the targeted cooperatives.

Strengthening of public services

22. Decentralized MOA (CAC & DAOs) and LACRA will be involved in Component C. A MOU will be signed with the Project in order to define roles and responsibilities.

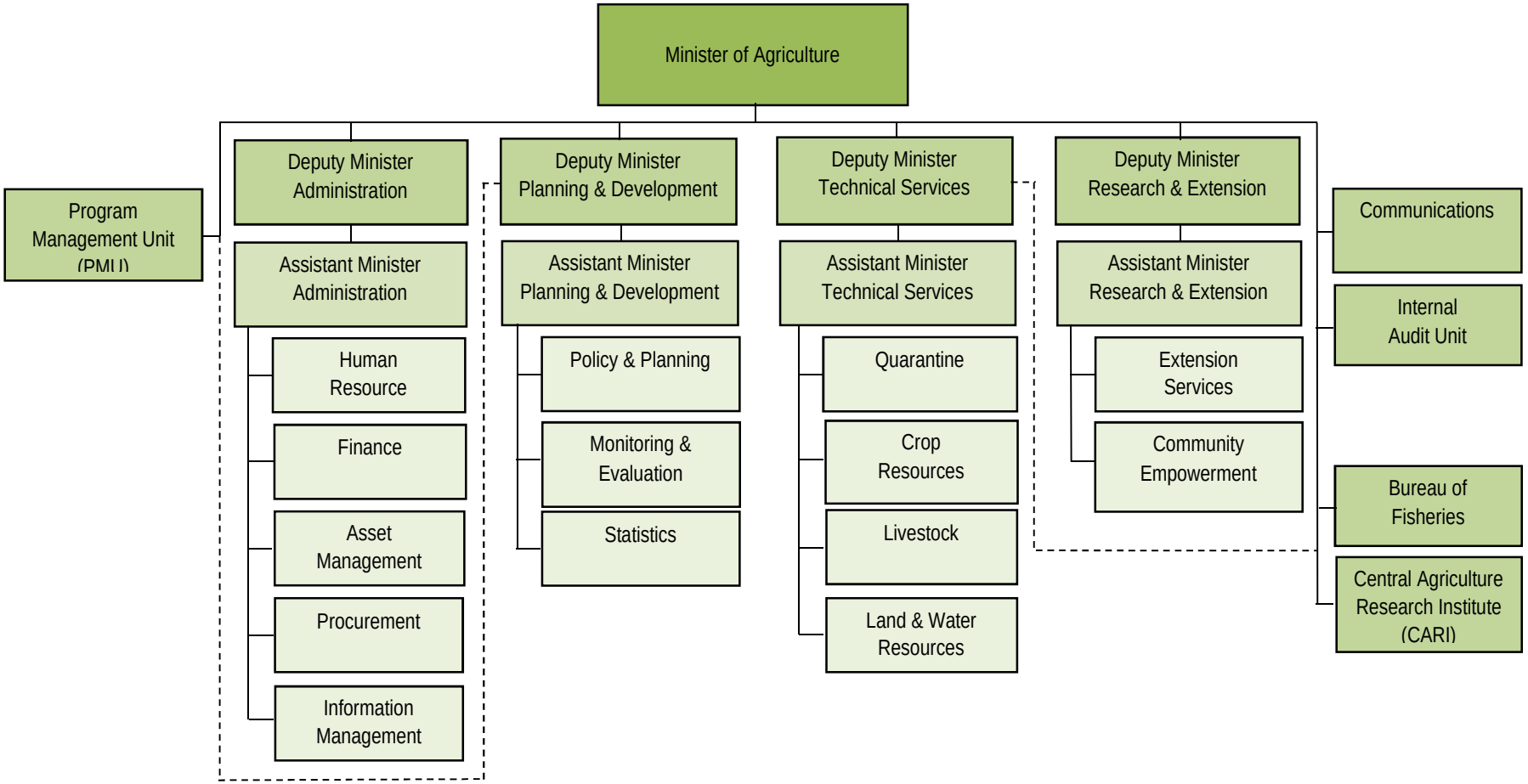
Institutional capacity building in climate change resilience

23. The Project will procure the services of international and national consultants in order to (i) mainstream all issues related to climate change resilience in activities and protocols; (ii) organize capacity building and training of trainers in all partner institutions; (iii) facilitate the organization of the National round tables.

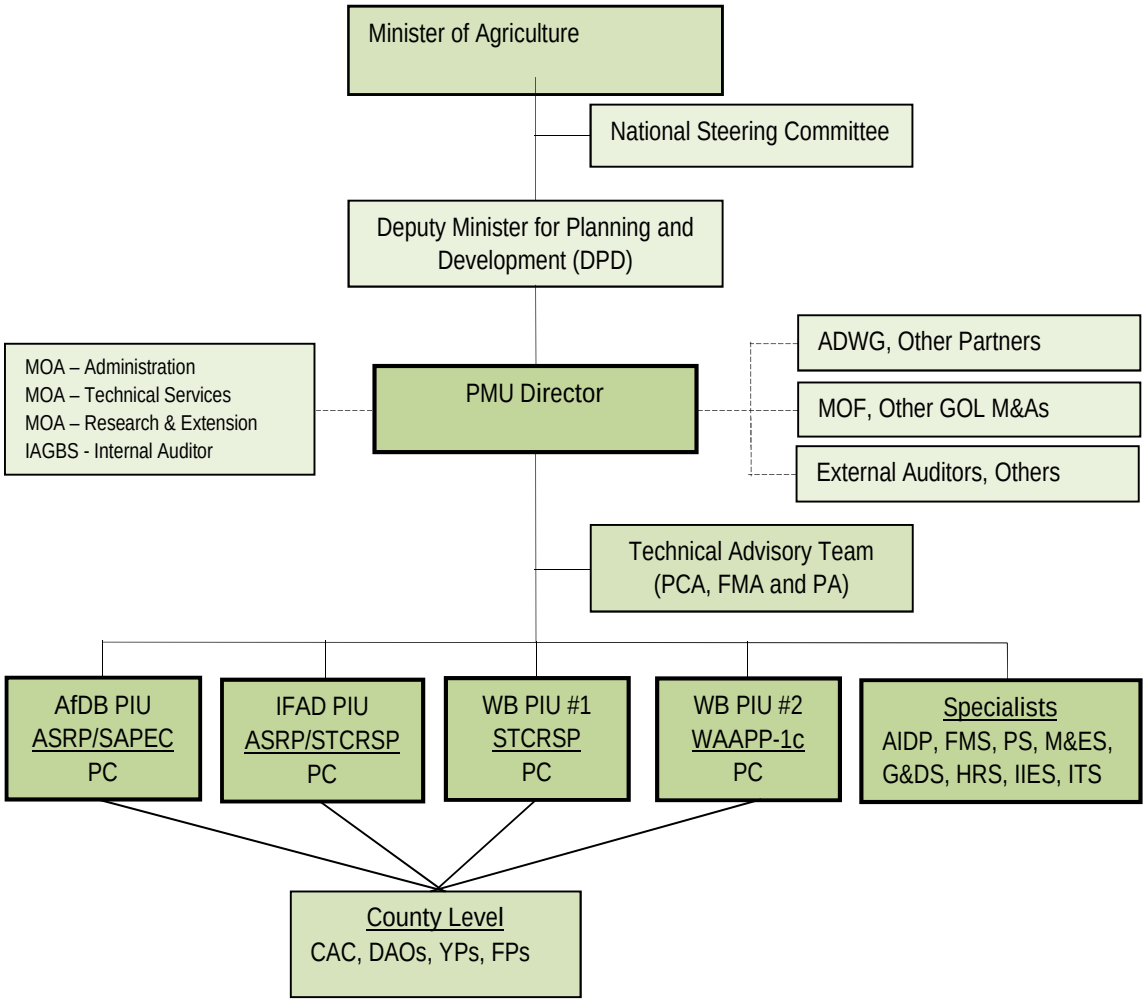
Mitigation of the risk of deforestation

24. For the activity on deforestation mapping, the Project will contract an NGO with experience in participatory mapping and GIS. This NGO will hold initial meetings with each community that intends to participate in the project to agree on zero-deforestation of old-growth and protected forest. The community will then be responsible for ensuring that no encroachment of agriculture into these forest areas occurs. This will be monitored through periodic visits by the NGO staff. All maps will be included in a GIS where the supported farm sites, rehabilitated roads and other relevant information of the project can be collected.

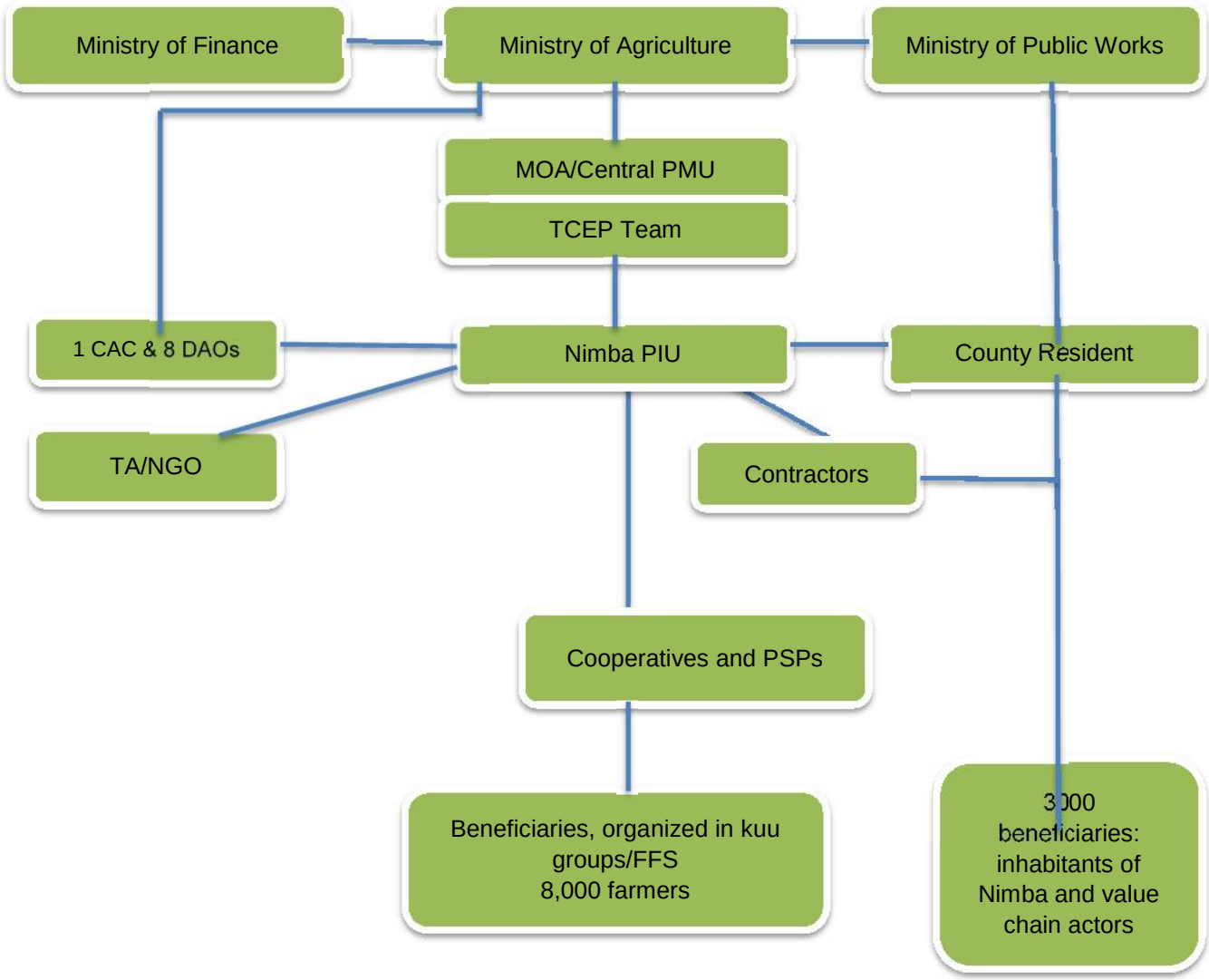
H. Organization Chart of the Ministry of Agriculture



I. Organization Chart of the PMU



J. PIU Organizational Chart



Appendix 6: Planning, M&E and learning and knowledge management

A. Planning and Preparation of AWPB

1. The preparation of the AWPB is a participatory exercise involving the PIU in Nimba and the decentralized local government (CAC and DAO) and other stakeholders (i.e. PSP and SPs), and the implementing partners, under the direction of the PIU. The central PIU will then have a key role in the consolidation of the AWPB and should ensure that project indicators are properly integrated with clear targets. IFAD will also review and approve the AWPB and its revised version.

2. The preparation of the AWPB will start with a preliminary meeting within the project management with the objective to: (i) set project objectives for the coming year in terms of activities, inputs, outputs and outcomes; (ii) establish priorities, taking into account results obtained to date and the recommendations of supervision missions; (iii) assess the achievements of the previous AWPB so as to take any necessary corrective measures, and; (iv) agree on the different steps and set the schedule for the preparation of the AWPB. Based on the finalized work plan, the technical staff will estimate the cost of the various activities to be conducted and prepare the project's operating budget. After internal validation the draft AWPB will be submitted to the National Steering Committee (NSC) for clearance and then to IFAD for comments and final approval.

B. Monitoring and Evaluation

Role of MOA and the National PIU

3. The Ministry of Agriculture (MOA) plays a leading role in the monitoring and evaluation (M&E) of the RB-COSOP, given that it is responsible for establishing and maintaining a comprehensive database on agriculture, land use, natural resources, donor and Ministry interventions; harmonizing M&E approaches, logical frameworks, reporting formats; and carrying out M&E and national surveys.

4. The national PIU will establish an efficient M&E system that is in line with IFAD's Results and Impact Management System (RIMS) and requirements of Government of Liberia. The logical framework will form the basis for the overall system for measuring outputs, outcomes and impact.

5. Overall responsibility for M&E will be vested in the M&E Officer in the PIU. The M&E Officer should design and manage the M&E system – the design of the system should be as inclusive as possible involving all relevant stakeholders. Responsibilities will include data collection, analysis, report writing and dissemination of the information. He should train staff and project partners on various methods and tools for data collection. He should actively participate in the development of annual work plan. He should develop an M&E work plan to be incorporated into the AWPB. He should facilitate the conduct of studies (baseline, impact, etc.).

6. In collaboration with the unit heads and the Project coordinator, the M&E Officer will prepare: a) an annual review workshop report; b) contribute to the an annual work plan and budget (AWPB); c) quarterly progress reports; d) half-year progress reports; e) annual progress reports; f) status reports for supervision missions; g) ad-hoc reports, as required; and h) a status report for project completion.

Role of Counties in M&E

7. The District Agriculture Officers (DAO), County Agriculture Coordinator (CAC) and implementing partners (IP) as well as beneficiaries (cooperatives, FFS, women and youth groups) will be mobilized, and trained to monitor interventions at district and community levels.

8. The role of the CAC in M&E will be to: (a) plan implementation of project activities with MOA staff and implementing partners; (b) supervise activities of MOA staff and provide useful backstopping

to them; (c) verify and process data submitted by MOA field staff; (d) collate and write monthly and quarterly progress reports, as well as annual reports on Project activities and submit to national office; (d) provide feedback to field officers after processing and analysis of data; (e) carry out field monitoring visits and prepare field monitoring reports using Field Trip Report format; (f) assist field staff in training beneficiary groups in participatory monitoring and follow up on participatory monitoring activities of beneficiary groups; they will also incorporate results of this monitoring activity in quarterly reports. These reports will complement results obtained using more formal methodologies; (g) organize Project review meetings at the county level and participate in Project review meetings at the national level.

9. The role of the DAOs in M&E will be to: (a) collect field data using prescribed formats; (b) submit monthly, quarterly, and annual progress reports to the CAC; (c) utilize findings arising from progress and field visit reports to assist farmers to improve performance; (d) train farmers in participatory monitoring techniques; (e) use output of information generated through participatory monitoring records of farmers and other beneficiaries to complement results from the conventional monitoring approaches; (f) inform higher level authorities promptly when solutions to problems lie beyond the scope of their capability; (g) participate in Project review meetings.

Monitoring and Evaluation System

10. The table below summarizes the M&E activities that will be carried out during the implementation of the project.

11. **Internal monitoring**. The project data will be collected quarterly by PIU M&E staff. Quarterly data collection will be done by the CAC, DAO, and YP at the district and county levels, as well as implementing partners. The quarterly tracking of progress of implementation will involve monitoring of performance indicators agreed upon by all stakeholders.

12. **Beneficiary assessment** (BA). To ensure that targeted groups participate in the project, a rigorous mobilization and sensitization campaign will be conducted before the actual start of the project. Additionally, a Beneficiary Assessment (BA) approach will be used[52]. A BA facilitates the development of initiatives that are demand-driven and enhances their sustainability. The objective of a BA is to assess the value of an activity as perceived by project beneficiaries and to integrate findings into project activities. It is designed specifically to undertake systematic listening of the poor and other stakeholders by giving voice to their priorities and concerns. This method of systematic consultation is used by project management as a design, monitoring, and evaluation tool. The BA approach is not intended to supplant quantitative surveys and other traditional methods for data gathering. It seeks to complement these methods by providing reliable, qualitative, in-depth information on the sociocultural conditions and perceptions of the project's target group. This information is intended to be of immediate use to managers and policymakers responsible for improving the beneficiaries' lives. Moreover, beneficiaries will be trained to participate in data collection and the M&E processes.

13. **External monitoring (supervision)** is carried out essentially through the review of periodic progress reports submitted by the PIU, and through supervision missions. Outside the PIU, the responsibility for monitoring project's progress will be shared between IFAD and GOL (MOA and Liberia Institute of Statistics and Geo-Information Services - LISGIS). TCEP's M&E system is integrated into the Liberia Agriculture Sector Investment Program/Comprehensive African Agricultural Development Program (LASIP/CAADP) M&E system. Particular attention will be paid to the appropriateness of targeting and interventions, the relevance of implementation modalities and tools, the quality and performance of the PIU and the IPs, as well as the use of project funds.

[52] Is a qualitative research tool used to improve the impact of development operations by gaining the views of intended beneficiaries regarding a planned or ongoing intervention

14. A **Mid-term Review** (MTR) will be conducted during project year three to assess the progress, achievements and constraints of Project implementation to date and make recommendation for the remaining period of disbursement. The MTR will review in particular the following aspects: (i) Project achievements against targets; (ii) efficiency and effectiveness of project management and approaches; (iii) validity of project design, and; (iv) outcome and impact achieved. On the basis of the findings, conclusions and recommendations of the MTR, necessary adjustments will be made in the Project Design and the Agreement to remove constraints and achieve the Project objectives.

15. The **Project Completion Report** (PCR) is an IFAD requirement. The PCR will cover the key criteria associated with success of the project in achieving its objectives. This includes: relevance of Project design and implementation to communities and national priorities, effectiveness of project benefits, efficiency of the Project, performance of the institutions involved in implementing the project, impact across different dimensions, innovation and replication promoted by project activities, sustainability of project benefits and institutions, targeting strategy and gender performance of the project.

16. At the beginning of the project, a **baseline study** will be conducted by an external service provider. he baseline survey to establish benchmarks in respect of farm households, family, gender, community, district and county monitoring indicators; the survey provides the data against which future impact and assessments related to project activities will be conducted.

17. The survey will also include specific indicators related to **ASAP**. This should ideally be conducted within the first year of implementation. The objective is to provide baseline information on each indicator of the logical framework with the view to measure progress and achievements during project implementation and at the end of the project. The baseline will assess the physical and socio-economic status of the intervention area and the target groups before the implementation of project activities to enable a benchmarking. The baseline survey will also incorporate the RIMS impact-level indicators. This includes the three mandatory indicators related to child malnutrition, household assets and length of hungry season. The other impact level indicators include access to services such as sanitation and drinking water, literacy, farmland cultivation, tools, livestock ownership and food security. The questionnaire for the survey is available at http://www.ifad.org/operations/rims/index.htm. The RIMS indicators will therefore be integrated into the baseline and completion surveys.

18. **Impact evaluation studies** will be conducted in order to report on the impact indicators of the project. Impact evaluation will serve three purposes: (i) to compare project's final results to expected benefits for the targeted beneficiaries, particularly with regard to poverty reduction and food security, (ii) to identify potential positive/negative results which will be a lesson for future interventions.

Table 1: M&E Activities

Activity	Description	M&E Reports	Timing
Conduct baseline analyses	Comprehensive situational picture of cocoa value chains the Project is working on as well as providing data on M&E indicators	Baseline survey report	PY1
Conduct climate change vulnerability assessment	Reference survey to provide baseline data on climate change vulnerability within the sites and communities that will be potentially targeted through ASAP	Baseline vulnerability analysis	PY1, PY3 and PY6
Conduct cooperative assessment	SCOPEinsight did a cooperative assessment in PY0. This exercise will be repeated in PY3 and PY6. Also in other years, progress reports could be developed.	Cooperative assessment report	PY0, PY3, PY6

Internal Monitoring	Monitoring of activities on the basis of activity reports of partners.	Quarterly, Half-Yearly, Annual Progress Reports	Quarterly
Annual Review Workshop	Stakeholder satisfaction of progress in the previous year	Information included in Progress Reports	Annual
Participatory Outcome Assessment	A qualitative participatory study of the outcomes of the project from the client perspective	POA Report	Annually
Facilitation of Supervision and Support Missions	External monitoring of Project implementation Support from IFAD, GoL.	Status reports for supervision	Twice a year
Facilitation of Mid-term review	Review of Project outreach to target groups; exit strategy and adjustment of project focus and implementation mechanisms if considered necessary	Status reports for Mid-term Review reports	PY3
Final Impact Survey		Impact survey report	PY5
Preparation of Project Completion Report	Use of conclusions from impact assessment studies/surveys.	Project Completion Reports	Not later than six months after completion of Project

Project indicators and RIMS indicators

19. **Project indicators** have to be identified at 3 levels, namely output, outcome and impact. Quantitative or qualitative targets are associated to each indicator, corresponding to the final objectives to be achieved at the end of the project. In addition, yearly targets will be established within the Annual Work Plan and Budget for 1st and 2nd level indicators. These will be monitored and reviewed through the annual results tracking process. In addition, development goals for the entire project will be tracked through special studies/ impact surveys. The list of indicators in the Results Tracking Sheet has integrated indicators from the logical-framework, as well as RIMS.

20. **RIMS Indicators**. Since 2004, IFAD requires each project to report on the RIMS indicators in March of every year. A specific reporting format should be used in order to provide information on: (i) achievement of the yearly target for 2nd and 1st level indicators (set in each Annual Work and Budget Plan); (ii) cumulative progress regarding the achievement of the overall project target for the 2nd and 1st levels of indicators (set in the logical framework).

C. Learning and Knowledge Management

21. Knowledge management and innovation play a central role in IFAD's scaling up agenda. For IFAD, knowledge management means using knowledge more effectively to improve the way we do business and achieve greater impact. It is a continuous improvement process in which we try out new ways of doing things, reflect, learn and share knowledge, and then change and adapt to become more effective and successful.

22. IFAD-supported projects in Liberia have been performing relatively weak on knowledge management. They do not have a knowledge management strategy, nor are roles and responsibilities in knowledge management clearly defined. There has been knowledge sharing amongst different project, but in an ad hoc and informal manner.

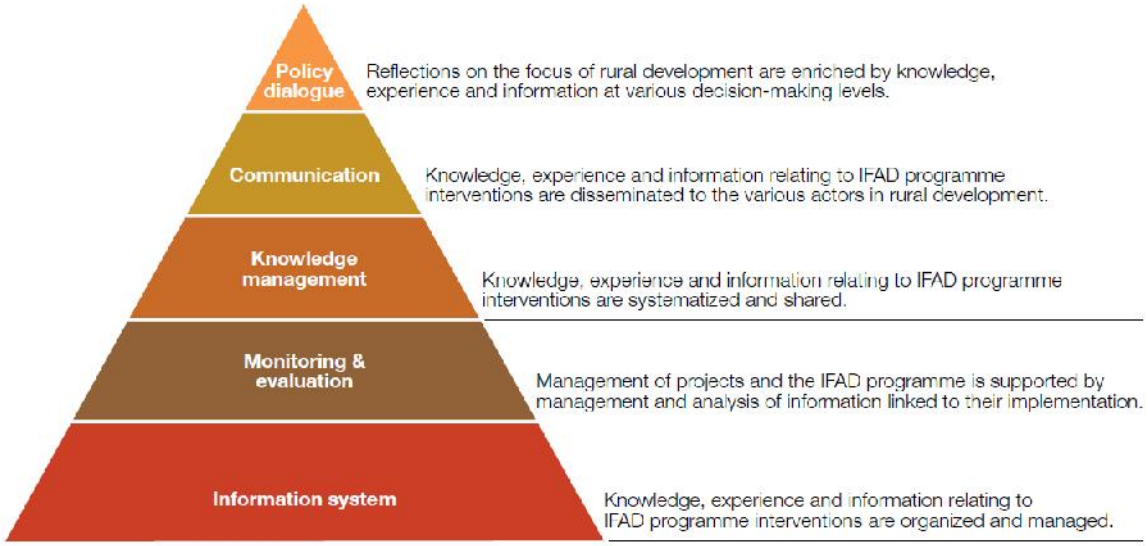
23. **Knowledge management plan.** At start-up TCEP will develop a knowledge management plan outlining what action project staff and implementation partners will take to ensure they are able to generate, access and use knowledge and information. This will then be used to: (i) improve project

performance; (ii) support efforts to scale up or replicate successes; and (iii) share lessons with wider audiences to achieve visibility, and for advocacy and influence.

24. The plan will:

- Include links to project goal and objectives;
- Define strategic objective/s for project KM;
- Articulate the main areas of work;
- Outline activities, including budget and timeline;
- Define clear roles and responsibilities (included in ToRs of project staff);
- Include indicators and monitoring methods to track results and impact of KM activities (reflected in the project M&E system).

25. **Value chain linking M&E, knowledge and communication.** TCEP will integrate M&E, knowledge management and communication into a seamless system[53]. The system will be set up in several layers, starting with an electronic library containing project documents relating to implementation activities, budget figures and the like. A second layer has results and impact data that are compiled and fed into a database, organized by key indicators. In a third layer called knowledge management, the data can be analysed and presented in a user-friendly manner and can be easily extracted to: carry out analyses or syntheses; produce maps, photographs and graphics; and draft articles and even case studies presenting the successes or failures of projects presented. At the end of the process, in the fourth layer, the data are disseminated for a global audience through project websites and publications, and are used during workshops for policy dialogue, capacity-building and the design of new projects.



26. **Project knowledge products and learning processes.** TCEP will address three particular issues to ensure effective implementation: (i) building brand recognition and visibility, primarily to rural women and youth and their organisations; (ii) extending beneficiary access to cooperative development and value addition information, lessons learned and best practices; and (iii) facilitating the collection, sharing and dissemination of information on the targeted value chains, cooperative development and cocoa commercialization related information, lessons learned and best practices.

[53] Based on the experience of IFAD in Madagascar: http://segs-mada.fidafrique.net/

27. Knowledge services will be tailored to meet the needs of beneficiaries. The content should be youth- and women-centred and channelled, with all services targeting these users; if unsatisfied, these target groups should be in a position effectively to influence service provision. To these ends, the Project's overall learning and KM strategy to capture and disseminate knowledge at various levels will focus on five priorities: (i) generating trust and fostering linkages between partners; (ii) managing and sharing information, knowledge and experiences; (iii) improving the effectiveness and efficiency of the private sector in adding value and innovating; and (iv) conducting analysis that can provide the evidence base for policy dialogue; (v) creating conditions for replication, upscaling and sustainability.

28. A "Good Practice and Innovation Tracking System" that will be set up. It will be validated by the M&E team and the project steering committee. This will allow keeping track of day-to-day good practices from a variety of stakeholders e.g. cooperatives, service providers, etc, learning from their achievements and feeding them into policy dialogue. This system will also allow the identification of innovative case studies that TCEP's stakeholders can learn from and adopt/implement in their work. every year, an award for innovation will be attributed to an institution or individual that is at the origin of innovations retained through the tracking system.

29. **Learning.** The Project structure has the flexibility to support continuous internal improvement and adaptation through "learning-by-doing" and rigorous analysis of the qualitative and quantitative information generated under implementation. With this constructive approach, TCEP can become progressively more effective, simplify processes, adapt quickly to emerging realities and lessons, and achieve optimum impact.

30. The uncomplicated design features a limited number of activities repeated in many communities and is heavily reliant on human resources to transfer skills, so permitting a very rapid evolution of approaches and methodologies. TCEP interventions are expected to generate important learning in three activity domains of critical importance to OA and the nation:

- ways and means to establish sustainable mutually-beneficial public-private partnerships at all levels in the tree crop subsector, for the benefit of poor producers;
- the development of approaches to rehabilitate and manage smallholder plantations; and
- refinement of group-based mechanisms to accumulate, expand and invest local resources to generate incomes for poor rural households.

  As part of their research programmes, university and college students will be called upon to carry out studies on these activity domains and others as they emerge.

31. **Knowledge management and networking**. Operational experiences will create valuable knowledge in the target areas. It is axiomatic that the knowledge generated, captured and analysed under implementation should be utilized to generate lessons and best practices to be shared with beneficiaries, public institutions, the IFAD country team, partners and others; and that these should contribute to the policy agenda of the Project. In particular, the results of support for rangeland restoration and water management, as well as expanding sustainably small businesses in rural areas, will be widely publicized.

32. Annual TCEP planning workshops will provide fora for documenting lessons learned, sharing best practices and identifying promising areas for knowledge generation, providing stakeholders with an opportunity to express needs, successes and constraints, as well as fostering collaboration and brokering partnerships. The main anchoring points for knowledge management will be identified, including research institutions, civil society, regional KM networks and specialised service providers. The Project will package and disseminate information to the respective stakeholders in appropriate formats, such as brochures, studies, articles, newsletter, TV and radio, and social media.

33. The Project will collaborate and share valuable lessons with other projects by sponsoring: (i) knowledge networking through periodic workshops and learning events; (ii) publication of "how-to" leaflets relevant to all work undertaken on restoration of natural assets; and (iii) audio-visual material

that captures lessons learnt and impact. Special emphasis will be placed on knowledge regarding climate change adaptation and disaster-risk development planning, as the vulnerability assessments to be undertaken at village cluster level will form the foundation for all adaptive development work in Liberia. The project coordinators from IFAD supported projects in Liberia will continue to meet on a monthly basis to share experiences.

34. **Regional knowledge networking.** The Project will benefit from and contribute to existing regional knowledge networks as important fora to build and share approaches, tools, methodologies, technologies and best practices on sustainable tree crop business development, natural resource management and climate change resilience, and bottom-up rural economic growth. South-South learning and sharing opportunities will be explored to ensure that TCEP beneficiaries and their organisations have access to up-to-date incremental knowledge and experience sharing on ways and means to improve their livelihoods. As part of WCA's new regional grant, TCEP will link up with PROCASUR in the dissemination of innovations and good practices amongst other IFAD supported projects and their partners. This grant foresees the organisation of learning routes and capacity building in the area of knowledge management.

Appendix 7: Financial management and disbursement arrangements

A. Financial management assessment of the Project

1. A Remote Financial Management Assessment (FMA) has been undertaken as part of programme design. The objective of FMA is to provide assurances that the Lead Project Agency (LPA), the Ministry of Agriculture (MOA), will have sufficiently strong financial management systems and controls in place to properly manage, control and report on programme finances. The FMA involves assessing: (i) the inherent risk at country level; and (ii) the project specific risk.

2. **Country context and inherent risk.** The inherent risk in Liberia is medium. The Corruption Perception Index of Liberia has slightly deteriorated from 4.1 in 2012 to 3.8 in 2013 and to 3.7 in 2014. According to the latest Public Expenditure and Financial Accountability (PEFA) Assessment conducted in 2012, Government of Liberia (GOL) has made significant improvements since the past assessment (2007) but the overall state of the Public Financial Management (PFM) remains moderately weak. Main improvements have taken place in areas such as revenue administration, arrears, debt management, procurement, and accounts reconciliation. In addition, on-going reforms in internal audit, budget classifications and chart of accounts, and in the implementation of the IFMIS are likely to yield further improvements in the short to medium term. Yet, significant deficiencies remain in the GOL's PFM system, including accounting, recording, and reporting and external scrutiny and audit, which can only be addressed through steady and continuous implementation of PFM reforms.

3. To mitigate the inherent risk, the proposed programme will take advantage of the Project Management Unit (PMU) and the IFAD Project Implementation Unit (PIU) under the Ministry of Agriculture with an established track record in implementing IFAD Projects. In 2015, the PIU showed moderately satisfactory performance with regards to Financial Management and according to the risk assessment the PIU was rated as medium risk. Project Audit reports have been received with minor delays and have been unqualified.

4. **Anticorruption and Good Governance Framework.** In accordance with its Policy on Preventing Fraud and Corruption in its Activities and Operations, adopted by the Executive Board in adopted December 2005, IFAD applies a zero-tolerance policy towards fraudulent, corrupt, collusive or coercive practices sin projects financed through its loans and grants. 'Zero tolerance' means that IFAD will pursue all allegations falling under the scope of this Policy and, if allegations are substantiated, that appropriate sanctions will be applied. Among the remedies that IFAD may apply in accordance with its General Conditions, there is the suspension and cancellation of the right or the Borrower/Recipient to request withdrawals of funds. Suspension includes the use of financing resources for ineligible expenditures and credible allegations of coercive, collusive, corrupt or fraudulent practices when the Borrower/Recipient fails to timely take appropriate actions. Cancellation includes the use when the Borrower/Recipient fails to refund amounts determined as ineligible expenditures and when IFAD determines that coercive, collusive, corrupt or fraudulent practices have been carried out and the Borrower/Recipient fails to timely take appropriate actions. where the allegations are substantiated.

5. IFAD shall take all possible actions to protect from reprisals individuals who help reveal corrupt practices in its project or grant activities and individuals or entities subject to unfair or malicious allegations. The primary responsibility for enforcing the Policy lies with the Borrower/Recipient, and the first defence for controls shall be exercised by Project staff, Implementing Partners and Counterparts. Given IFAD's zero tolerance described in the above paragraph, it is important that the project staff and all stakeholders of the project are familiar with IFAD's Anticorruption Policy as well as the national anticorruption policies and whistle blowing procedures.

6. **Taxation.** The GOL will cover all taxes under the project. Consequently, IFAD funds cannot be used to pay VAT, duties or other taxes imposed on the project. However, as per IFAD procedures,

taxes paid by the ultimate recipient of an expenditure (e.g. income taxes paid by a project employee or withholding taxes on the profits of a contractor) are not considered to be taxes paid by the Project.

7. **Project implementing arrangements and expenditures by implementing partners**. The overall responsibility for the day to day planning, management and implementation of the Project will rest with the existing IFAD Programme Implementation Unit under the authority of the Ministry of Agriculture (PMU/MOA), which has been responsible for the successful day to day management and implementation of all previous IFAD-financed projects in Liberia. The aspect of financial management to be perform by PMU includes: accounting for the Project, producing consolidated project financial reports, organizing the Project's annual audits, coordination with IFAD, including submission of withdrawal applications, coordination with other implementing partners on implementation and financial management issues, and coordinate the regional activities delegated to the county offices. Under Component A (Cocoa rehabilitation): PIU-PMU/MOA will enter into sub-agreements/MoUs with private sector partners (PSP) and district cooperatives. Component B (Feeder road rehabilitation) will be implemented through private contractors under the supervision of Ministry of Public Works and the PIU while Road maintenance will be carried out by Local or village maintenance committees. Under Component C (Capacity building for service provision), PIU-PMU/MOA will enter into Memorandums of understanding (MOU) with selected cooperatives based on business plans.

8. **Project specific Financial Management Assessment.** As required by IFAD Financial Management assessment guidelines, the summarised scoring at design is as shown in the table below. Due to travel restrictions the assessment was done remotely based together with the PIU staff and complemented with assessments carried out of the PIU in the past.

Table 1: Risk assessment at design stage

Type of risk	Initial Risk Assessment	Proposed mitigation	Final Risk Assessment
Inherent Risk			
1. **TI Index**	3.7		Medium
2. RSP score			
Control Risks			
1. **Organisation and staffing** • Experienced FM staff in place.	L	• All FM staff to receive a refresher in relevant IFAD FM procedures and made aware IFAD and National anticorruption policy including whistleblowing mechanism.	L
2. **Budgeting** • Budget controls to be improved in accounting software.	M	• The consolidated AWPB to be submitted for IFAD non-objection 2 months before the beginning of the fiscal year. • Proper budget controls to be ensured in the accounting software.	L
3. **Funds flow and disbursement arrangements** • Several implementing partners	H	• A separate designated and operational account to be opened for each financing source in a commercial bank acceptable to IFAD • WAs duly authorized by double signature (/PIU & Representative of the borrower). • Audit trail for each expenditure item to be properly disclosed in the Withdrawal Applications. • The FM capacity of the implementing partners to be assessed and MoU with the implementing partners to include clear disbursement triggers, reporting requirements and audit clauses.	M
4. **Internal controls** • The Financial procedures manual needs to be updated.	M	• The Financial procedures manual, to be updated with special weight on the FM arrangements related to the implementing	L

Type of risk	Initial Risk Assessment	Proposed mitigation	Final Risk Assessment
		partners.	
5. **Accounting systems, policies and procedures** • The accounting software required updating.	M	• The accounting software to be upgraded to include proper budget controls and to generate extended WAs and financial reports in agreed format.	L
6. **Reporting and monitoring** • Financial report formats to be improved. • Financial report formats required from the implementing partners need to be developed.	M	• Reporting templates to be established and the Accounting system to be customized to produce these reports automatically by the PIU • PIU to produce quarterly Interim Financial Statements.	L
7. **Internal Audit** • No proper IA function in place in the PIU	H	• The internal auditor of the PIU will need to include the project in his/hers ToRs.	M
8. **External audit** • Past Audit reports have been unqualified and submitted on timely manner. The auditor selected using LCS**.**	M	• PIU to provide consolidated audit report including the implementing partners. • IFAD non objection required for the Audit TORs. • Auditor to be selected using QCBS or LCS from an IFAD approved shortlist.	L
Fiduciary risk at design stage • The financial management arrangements of the Existing PIU are assed as medium risk.	M	Mitigation actions listed above.	L

NB: H/M/L = High, medium and low risk as per the Guideline Note on undertaking Financial Management Assessment at design.

9. **Conclusion.** The financial management arrangements, and capacity of the existing PIU are mostly adequate to meet IFADs requirements and the initial risk rating is considered to be medium. The final risk rating is expected to become low after implementation of the mitigation actions.

B. Proposed financial management arrangements

10. **Proposed financial management arrangements.** The proposed FM-arrangements including budgeting, accounting, internal controls, flow of funds, financial reporting, and audit arrangements will follow the FM arrangements already in place in the PIU and used for the ongoing STCRSP-project with some adjustments. The proposed FM arrangement is described below and will be outlined in detail in the Project's Financial Procedures Manual.

11. **Staffing**. PIU currently has in place an experienced Financial Controller and two accountants which have experience in implementing IFAD projects and IFAD's Financial management requirements and procedures.

12. **Budgeting and Budget control.** The government fiscal year runs from 1st July from to 30 June. Based on inputs from the stakeholder the PIU will prepare a consolidated Annual Work Plan and Budget (AWPB) in a format acceptable to IFAD and submit it to the Project steering committee for approval and to IFAD for its non-objection at least two months before the beginning of the relevant fiscal year. The format of the AWPB will indicate at least the following: expenditure items by activity, by component, by expenditure category, and by implementing entity, physical indicators by activity as well as funding requirements by financier on a quarterly basis. Any incurred expenditures as part of the project will have to be part of the approved AWPB to be considered eligible for IFAD financing.

13. **Accounting.** As per the ongoing project, the PIU will maintain its accounting records in accordance with IPSAS-cash as basis for accounting. The project transactions will be recorded in the accounting software, TOMPRO which will be further customized to meet project's need and automatically generate interim Financial Reports (IFRs) and Project Financial statements. The accounting software will include a budget module with proper budget controls, accounting module,

financial reporting module, fixed asset register etc. The detailed Accounting and control procedures will be documented in the Administrative, Accounting and Financial Manual to be updated.

14. **Internal Controls.** In order to ensure: (a) efficiency; (b) reliability of financial reports; and (c) compliance with applicable laws and regulations including the conditions set forth in the financing agreement, the PIU will ensure that adequate internal controls including:

i. Adequate policies and procedures including an updated financial procedures manual, and accounting manual which are to be revised once a year;

ii. Sufficient segregation of duties;

iii. Monitoring of fixed assets including tagging of all assets, maintaining of a fixed asset register and annual inventory exercises;

iv. Periodic monitoring and review including comparison of physical and financial progress;

v. Proper authorization and access levels are maintained through the project parties;

vi. All project sites are clearly identified and mapped including GPS-coordinates (as appropriate) to facilitate supervision and that this information is shared with other donors (e.g. World Bank etc.) supervising projects in the same sector;

vii. All trainings will be duly documented including a list of participators.

viii. All distributed goods, agricultural inputs etc.., reconciled against procured goods and supported by distribution lists of sufficient detail.

ix. All implementing partners FM-capacity will be properly assessed before the awarding of the contract and their financial performance will be continuously assessed.

15. **Flow of funds.** Two Project Designated Accounts, one for the IFAD loan and one for the ASAP-grant will be opened in Central Bank of Liberia. It is not envisaged to open an operational account in Liberian Dollars as all transactions will be effected in US$. However, there will be two operational account in US$ opened in a commercial bank acceptable to IFAD.

16. The designated accounts will be operated under the joint signature of the following category of signature. Category A: Deputy Minister of Administration and the PIU Director, Category B: Project Coordinator and the Financial Controller of the PIU/IFAD-PIU. Withdrawal applications will be approved by a representative of the Ministry of Finance and PIU/IFAD-PIU (Project Coordinator and Financial Controller). Adequate provisions for alternate signatures will be put in place to avoid disruptions in FM operations. All payments to implementing partners will be handled through bank accounts. Payments at field level above petty threshold, if any, will be made through bank transfers to minimize the use of petty cash transactions.

17. **Counterpart funds.** Government co-financing will be limited to payment of taxes and duties, office facilities and intervening in the project at national and county level. Full tax exemption from import duties and taxes will be provided for all purchases under the project. Consequently, no cash contribution will be required from Government.

18. **Start-up Funds.** The project is estimated to receive USD 200 000 to incur expenditures related to the project start up before the satisfaction of the additional general conditions precedent to withdrawal, The start-up funds will be used to for: i) Updating of the Project implementation manual including the Financial procedures , accounting and procurement manual, ii) Preparation of the first AWPB & procurement plan, iii) organization of a Start-up workshop, iv) Fine tune the accounting software as necessary to automate all required financial reports and extended SOEs, v) finalization of the scope of work and the ToRs of the internal auditor as well as report format, vi) finalization of the Agreement/MoU templates to be used with the implementing partners, etc..

19. **Financial Reporting.** The PIU will further customize its accounting software to automatically produce financial reports on a quarterly basis in a format agreed with IFAD. The financial reports will

integrate financial information from county offices and implementing partners and compare incurred expenditures with the planned amounts (actual vs. budget for a reporting period and cumulative vs appraisal). The PIU will provide IFAD with consolidated financial reports within agreed timeframes as follows:

i. Quarterly consolidated interim financial reports (IFRs) as agreed with IFAD.

ii. Annual consolidated Financial Statements within four months after the end of the fiscal year prepared in compliance with International Accounting Standards (IPSAS cash) and IFAD requirements.

iii. Annual consolidated audit report and a management letter within six months after the end of the borrower's fiscal year.

20. The financial reports outlined above will in include at least the following reports: i) sources and uses of funds by financier ii) incurred expenditures by component and financier, iii) Actual expenditures vs budgeted expenditures by financier by component, iv) designated account reconciliations, v) Statement of Expenditures - Withdrawal Application Statement, vi) a fixed asset register, and vii) implementing partner report disclosing expenditures incurred by the different implementing partners and any advances still unjustified. The PIU will also produce quarterly progress reports linking the financial progress, to physical progress in a format acceptable to IFAD.

21. **Internal audit**. The PIU internal auditor (IA) was recently recruited and has not yet got accustomed to IFAD processes. The PIU internal auditor will have to include STCRSP-extension project as part of his/ her rolling audit plans and thus will be expected to issue project specific internal audit reports at least on semi-annual intervals, which will be shared with IFAD on a timely manner. The scope of the audit work will follow a risk based approach and the internal audit reports are foreseen to contain the following sections: (a) objectives of audit, (b) methodology of audit, (c) key areas of weaknesses that need improvement, (d) recommendations for improvements, (e) management's response to the recommendations and (f) a follow-up table on the status of past years recommendations. The TORs of the IA will be further customized to fit the Project needs during the project start-up.

22. **External audit.** The PIU will appoint independent auditors, selected in accordance with the procedures and criteria set forth in IFAD's Guidelines on Project Audits (for Borrower's Use). The auditors will be procured using QCBS or LCS from an IFAD approved shortlist. The auditors will be required to audit the consolidated financial statements of the entire Project for each fiscal year in accordance with International Standards on Auditing (ISA). The terms of reference for the audit will be agreed with IFAD on annual basis. The auditor will be required to issue a separate opinion on i) the project financial statements, ii) SOE-WA statement including the adequacy of supporting documentation, iii) operation of the designated account, iv) funds used by the implementing partners and v) compliance with procurement. The auditors will also prepare a Management Letter giving observations and comments on the internal control systems of the PIU as well as the implementing partners, and providing recommendations for improvements in accounting, records management, systems, controls, compliance with financial covenants in the Financing Agreement and compliance with previous year's auditors' recommendations. The audit report, including the management letter covering the audit observations on internal controls, will be submitted to IFAD within six months of the end of the fiscal year. The appointment of the auditor shall be for a maximum period of 3 years, subject to satisfactory performance.

23. **Records management.** The PIU under the MOA will maintain adequate filing and ensure proper back up of all project records. In accordance with IFAD General Conditions, the borrower has to maintain the original records for a minimum of 10 years after the project completion

24. **Implementing partners.** The project is foreseen to contract implementing partners (private sector partners (PSP), district cooperatives, Local or village maintenance committees etc.)to

implement selected activities under the project. The FM arrangements related to the implementing partners is expected to be as follows:

i. The PIU will send out a call of interest.

ii. All interested implementing partners will submit a proposal to the PIU.

iii. The PIU will conduct a due diligence check of the implementing partner including the Financial Management capacity.

iv. Subject to IFAD non objection, the PIU will enter into a performance based contract/MOU with the selected implementing partner with well-defined performance/service standards.

v. The performance milestones, criteria for measurement and the triggers for disbursement will be clearly specified in the contract. In addition the contract/MOU will specify the financial reporting requirements and the associated timelines. All payments to the service providers will be made against a duly certified disbursement request, statement of expenditures and supporting documentation (either in original or certified copies) as required in accordance with the disbursement schedule of the agreement. The Payment request will be reviewed by the technical officer in the PIU a ensuring that the performance milestones have been reached. Subject to the technical officers clearance the payment is prepared by the Financial controller and Project management.

   Once the payment is approved the funds are transferred in to the implementing partner and duly recorded in the PIU accounting software. All contracts with the implementing partners will include a provision requiring them to permit: i) IFAD to inspect their accounts, records or other documents as part of the supervision missions, ii) to have them audited by the project auditors as part of the annual project audit exercise and iii) promptly refund any ineligible expenditures or unused funds to the PIU

25. **Financial reporting by implementing partners**. Implementing partners will submit quarterly financial reports on both physical and financial progress in an agreed format. In addition, they will provide the PIU with monthly expenditure reports using SOEs by expenditure category so as to facilitate the preparation of withdrawal applications each month, together with the necessary supporting documentation (in original or certified copies).

26. **Disbursement to implementing partners**. The implementing partners are expected to receive an initial advance based on disbursement applications and approved AWPBs, prepared by the chief accountant and signed by its management. The subsequent advances will be subject to justification of at least 75% of the immediately previous advance and 100% of all earlier advances, if any. In this regard the expenditures will be reported monthly to PIU based on SOEs prepared on cash basis and signed by chief accountant and management and accompanied by bank statements any necessary supporting documentation as required by PIU. The sizes of the initial and subsequent advances will depend on the implementing partner's budget forecast and financial management capacity including accounting systems.

C. IFAD disbursement procedures

27. **IFAD disbursement procedures.** In accordance with the IFAD disbursement procedures between the date of entry into force of the Financing Agreement and the Financing Closing Date, the PIU may request withdrawals from the Loan Account and/or Grant Accounts of amounts paid or to be paid for eligible expenditures. Accordingly four standard disbursement procedures may be used for withdrawal of financing:

i. Advance withdrawal;

ii. Direct payment;

iii. Special commitment;

iv. Reimbursement.

28. **Authorized allocation of the Designated Account.** The Designated Accounts for the IFAD financing will be operated and replenished following the Imprest Account arrangements in accordance with IFAD disbursement procedures. After the IFAD financing has entered into force and the conditions for first disbursement have been duly complied with and upon request by the borrower, IFAD will make an initial deposit to the Designated Accounts equal to the requirements of six months implementation (Authorized Allocation).

29. **Conditions for first withdrawal.**, The following conditions related to financial management are to be met before the first withdrawal can be realized:

i. IFAD has received from the Minister of Finance a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s);

ii. IFAD has received documentation evidencing the opening of (i) the bank accounts designated to receive IFAD Loan and grant proceeds in advance; and (ii) the project accounts in local currency with advice of the persons/titles authorized to operate these accounts;

iii. Key Staff including the Project director, Finance manager, and Procurement specialist have been duly appointed

iv. An updated Project Implementation Manual including the Financial Administration and Accounting manual, has been approved by IFAD;

v. The IFAD no-objection on the first AWPB and procurement plan for the first 18 months of the project has been obtained.

vi. The MoU format to be used with the Implementing partners has been approved by IFAD.

30. **Withdrawal applications.** The PIU will compile and consolidate, on a timely basis, eligible project expenditures for activities. From these expenditures the PIU will prepare withdrawal applications (Was) for eligible project expenditures for submission to IFAD for reimbursement or replenishment. All WAs will be signed by the authorized signatories.

31. **Minimum withdrawal amounts.** In order to minimize transaction costs, the minimum withdrawal amounts are set as follows:

i. Withdrawal Applications requesting replenishments of the Designated Account should at least cover a minimum amount of thirty per cent (30%) of the initial advance.

ii. Direct Payment method should only be used for payments of US$100 000 and above while expenditures below US$100 000 should be financed from the Designated Account if possible and claimed through the replenishment of the Designated Account.

32. **Statement of Expenditure (SOE).** The SOE thresholds shall be determined in the light of the associated risk for each expenditure category and will be duly documented in the Letter to the Borrower. The initial estimate is that the SOE threshold will be US$30,000 for all contracts under all categories. The project will retain the relevant support documents and make them readily available for inspection and review by supervision missions and the auditors. These thresholds may be revised from time to time based on project performance and risk assessment.

D. Supervision, Implementation Support and Implementation Readiness

33. **Project supervision.** The project will be directly supervised by IFAD. Supervision will not be conducted as a general inspection or evaluation, but rather as an opportunity to assess achievements and lessons jointly, and to reflect on ways to improve implementation and impact. From a financial management perspective, a financial management specialist will participate in missions annually to

supervise and provide implementation support to the project and follow up the fiduciary risk at various levels including the use of the SOE.

34. **Supervision and implementation support plan.** In light of the risk assessment residual (medium FM risk), in the first two years of implementation the supervision plan of project will especially focus on the following actions :

i. At least two on-site visits that will involve visits to the implementing partners (if any) and conducting/updating the FM assessment and conducting an FMA assessment of the implementing partners;

ii. Detailed review of adequacy of the staffing arrangements at the FM unit of the PIU, including the TOR's and performance of the financial staff and identification of training needs;

iii. Detailed review of the Project Financial Management and accounting procedures in use;

iv. Detailed review of the accounting software and financial reports produced by the accounting software and the use of budget controls;

v. Review of overall flow of funds (and resolving any bottlenecks) and a detailed review of the operation of the designated and project accounts (including monthly reconciliations).

vi. Detailed review of the fixed asset register and verification of a) inventory reports and b) assets through spot checks;

vii. Detailed review of the use of the Statement of Expenditure (SOE) procedure and the adequacy of supporting documentation for all expenditure items incurred by the PIU and by the implementing partners;

viii. Detailed review of records management, filing and information back up

ix. Follow-up on contracting the project (independent) external auditors and the ToRs;

x. Follow-up on work performed by the internal audit function.

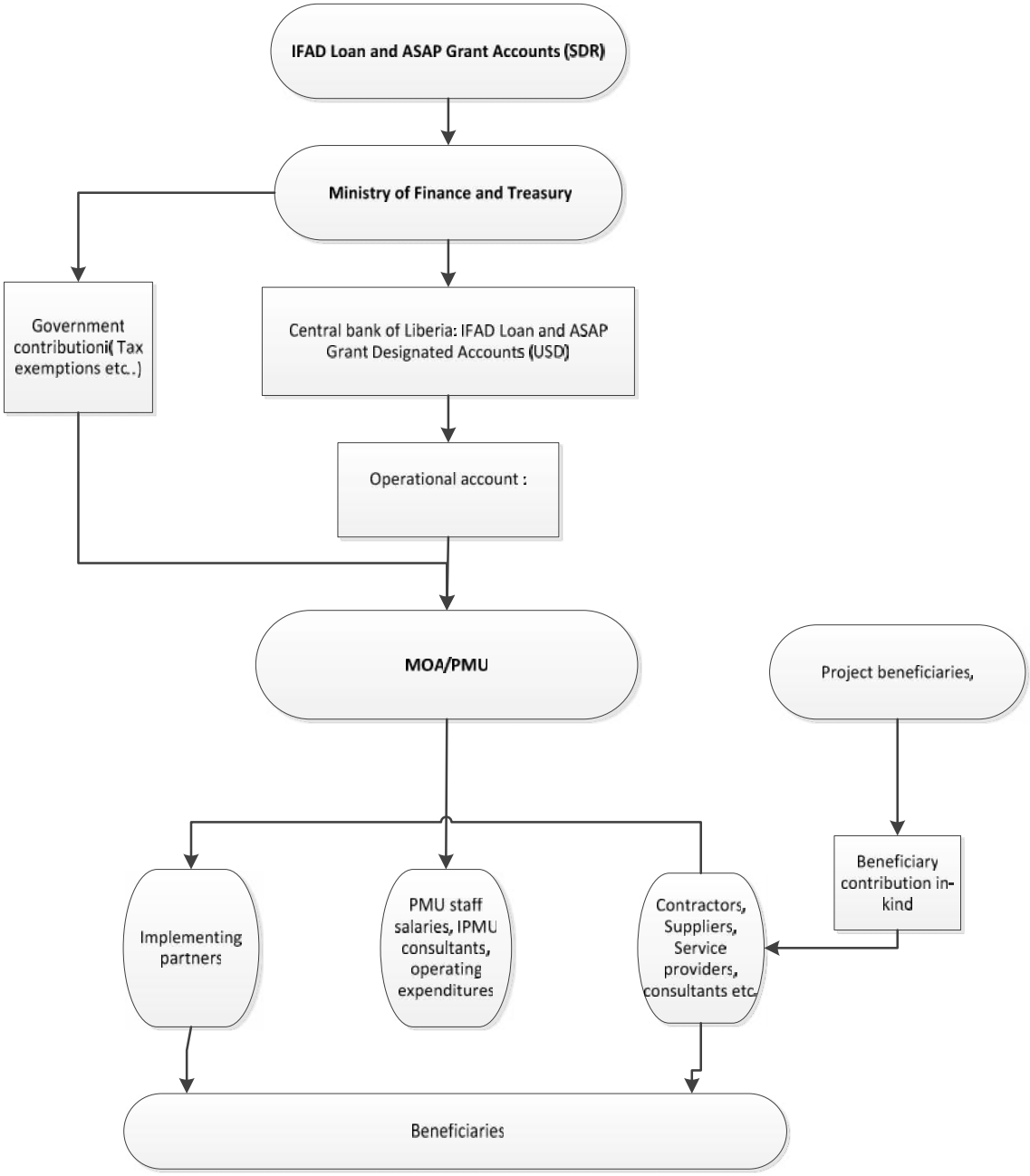
35. The supervision process will be complemented by desk review of progress and financial reports, the programme's annual financial statements, internal audit reports, and annual audits.

Table: Implementation Readiness - A list of key tasks are summarized below

Action	By Whom	When	Conditionality
Agree on the Start-up funds (if any)	IFAD and the Borrower	As part of design	Negotiations
Project implementation manual, Financial procedures manual and procurement manual duly updated.	PIU	Start up	Start Up and disbursement condition.
Opening of Designated Account, and operational account	Borrower/PIU	Start up	Disbursement condition
Format of the Quarterly/semi-annual Financial Reports and Annual Financial Statements to be agreed.	PIU	Start up	N/A
Finalise project draft LTB	IFAD	As part of design	Negotiations
Prepare first AWPB & procurement plan.	PIU	By start-up	Disbursement condition
Appointment of auditor under ToR and conditions acceptable to IFAD using QCBS	PIU	Not later than 3 months after entry into force	Financing agreement schedule 3
Fine tune the accounting software as necessary	PIU	Start up	N/A
Agree on the scope of work and the ToRs of the internal auditor and the report format	PIU/IFAD	Start up	N/A

Agree on FM covenants to be included in the Agreements with the implementing partners	PIU/IFAD	Start-up	N/A

E. Flow of funds chart



F. Audit Terms of Reference

The following are the terms of reference ('ToR') on which **the PIU** agrees to engage **audit firm** 'the Auditor' to perform an Audit and to report in connection with the Agreement with the International Fund for Agricultural Development (IFAD) concerning **the project** where in these ToRs the 'Contracting Authority' is mentioned this refers to **IFAD** which has signed the Agreement with the **Recipient/Borrower** and finances the services. The Contracting Authority is not a party to this engagement.

1.1 Responsibilities of the Parties to the Engagement

(i) The PIU is responsible for providing a Financial Statements for the services financed by the IFAD financing and for ensuring that these Financial Statements can be properly reconciled to the PIU records and accounts in respect of these services.

(ii) The PIU accepts that the ability of the Auditor to perform the procedures required by this engagement effectively depends upon the PIU providing full and free access to its staff and records and accounts.

(iii) The PIU shall provide the auditors with all the necessary documentation to perform the assignment properly; in particular the following information shall be provided to the auditors before the beginning of the assignment:

a) Project Agreement;
b) Letter to the borrower and IFAD Disbursement handbook
c) Annual Progress Report and interim financial reports;
d) Project Implementation Manual including financial procedures manual;
e) All TORs, Organizational charts along with names and titles of for all PIU staff.
f) Names and qualifications of officers responsible for financial management, accounting and internal audit.
g) Description of information technology facilities and computer systems in use and
h) Copies of the minutes of negotiations, the project design document and cost tables, the annual work programme and budget and the letter to the borrower if available.
i) IFAD guidelines on project audit
j) MoUs/ sub-agreements with implementing parties.

'**The Auditor'** refers to the Auditor who is responsible for performing the agreed-upon procedures as specified in these ToR, and for submitting a report of factual findings to the PIU.

The Auditor shall provide:

(i) **A separate opinion on Project Financial Statements (PFS).** Minimum content of the PFS:

a) Yearly and cumulative statements of sources and application of funds by expenditure category, which should disclose separately IFAD's funds, other donors funds and beneficiaries funds;
b) Yearly and cumulative statements of sources and application of funds by project components/subcomponent, which should disclose separately IFAD's funds, other donors funds and beneficiaries funds;
c) Yearly comparison between the actual expenditures and the budget estimates by project components/subcomponent,
d) Yearly and cumulative SOEs by withdrawal application submitted to IFAD and category of expenditures;
e) Reconciliation of the designated account.
f) Reconciliation between the amounts shown as received by the project and those shown as being disbursed by IFAD should be attached as an annex to the PFS. As part of that reconciliation the auditor will indicate the procedure used for disbursement (SA funds, letters of credit, special commitments, reimbursement or direct payment) and indicate whether the expenditure is fully documented or uses the Summary of Expenditures format.
g) Yearly and cumulative statements of funds disbursed to - and justified by implementing partners. This statement should also disclose all unjustified advances to the implementing partners
h) Cumulative status of funds by category
i) Full disclosure of cash balances and
j) Notes accompanying the Financial statements
k) Fixed asset register

(ii) A separate opinion on the use of the Designated Accounts. The auditor is also required to audit the activities of the DA associated with the project including the initial advance, replenishments, interest that may accrue on the outstanding balances, and the year-end balances. The auditor must form an opinion as to the degree of compliance with IFAD procedures and the balance of the DA at year end. The audit should examine: (i) the eligibility of withdrawals from the DA during the period under review; (ii) the operation of the DA in accordance with the relevant financing agreement; (iii) the adequacy of internal controls within the

project appropriate for this disbursement mechanism; and (iv) the use of correct exchange rate(s) to convert local currency expenditures to United States dollars.

(iii) **A separate opinion on Withdrawal Application Statement / Statement of expenditures / Summary of Expenditures (SOEs);** the audit will include a review of SOEs used as the basis for submitting withdrawal applications. The auditor will carry out tests and reviews as necessary and relevant to the circumstances. SOE expenditures will be carefully compared for eligibility with relevant financial agreements, and the letter to the borrower , and with reference to the project appraisal report for guidance when necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, auditors will note these separately. A schedule listing individual SOEs withdrawal applications by reference number and amount should be attached to the PFS. The total withdrawals under the SOE procedure should be part of the overall reconciliation of IFAD disbursements described above. The auditor's opinion should deal with the adequacy of the procedures used by the project for preparing SOEs and should include a statement that amounts withdrawn from the project account on the basis of such SOEs were used for the purposes intended under the agreement.

(iv) **A separate opinion on the expenditures incurred by the implementing partners.** The audit will include visits to the implementing partners and review of their financial reports, internal controls, supporting documentation with regards to the expenditure items claimed by them. The auditor will carry out tests and reviews as necessary and relevant to the circumstances. Expenditures will be carefully compared for eligibility with relevant agreements, project implementation manual and the letter to the borrower , and with reference to the project appraisal report for guidance when necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, auditors will note these separately. Any internal control weaknesses will be noted in the management letter.

(v) **A separate management letter addressing the adequacy of the accounting and internal control systems of the Programme, including compliance with IFAD's Procurement Guidelines and such other matters as IFAD may notify the PIU to include in the audit.**
The auditor is requested to:

a) Comment on economy, efficiency and effectiveness in the use of project resources;
b) Comment on achievement of planned project results;
c) Comment on legal and financial obligations and commitments of the project and the extent of compliance or non-compliance thereof;
d) Comment on systems and procedures such as improvements in accounting, information technology or computer systems, and operations that may be under development, on which the auditor's comments are necessary to ensure effective controls;
e) Perform field visits to verify the material activities undertaken in different districts comment on the observations.
f) Comment on the internal controls environment, segregation of duties and Financial reporting and other FM arrangements (related to the project) of the implementing partners.
g) Comment on the compliance and status of previous years audit recommendations.
h) Comment on other activities on which an auditor may consider it appropriate to report.

(vi) **Auditors shall certify** :

a) Whether the PFS are drawn up in conformity with international accepted accounting standards (IFRS or IPSAS)
b) Whether the PFS are accurate and are drawn up from the books of accounts maintained by the Project.
c) Whether the provisions of the Project Agreement are adhered to.
d) Whether Procurement has been undertaken by the Project in accordance with **Article VI** of the Project Agreement,, IFAD's Procurement Guidelines
e) Carry out a physical verification of any significant assets purchased and confirm their existence and use for project purposes.
f) Perform field visits to verify material project activities.
g) Whether the project has an effective system of financial supervision or internal audit at all levels.
h) Whether the expenditure claimed through SOEs are properly approved, classified and supported by adequate documentation including those incurred by the implementing partners.
i) The Auditor is a member of the International Federation of Accountants (IFAC).

1.2 Subject of the Engagement

The subject of this engagement is the financial statements of the years **20XX, 20XY**, and **20XV** for the **IFAD Loan.**. The information, both financial and non-financial, which is subject to verification by the Auditor, is all

information which makes it possible to verify that the expenditures claimed by the **PIU** in Financial statements have occurred, and are accurate and eligible.

1.3 Reason for the Engagement

The **PIU** is required to submit to the Contracting Authority an Audit report produced by an external auditor.

1.4 Engagement Type and Objective

This constitutes an engagement to perform specific agreed-upon procedures following the IFAD Guidelines on Project Audits provided to the Auditors by the **PIU** in Annex 1 of these TOR. The objective of this audit is for the Auditor to verify that the expenditures claimed by the **PIU** in the financial statements for the services covered by the Agreement have occurred ('reality'), are accurate ('exact') and eligible and to submit to the **PIU** a report of factual findings with regard to the agreed-upon procedures performed. Eligibility means that expenditure have been incurred in accordance with the terms and conditions of the Agreement.

1.5 Scope of Work

1.5.1 The Auditor shall undertake this engagement in accordance with these Terms of Reference and:

- in accordance with the International Standard on Audit (ISA) to perform Agreed-upon Procedures regarding Financial Information as promulgated by the IFAC;
- In compliance with the Code of Ethics for Professional Accountants issued by the IFAC. Although ISRS 4400 provides that independence is not a requirement for agreed-upon procedures engagements, the Contracting Authority requires that the auditor also complies with the independence requirements of the Code of Ethics for Professional Accountants.
- In accordance with International Standards on Auditing and in line with IFAD's Guidelines for Project Audits.

1.5.2 The Terms and Conditions of the Agreement

The Auditor verifies that the funds provided by the Agreement were spent in accordance with the terms and conditions of the Agreement.

1.5.3 Planning, procedures, documentation and evidence

The Auditor should plan the work so that effective audit can be performed. For this purpose he performs the procedures specified the IFAD Guidelines on Project Audits and he uses the evidence obtained from these procedures as the basis for the report of factual findings. The Auditor should document matters which are important in providing evidence to support the report of factual findings, and evidence that the work was carried out in accordance with ISA and these ToR.

1.6 Key professional staff required:

(i) Team Leader: Professional Accountant (CA, ACCA, ACA, CPA) or equivalent professional qualification with a minimum of ten (10) years post-qualification experience on similar audit assignments.
(ii) Auditor (1): Professional Accountant (CPA) or equivalent professional qualification with a minimum of five (5) years audit experience of which three (3) should have been on the audit of World Bank/Multilateral funded projects.
(iii) Accountant (1): Part-qualified Accountant (Part 3 of the professional examinations of (BBA) or equivalent professional accountancy body with a minimum of three (3) years audit experience two (2) of which should have been on the audit of World Bank / Multilateral funded project.

1.7 Workplace, Schedule and Reports:

(vii) The Auditor will carry out the audit services at the office of the PIU in Monrovia, where the financial and accounting functions are performed. The Auditor will, however, also be expected to visit the offices of the STCRSP in Lofa County as well as offices of all ASRP and STCRSP IPs at county level for further investigation as required in the scope of audit and audit opinions.
(viii) The Auditor will be expected to carry out his/her audit services for a period not exceeding two (2) months and to submit the audit reports at the latest four (4) months after the end of the fiscal year.
(ix) At the end of each audit the Auditor will submit 5 original copies of the audit report to the MOA.

1.8 Reporting

The report on this audit should describe the purpose and the agreed-upon procedures of the engagement in sufficient detail in order to enable the **PIU** and the Contracting Authority to understand the nature and extent of the procedures performed by the Auditor. Use of the financial and audit reporting is compulsory.

Appendix 8: Procurement

A. Country context

1. The Use of Country Systems (UCS) refers to the use of the procurement procedures and methods contemplated in the public procurement system in place in the country of the Borrower that have been determined to be consistent with the donor's Guidelines and acceptable to the International Financial Institution (IFI) under its Use of Country Systems Piloting Program. At present, very few donors are channeling funds completely to the country, to be disbursed under the Public Procurement and Concessions Act of September 2005, for projects activities.

2. Liberia adopted a Public Procurement and Concessions Act in September 2005. The Act does conflict with some Procurement Guidelines of some International Financial Institutions, such as the World Bank. For this reason, Liberia Public Procurement and Concessions Act (2005) has not been accepted for use as a Country Procurement System by the World Bank. Most donors, therefore, make use of their own procurement rules and guidelines and not Liberia's public procurement system. While progress has been made since the establishment of the Public Procurement and Concessions Commission (PPCC) in 2006, weak government capacity to manage the procurement process remains a challenge. Challenges also remain in implementing the procurement law to improve compliance and ensure transparency. Support for building capacities is critical to advancing progress in this area, and it is known that several partners plan to scale their support to public procurement through increased support for training and capacity building at the ministries' levels.

3. **Procurement Guidelines**. Procurement for the proposed project will be carried out in accordance with IFAD Procurement Guidelines. Each contract to be financed by IFAD financing will be included in the Procurement Plan prepared by the PIU and agreed with IFAD. Regardless of the type and value of the contract, the PIU will be responsible for carrying out the procurement process. As a procuring entity for the STCRSP, the PIU will establish a procurement unit in charge of, *inter alia*, procurement planning, handling of the bidding process, conducting bid openings and evaluations of bids, and contract monitoring.

4. IFAD procurement guidelines take into consideration the following: (i) general procurement principles, standards and policies (ii) procurements shall be carried out in accordance with the provisions of the Borrower's procurement regulations, to the extent that these are consistent with the IFAD Procurement Guidelines, (iii) procurement methods will be identified in the approved procurement plans and prior review thresholds provided in the Letter to the Borrower (LTB) and any duly agreed amendments thereto; (iii) procurement will be conducted within the project implementation period, with the exception of winding up expenditures); (iv) cost of the procurement is not to exceed the availability of duly allocated funds as per Financing Agreement unless otherwise agreed in accordance with amendments to the Financing Agreement; (v) procurement will be consistent with the duly approved Annual Work Plan and Budget (AWPB) including an initial procurement plan for 18 months followed by successive 12-month plans synchronized with the annual AWPB cycle; and (vi) procurement should result in the best value for money.

5. **General Guidelines.** The following considerations generally guide IFAD's requirements for procurement: (i) the need for economy and efficiency in the implementation of the project, including the procurement of the goods and works involved and the recruitment of consultants; (ii) IFAD's interest in giving all qualified bidders from developed and developing countries the opportunity to compete in providing goods, works and consulting services financed by IFAD; (iii) IFAD's interest, as a development financing institution, in encouraging the development of domestic capacity to provide goods, works and consulting services; and giving appropriate preference to experts, technicians and suppliers from developing countries; (iv) the importance of fairness, integrity, transparency and good governance in the procurement process; and (v) the recognition that competition is the basis for efficient public procurement.

B. Proposed Procurement Arrangements under the Project

6. **Implementation arrangement**. The PMU/IFAD PIU will be responsible for the procurement under the project in accordance with IFAD procurement guidelines, IFAD procurement handbook and the provisions stipulated in the Financing Agreement and the letter to the Borrower. As a procuring

entity for the project, the PMU/IFAD-PIU have a procurement unit in charge of, inter alia, procurement planning, handling of the bidding process, conducting bid openings and evaluations of bids, and contract monitoring. For each contract to be financed by the IFAD financing, the different procurement methods, the need for prequalification, estimated costs, prior review requirements, and time frame will be agreed between the Borrower and IFAD project team in the Procurement Plan. The end-users will be included in developing the TORs to the extent possible.

7. **Procurement committee**. A Procurement Committee will be established at the PMU/IFAD PIU to review and/or approve the following documents or actions: procurement plan, draft advertisements and bidding documents (including specifications/TOR), evaluation reports and contract award recommendations, rejection of bids, contracts or contract amendments above pre-defined thresholds.

8. **Staffing**. The PMU/IFAD PIU has recruited a Procurement Advisor to support day-to-day procurement of the PMU projects, and to train and build the procurement capacity of the projects' Procurement training will be provided as part of the project start up to further strengthen the procurement capacity of the PIU.

9. **Bidding Documents**. The bidding documents shall be based on the WB procurement sample documentation appropriated for IFAD's purposes. All bidding documents for the procurement of goods, works and services will be prepared by the PIU. The technical specification will be prepared in consultation with the end-users.

10. **Performance based contracts**. The project envisages performance based contracts for both technical service providers and financial service providers. Thus during the procurement of these providers and renewal of contracts, the performance criteria will be clearly specified on the basis of which disbursements will be made. All bidding documents and contracts for the procurement of services financed by the IFAD financing will include a provision requiring bidders, suppliers, contractors, sub-contractors and consultants to permit IFAD to inspect their accounts, records or other documents relating to the bid submission and contract performance and to have them audited by IFAD-appointed auditors and investigators, as appropriate.

11. **Procurement Plan**: The PIU, will prepare an AWPB and a Procurement Plan in a format acceptable to IFAD for the first 18 months of project implementation. The procurement plan will provide the basis for the procurement methods and prior/post review threshold. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs.

12. **Procurement progress report**. Procurement information will be recorded by the PIU and submitted to IFAD, as part of the semi-annually and annual progress reports. As part of the procurement reports the PIU will maintain at least the following: i) procurement plan execution report with variance analysis and ii) list of pending issues. The exact format of the procurement reports will be agreed with IFAD.

13. **Register of contracts**. In addition, all contracts, will be listed in the Register of Contracts in a format agreed with IFAD and maintained by the PIU. The register of contract will include information on contractor/supplier/service provider, contract amount, procurement method, contract signing, contract duration, date of IFAD non objection, prior/post review etc.. As the register of contracts facilitates the review and approval of payment requests on contracts, please ensure that the Register is updated and submitted to the IFAD Country Programme Manager on a monthly basis. The sample register of contract -form to be used is defined in the IFAD Loan Disbursement Handbook.

14. **Record keeping**: The PIU under the respective ministries will maintain complete procurement files including the IFAD non-objection which will be reviewed by IFAD supervision missions and backed up electronically. In accordance with IFAD General Conditions, the borrower has to maintain the original records for a minimum of 10 years after the project completion.

15. **Procurement of project auditors**. The PMU will appoint independent auditors, selected in accordance with the procedures and criteria set forth in IFAD's Guidelines on Project Audits (for Borrower's Use). The auditors will be procured using QCBS (with 30% weight on price and 70% weight on quality and past experience) or LCS from an IFAD approved shortlist. The terms of reference for the audit will be agreed with IFAD on annual basis . The content of the bidding documentation should also include well defined criteria on minimum quality of auditors, including number, qualification and experience of staff, demonstrated knowledge of ISA, experience in auditing

externally funded projects. The length of appointment should not exceed four years with annual confirmation based on the auditor's performance.

C. Procurement Thresholds

16. While specific thresholds for procurement financed under the programme will be stipulated in the Letter to the Borrower, the general recommendation is the following:

i. **Goods** estimated to cost more than USD 200,000 equivalent per contract may be procured through the International Competitive Bidding (ICB) method using the World Bank's applicable Standard Bidding Documents (SBDs). Goods estimated to cost less than US$200,000 equivalent per contract may be procured through the National Competitive Bidding (NCB). Goods estimated to cost less than US$20,000 equivalent per contract may be procured through National Shopping method.

ii. **Works** estimated to cost more than USD 500 000 equivalent may be procured through International Competitive Bidding (ICB) method using the World Bank's applicable SBDs. Works estimated between USD 25 000 and USD 500 000 may be procured through the NCB. While works estimated below USD 25 000 may be procured through National Shopping method. Direct contracting will have to be identified and approved by IFAD in advance for those cases which justify use of such method.

iii. **Consultancy services** generally estimated to cost more than USD 50 000 for firms and USD 20 000 for individuals will be on the basis of Quality and Cost based selection method. However, the specific nature of the assignment will finally determine the method of procurement to be followed

17. **NCB/ICB Bid-submission and threshold for publication.** Time given to bidders to submit their bids will be 4 weeks for NCB, 6 weeks for ICB. Preference margins may be applied in accordance with IFAD Guidelines. Thresholds for publication are set as follows in accordance with the national law:

i. Contracts for the procurement of goods, USD 25,000

ii. Contracts for the procurement of works, USD 50,000

iii. Contracts for the procurement of consulting services, USD 10,000

18. Thresholds for procurement methods will be established in US$ and clearly indicated in each procurement plan, as shown below.

i. The following requirements will be taken into account for National Competitive Bidding procedures: (i) the invitation to bid is advertised in national newspapers with wide circulation; (ii) the bid evaluation, qualification of bidders and contract award criteria are clearly indicated in the bidding documents; (iii) the bidders are given adequate response time (at least four weeks) to prepare and submit their respective bids; (iv) the contract is awarded to the lowest evaluated bidder which meet the qualification criteria; (v) the eligible bidders, including foreign bidders, are not precluded from participating; and (vi) no preference margin is granted to local suppliers or contractors. A specific procurement notice will be published in a national newspaper or on a free access website.

ii. **Prior review thresholds.** Thresholds for IFAD prior review will be set as USD 30,000 for goods, USD 50,000 for works and USD 20,000 for consulting services. Thresholds will be specified in the procurement plan and may be revised from time to time based on procurement performance and subsequent risk assessments. Use of single source procurement shall always be subject to prior review.

Procurement of Works

19. Contracts for works estimated at less than USD 500,000, will be procured under NCB procedure. Contracts for works estimated at USD 30,000 or less may be procured under the shopping procedure. Works will be procured under contracts awarded on the basis of quotations obtained from at least three qualified domestic contractors in response to a written invitation. The invitation shall include a detailed description of the works, basic specifications, required completion date, basic form of agreement acceptable to IFAD. The award will be made to the contractor with the lowest price quotation and who has the experience and resources to successfully complete the contract.

Procurement of Goods

20. ICB procedures will be applied for purchase of goods estimated above USD 200,000. A General Procurement Notice (GPN) will be prepared by the Borrower and published in the United Nations Development Business online (UNDB online) and Development Gateway Market (dgMarket) and international newspapers and on a free access website.

21. Contracts estimated at less than USD 200,000 for locally available goods will be awarded through NCB procedures. Contracts for small goods and office supplies, as well as minor equipment and furniture available locally and estimated at less than USD 20,000 may be procured under shopping procedures. These include: furniture, computers; accessories; software; communication; and office equipment, etc.

Selection of Consultants

22. Consultants will be selected using the Quality and Cost-Based Selection (QCBS) method in most cases. In special cases specified in the Procurement Plan (PP) the following methods will be used: (i) Quality-Based Selection (QBS); (ii) Least Cost Selection (LCS),; (iii) Selection Based on the Consultants' Qualifications (CQS), (iv) Single-Source Selection (SSS) and (v) Individual Consultants (IC) Selection will be processed prior to the establishment of short-lists for all consultancy firms. ICB procedures will be applied for contracts estimated above USD 100,000. Contracts estimated at less than USD 50,000 will be awarded through NCB procedures. Shopping procedures will be applied for services below USD 10,000.

23. The PIU will ensure widely publicized Requests for Expressions of Interest (REI) for all contracts for consultants, except for single source when applicable.

Training, Workshops and Study Tours.

24. As regards Training, Workshops and Study Tours if any, at the beginning of each year the PIU will submit its proposed plans in the form of an annual action plan for the coming year, to be reviewed by IFAD. The plan will indicate the persons or groups to be trained, the type of training to be provided, indicative learning outcomes, the provider and the location of the training, its estimated cost. Selection of training institutions for workshops/training should be based on a competitive process.

Operating costs.

25. Operating costs financed by the project consists of additional expenditures incurred, such as office equipment and supplies, rental costs, maintenance of vehicles, fuel and spare parts, as well as travel expenses and per diem, to the extent that these expenses are required for project monitoring. They will be procured using the shopping procedure and grouping, as much as possible, resorting to customer contracts for procurement of routine services. These procedures will be specified in detail in the Project Implementation Manual (PIM), and procurements scheduled in the Procurement Plan (PP) submitted to IFAD for prior approval.

Table 1: 18 Months Procurement Plan

Procurement plan for works 2015 - 2016

			General Desccription of the Acquisition and Procurement method						Preparation of Tendering Process			Bidding Process					Bid evaluation report				Contract finalization			
S/No.	AWPB Activity	Lot #	Description of Goods	Quantity	Amount	Method	IFAD Review(Prior or Post	Plan Vs. Actual	Specfication / Terms of reference	Date Proposed	Date no objection	Publication	LOI	Response	Issue # of Invitation for Bid	Bid closing/Opening	Technical Evaluation	Comercial Evaluation	Final Report	IFAD's No-Objection	Negotiation of awards	Signature	Duration	End date
			Blue print and construction of seeds Station Building(1 building,1.2)	1 building	$ 100,000.00	NCB	Prior	Plan	March 25, 2016	April 4, 2016	April 18, 2016	April 21, 2016	N/A	4 weeks	MOA/PMU/IFAD/TCEP/NCB/W-01/2016	May 19, 2016	June 2, 2016	June 5, 2016	June 12, 2016	June 16, 2016	June 19, 2016	June 21, 2016	3 months	August 11, 2016
								Revised																
1	1.2	1						Actual																
			Office and warehouse refurbishment (6 houses,3.1)	6 houses	$ 210,000.00	NCB	Prior	Plan	March 25, 2016	April 4, 2016	April 18, 2016	April 21, 2016	N/A	4 weeks	MOA/PMU/IFAD/TCEP/NCB/W-01/2016	May 19, 2016	June 2, 2016	June 5, 2016	June 12, 2016	June 16, 2016	June 19, 2016	June 21, 2016	3 months	August 11, 2016
								Revised																
2	3.1	2						Actual																
			Refurbishing of Office Building and warehouses,bachelor accommodation(4 h	4 houses	$ 100,000.00	NCB	Prior	Plan	March 25, 2016	April 4, 2016	April 18, 2016	April 21, 2016	N/A	4 weeks	MOA/PMU/IFAD/TCEP/NCB/W-01/2016	May 19, 2016	June 2, 2016	June 5, 2016	June 12, 2016	June 16, 2016	June 19, 2016	June 21, 2016	3 months	August 11, 2016
								Revised																
3	3.2	3						Actual																

Procurement plan for services 2015 - 2016

Description of Services	Selection method	Lump Sum or time -based	Estimated amount in US$	Pre/Post-review	Plan Vs Actual	Date prepared	Closing date	Date Proposed	Date of No Objection	Date Proposed	Date no objection	Plan vs Actual	Date Prepared	Date no objection	Invitation date	Submission/Opening date	Submission evaluation Report(T)	No-objection evaluation reportT (T)	Opening financial proposal	Submission eval. Report(T)and (F)	No-objecion eval. Report(T)and(F)	Plan vs Actual	Contract amount in US$	Contract award	Date Contract Signature
Hiring of Staff(Start up, 1.1, 1.2,2.2,4.1,4.2,	IC	Lump Sum	$274,200.00	prior		January 7, 2016	January 21, 2016	January 24, 2016	February 7, 2016	February 21, 2016	March 6, 2016		N/A	N/A	N/A	N/A	March 20, 2016	April 3, 2016	N/A	N/A	N/A	Plan		April 4, 2016	April 5, 2016
																						Revised			
																						Actual			
Guard Service(Start up ,1.2)	IC	Lump Sum	$ 12,000.00	prior		October 16, 2016	October 30, 2016	November 3, 2016	November 17, 2016	December 1, 2016	December 15, 2016		N/A	N/A	N/A	N/A	December 29, 2016	January 12, 2017	N/A	N/A	N/A	Plan		**13-Mar-17**	**14-Mar-17**
																						Revised			
																						Actual			
Recruitment of consultants to conduct FFS assessment		Lump Sum		prior		April 3, 2016	April 17, 2016	April 20, 2016	May 4, 2016	May 18, 2016	June 1, 2016		N/A	N/A	N/A	N/A	June 15, 2016	June 29, 2016	N/A	N/A	N/A	Plan		June 30, 2016	July 1, 2016
																						Revised			
																						Actual			
Recruitment of consultants to conduct farming model assessment		Lump Sum		prior		May 30, 2016	June 13, 2016	June 16, 2016	June 30, 2016	July 14, 2016	July 28, 2016		N/A	N/A	N/A	N/A	August 11, 2016	August 25, 2016	N/A	N/A	N/A	Plan		August 26, 2016	August 27, 2016
																						Revised			
																						Actual			
Capacity assessment and selection of Cooperatives		Lump Sum		prior		February 14, 2016	February 28, 2016	March 3, 2016	March 17, 2016	March 31, 2016	April 14, 2016		N/A	N/A	N/A	N/A	April 28, 2016	May 12, 2016	N/A	N/A	N/A	Plan		May 13, 2016	May 14, 2016
																						Revised			
																						Actual			
Recruitment of Private Sector Partners(PSPs)		Lump Sum		prior		July 14, 2016	July 28, 2016	August 1, 2016	August 15, 2016	August 29, 2016	September 12, 2016		N/A	N/A	N/A	N/A	September 26, 2016	October 10, 2016	N/A	N/A	N/A	Plan		October 11, 2016	October 12, 2016
																						Revised			
																						Actual			
Thematic studies(4.3)	LCS	Lump Sum	$ 24,000.00	prior		August 14, 2016	August 28, 2016	September 1, 2016	September 15, 2016	September 29, 2016	October 13, 2016		October 27, 2016	November 10, 2016	November 17, 2016	December 15, 2016	December 29, 2016	January 12, 2017	January 26, 2017	February 2, 2017	February 16, 2017	Plan		February 23, 2017	March 2, 2017
																						Revised			
																						Actual			
Recruitment of international consultant(1.1)	QCBS	Time- based	**$108,000.00**	prior		July 5, 2016	July 19, 2016	July 23, 2016	August 6, 2016	August 20, 2016	September 3, 2016		September 17, 2016	October 1, 2016	October 8, 2016	December 3, 2016	December 17, 2016	December 31, 2016	January 14, 2017	January 21, 2017	February 4, 2017	Plan		February 11, 2017	February 18, 2017
																						Revised			
																						Actual			
Recruitment on national consultant(1.1)	ICS	Lump sum	**$ 36,000.00**	prior		April 14, 2016	April 28, 2016	May 2, 2016	May 16, 2016	May 30, 2016	June 13, 2016		June 27, 2016	July 11, 2016	July 18, 2016	August 15, 2016	August 29, 2016	September 12, 2016	September 26, 2016	October 3, 2016	October 17, 2016	Plan		October 24, 2016	October 31, 2016
																						Revised			
																						Actual			
Conduct gender and inclusion baseline and monitoring survey(4.3)	LCS	Lump sum	**$ 20,000.00**	prior		June 14, 2016	June 28, 2016	July 2, 2016	July 16, 2016	July 30, 2016	August 13, 2016		August 27, 2016	September 10, 2016	September 17, 2016	October 15, 2016	October 29, 2016	November 12, 2016	November 26, 2016	December 3, 2016	December 17, 2016	Plan		December 24, 2016	December 31, 2016
																						Revised			
																						Actual			
Conduct baseline and MTR survey(4.3)	QCBS	Time based	**$100,000.00**	prior		January 5, 2016	January 19, 2016	January 23, 2016	February 6, 2016	February 20, 2016	March 5, 2016		March 19, 2016	April 2, 2016	April 9, 2016	June 4, 2016	June 18, 2016	July 2, 2016	July 16, 2016	July 23, 2016	August 6, 2016	Plan		August 13, 2016	August 20, 2016
																						Revised			
																						Actual			

Appendix 9: Project cost and financing

Tree Crops Extension Project
Components by Financiers
(US$ '000)

	Private Sector Partner		ASAP		Beneficiaries		IFAD1		IFAD2		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
A. Revitalization of cocoa plantations														
1. Revitalization of cocoa plantations	964	11.1	2,445	28.0	1,352	15.5	3,231	37.0	147	1.7	589	6.7	8,728	28.4
2. Supply of improved planting material	-	-	983	75.3	-	-	261	20.0	12	1.0	48	3.7	1,305	4.2
Subtotal	964	9.6	3,428	34.2	1,352	13.5	3,492	34.8	159	1.6	637	6.4	10,033	32.6
B. Rehabilitation and maintenance of roads														
1. Rehabilitation and maintenance of roads	-	-	-	-	-	-	639	6.3	8,902	87.1	679	6.6	10,220	33.3
C. Service provision for cocoa value chain development														
1. Strengthening cooperatives of cocoa farmers	-	-	15	0.4	-	-	3,609	93.1	-	-	251	6.5	3,876	12.6
2. Capacity building of value chain stakeholders	-	-	1,056	48.0	-	-	1,009	45.9	-	-	134	6.1	2,200	7.2
Subtotal	-	-	1,072	17.6	-	-	4,619	76.0	-	-	385	6.3	6,075	19.8
D. Project coordination, monitoring and evaluation														
1. Coordination and management	-	-	-	-	-	-	3,506	97.3	-	-	98	2.7	3,604	11.7
2. Monitoring, evalution and know ledge management	-	-	-	-	-	-	744	93.0	-	-	56	7.0	800	2.6
Subtotal	-	-	-	-	-	-	4,251	96.5	-	-	154	3.5	4,405	14.3
Total PROJECT COSTS	964	3.1	4,500	14.6	1,352	4.4	13,000	42.3	9,061	29.5	1,855	6.0	30,733	100.0

Tree Crops Extension Project
Expenditure Accounts by Financiers
(US$ '000)

	Private Sector Partner		ASAP		Beneficiaries		IFAD1		IFAD2		The Government		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs														
A. Works														
1. Works: roads	-	-	-	-	-	-	-	-	8,532	93.0	642	7.0	9,175	29.9
2. Works: w arehouses and buildings	-	-	99	46.5	-	-	99	46.5	-	-	15	7.0	212	0.7
Subtotal	-	-	99	1.1	-	-	99	1.1	8,532	90.9	657	7.0	9,387	30.5
B. Goods, services and inputs	-	-	592	13.8	1,158	27.0	2,135	49.7	107	2.5	301	7.0	4,293	14.0
D. Vehicles	-	-	77	8.1	-	-	799	84.9	-	-	66	7.0	942	3.1
E. Equipment and materials	964	21.2	1,911	42.0	193	4.3	1,119	24.6	39	0.9	318	7.0	4,545	14.8
F. Consultancies	-	-	730	25.7	-	-	1,928	67.8	-	-	186	6.5	2,845	9.3
G. Training	-	-	317	10.2	-	-	2,554	82.3	35	1.1	197	6.4	3,103	10.1
H. Workshops	-	-	-	-	-	-	109	81.8	15	11.2	9	7.0	133	0.4
I. Services	-	-	343	30.2	-	-	516	45.4	278	24.5	-	-	1,137	3.7
Total Investment Costs	964	3.7	4,068	15.4	1,352	5.1	9,259	35.1	9,008	34.1	1,734	6.6	26,384	85.8
II. Recurrent Costs														
A. Salaries and allow ances	-	-	125	4.8	-	-	2,492	95.2	-	-	-0	-0.0	2,617	8.5
B. Operation costs	-	-	307	17.7	-	-	1,249	72.2	54	3.1	121	7.0	1,731	5.6
Total Recurrent Costs	-	-	432	9.9	-	-	3,742	86.0	54	1.2	121	2.8	4,349	14.2
Total PROJECT COSTS	964	3.1	4,500	14.6	1,352	4.4	13,000	42.3	9,061	29.5	1,855	6.0	30,733	100.0

Tree Crops Extension Project

Disbursements by Semesters and Government Cash Flow

(US$ '000)

	Financing Available						Costs to be Financed	The Government	
	Private Sector Partner Amount	ASAP Amount	Beneficiaries Amount	IFAD1 Amount	IFAD2 Amount	Total	Project Costs	Cash Flow	Cumulative Cash Flow
1	47	645	56	1,340	1	2,089	2,219	-129	-129
2	47	645	56	1,340	1	2,089	2,219	-129	-259
3	119	500	162	1,223	1,575	3,579	3,822	-243	-502
4	119	500	162	1,223	1,575	3,579	3,822	-243	-744
5	145	505	198	1,261	2,661	4,769	5,104	-335	-1,079
6	145	505	198	1,261	2,661	4,769	5,104	-335	-1,414
7	171	354	249	1,241	85	2,101	2,231	-130	-1,543
8	171	354	249	1,241	85	2,101	2,231	-130	-1,673
9	-	222	10	882	140	1,254	1,319	-66	-1,739
10	-	222	10	882	140	1,254	1,319	-66	-1,804
11	-	25	-	553	68	647	672	-26	-1,830
12	-	25	-	553	68	647	672	-26	-1,855
Total	964	4,500	1,352	13,000	9,061	28,878	30,733	-1,855	-1,855

Expenditure Accounts by Components - Totals Including Contingencies
(US$ '000)

	Revitalization of cocoa plantations		Rehabilitation and maintenance of roads	Service provision for cocoa value chain development		Project coordination, monitoring and evaluation		
	Revitalization of cocoa plantations	Supply of improved planting material	Rehabilitation and maintenance of roads	Strengthening cooperatives of cocoa farmers	Capacity building of value chain stakeholders	Coordination and managemen	Monitoring, evalution and knowledge management	Total
I. Investment Costs								
A. Works								
1. Works: roads	-	-	9,175	-	-	-	-	9,175
2. Works: warehouses and buildings	-	106	-	-	106	-	-	212
Subtotal	-	106	9,175	-	106	-	-	9,387
B. Goods, services and inputs	3,825	40	-	428	-	-	-	4,293
D. Vehicles	77	77	81	348	189	169	-	942
E. Equipment and materials	3,530	331	5	158	447	75	-	4,545
F. Consultancies	451	66	218	469	747	126	769	2,845
G. Training	-	68	93	2,473	303	166	-	3,103
H. Workshops	-	-	16	-	-	86	31	133
I. Services	-	616	520	-	-	-	-	1,137
Total Investment Costs	7,882	1,305	10,107	3,876	1,792	622	800	26,384
II. Recurrent Costs								
A. Salaries and allowances	314	-	-	-	99	2,205	-	2,617
B. Operation costs	531	-	113	-	309	778	-	1,731
Total Recurrent Costs	846	-	113	-	408	2,982	-	4,349
Total PROJECT COSTS	8,728	1,305	10,220	3,876	2,200	3,604	800	30,733
Taxes	589	48	679	251	134	98	56	1,855
Foreign Exchange	5,002	322	2,885	1,029	584	426	9	10,258

Tree Crops Extension Project

Project Components by Year -- Totals Including Contingencies

(US$ '000)

	Totals Including Contingencies						
	2016	**2017**	**2018**	**2019**	**2020**	**2021**	**Total**
A. Revitalization of cocoa plantations							
1. Revitalization of cocoa plantations	1,176	1,988	2,296	2,459	678	132	8,728
2. Supply of improved planting material	706	164	156	147	131	-	1,305
Subtotal	1,882	2,152	2,452	2,606	809	132	10,033
B. Rehabilitation and maintenance of roads							
1. Rehabilitation and maintenance of roads	200	3,508	5,914	273	171	155	10,220
Subtotal	200	3,508	5,914	273	171	155	10,220
C. Service provision for cocoa value chain development							
1. Strengthening cooperatives of cocoa farmers	918	1,040	699	575	584	60	3,876
2. Capacity building of value chain stakeholders	620	389	443	294	310	144	2,200
Subtotal	1,538	1,429	1,142	869	894	204	6,075
D. Project coordination, monitoring and evaluation							
1. Coordination and management	636	494	484	641	711	637	3,604
2. Monitoring, evalution and know ledge management	181	61	217	73	52	217	800
Subtotal	818	555	701	713	764	854	4,405
Total PROJECT COSTS	4,437	7,644	10,208	4,461	2,638	1,344	30,733

Appendix 10: Economic and Financial Analysis

LIBERIA **TREE CROPS EXTENSION PROJECT (TCEP)**

EFA summary tables

Tabel A: Models' financial cash flow

Model 1: Basic revitalization

ITEMS	UNIT	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$	178	178	268	317	752	745	717	687	657	628	601
Total production costs	US$	40	433	176	176	176	176	176	176	176	176	176
Incremental net income	US$	0	-393	-46	3	439	431	403	373	344	314	287
Return to family labour*	**21.5**											
NPV @ 0.1	**997**											
IRR	**43%**											
B/C ratio	**2.40**											

Model 2: Enhanced revitalization

ITEMS	UNIT	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$	178	178	268	583	1,104	1,613	1,718	1,643	1,569	1,494	1,427
Total production costs	US$	40	459	307	412	432	452	375	465	435	425	375
Incremental net income	US$	0	-419	-177	33	533	1,023	1,204	1,040	995	931	914
Return to family labour*	**78**											
NPV @ 0.1	**2,922**											
IRR	**61%**											
B/C ratio	**2.49**											

Model 3: Replanting

ITEMS	UNIT	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$ 0	0	0	50	583	1,104	1,613	2,968	2,838	2,708	2,577	2,460
Total production costs	US$ 0	40	775	396	412	452	472	445	505	505	445	445
Incremental net income	US$ 0	0	-735	-306	211	691	1,181	2,563	2,373	2,242	2,172	2,055
Return to family labour*	**55**											
NPV @ 0.1	**5,867**											
IRR	**62%**											
B/C ratio	**2.84**											

Model 4: Cocoa cooperative

ITEMS	UNIT	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$	1,250	5,250	15,703	41,034	78,863	118,125	161,875	169,375	169,375	169,375	169,375
Total costs	US$	0	117,225	39,000	18,000	18,000	112,500	38,000	18,000	18,000	18,000	112,500
Incremental net income	US$	0	-113,225	-24,547	21,784	59,613	4,375	122,625	150,125	150,125	150,125	55,625
NPV @ 0.1	**237,986**											
IRR	**34%**											
B/C ratio	**1.76**											

Tabel B2: Indicators from the EFA

Outcome	Indicateur	Baseline	MTR	FINAL
Improved incomes and cli;ate change resilience of	Number of farmers who increased their income from cocoa	0	4,250	8,000
8,000 smaalholder cocoa producers	Gross sales per farm	178	583	1,718
Increased quality and quantity of cocoa sold by	% of grade 1	0%	60%	90%
smallholders	Ha of cocoa rehabilitated	0	6,500	10,000
Improved access to markets	Km of roads rehabilitated	0	75	200
	Number of farmers selling their produce through coops	0	3,000	8,000
Improved service provision to cocoa smallholder	Number of farmers receiving inputs from cooperatives	0	4,250	8,000
farmers				

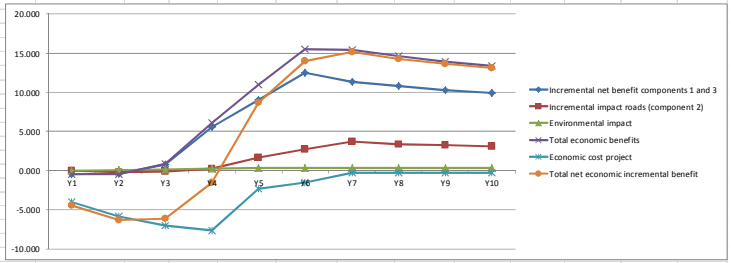
Table D: Phasing

		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Basic revitalization	farmers	250	750	1,375	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Enhanced rvitalization	farmers	750	2,250	4,125	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Replanting	farmers	0	500	1,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total cocoa farmers	farmers	1,000	3,000	5,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Total cocoa plantations	ha	1,000	3,500	6,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Cocoa cooperatives	coops	8	8	8	8	8	8	8	8	8	8

Table E: Project economic cash flow (million US$)

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Incremental net benefit components 1 an	-0.479	-0.390	0.805	5.565	9.013	12.497	11.344	10.844	10.296	9.947
Incremental impact roads (component 2)	0.000	-0.144	-0.117	0.241	1.670	2.704	3.749	3.403	3.253	3.089
Environmental impact	0.027	0.098	0.187	0.297	0.315	0.324	0.333	0.342	0.351	0.360
Total economic benefits	-0.452	-0.436	0.875	6.104	10.997	15.525	15.427	14.589	13.900	13.396
Economic cost project	-4.009	-5.889	-6.987	-7.639	-2.356	-1.541	-0.300	-0.300	-0.300	-0.300
Total net economic incremental benefit	-4.461	-6.325	-6.112	-1.535	8.641	13.985	15.127	14.289	13.600	13.096

Graph G: Project economic cash flow



Tabel C1: Main Assumptions

	Without	With project									Average
	Y0	Y1/	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	
Cocoa yields (kg/ha)												
Model 1 Basic revitalization	**100**	100	125	150	400	400	400	400	400	400	400	
Model 2 Enhanced revitalization	**100**	100	100	300	600	900	1000	1000	1000	1000	1000	
Model 3 Restocking	**100**	0	0	300	600	900	1200	1500	1500	1500	1500	
% of Famers with acces to each grade by year												
cocoa - grade 1	**0%**	0%	30%	60%	70%	80%	90%	90%	90%	90%	90%	
cocoa - grade 2	**100%**	100%	70%	40%	30%	20%	10%	10%	10%	10%	10%	
Cocoa price paid to farmers (US$/kg)												
cocoa - grade 1	1.22	1.93	1.84	1.83	1.80	1.76	1.68	1.61	1.53	1.46	1.39	1.68
cocoa - grade 2	1.2	1.78	1.70	1.70	1.66	1.63	1.56	1.49	1.42	1.35	1.28	1.56
Cocoa price paid to cooperative (US$/kg)												
cocoa - grade 1	1.22	2.05	1.94	1.93	1.90	1.86	1.78	1.71	1.63	1.56	1.49	1.78
cocoa - grade 2	1.22	1.88	1.80	1.80	1.76	1.73	1.66	1.59	1.52	1.45	1.38	1.66

Tabel C2: Shadow prices

Shadow prices	Factor
Tradable goods	0.90
Labour	US$ 3.5
Pesticides	0.90
Fertilizer	0.9
Output conversion factor	1.10
Social discount rate	4.3%

	Prices Financial	Economic
Cocoa, grade 1	1.65	1.82
Cocoa, grade 2	1.55	1.71
fertilizer	1	0.9
pesticides	40	36
sprayer	60	54
wages, skilled	5.5	3.5
wages, unskilled	3.5	2

Tabel B1: Project costs

Component	Cost IFAD, ASAP million USD	Beneficiaries	Cost US$/Beneficiary
Revitalisation of cocoa plantations	7.1	8,000	888
Rehabilitation and maintanance of roads	9.7	10,400	929
Service provision for value chain development	5.4	11,000	495
Project Coordination, M&E	4.3	11,000	391
Total	26.5	11,000	2,409

Table F: Sensitivity analysis

		ERR	NPV (mio US$)	Link with risk matrix
Base Scenario		37.2%	108.8	
Project benefits	-20%	31.0%	81.6	Combination of risks affecting output prices, yields and adoption rates
Project benefits	-10%	34.2%	95.2	
Adoption rate	-10%	28.7%	96.2	Extension sservice outreach is limited, low upteak of good practices,
Adoption rate	-20%	25.6%	79.7	
Project costs	10%	34.5%	106.1	Increase of price of service providers, road construction, fertilizer, etc..
Project costs	20%	32.1%	103.4	
1 year lag in benefits		29.9%	97.7	Low implementation capacity, risks affectingadoption rates
2 year lag in benefits		25.0%	87.0	

A. Beneficiaries and benefits

1. TCEP will have 11,000 beneficiaries of which 8,000 cocoa smallholder farmers, 2,400 additional farmers (30%) who will benefit from spillover effects and approximately 600 jobs along the value chain. Considering an average household size of 5.9 in the project area, this adds up to 64,900 household members. The 2,400 additional farmers will benefit from better roads, stronger cooperatives, market linkages, availability of improved planting material and better input supply systems.

2. Component A is expected to lead to increase in cocoa production, marketing and exports as a result of: (a) revitalization of abandoned plantations; (b) replanting of new trees; (c) higher yields at smallholder farmers level; (d) higher farm-gate prices; and (e) higher quality of cocoa as a result of improved post-harvest handling and marketing. Benefits from Component B, rehabilitation of farm to market roads will procure access to markets, reduce the time and cost to reach the local market and limit the post-harvest losses due to bad transportation conditions. Regarding Component C, the strengthening of cooperatives will contribute to the delivery of quality services to cocoa farmers and guarantee the sustainability of the approach, in particular dissemination of improved planting material, extension services, access to inputs and output markets.

B. Financial analysis

3. The following table summarizes 5 financial models that were developed to simulate the interventions of the TCEP. Models 1, 2 and 3 simulate the different scenarios for revitalization and replanting of cocoa plantations (Component A). Only bananas/plantain was included in the financial models as diversification, because (a) currently no market demand exists for coffee, (b) additional tree crops will deepen the financing gap of households during the first 3 to 4 years, (c) bananas can be harvested already in year 2 and provide additional revenues and food security to the farming households, as well as increasing the role of women in the farming economy. The fourth model simulates the income, cost and cash flow of a cooperative of cocoa producers (Component C). The 5th model analyses the sustainability of a Farmer Field School (FFS) after the initial project phase.

Table 1: Financial models

	Yields	Description of the models	Farmers
Baseline	100 kg/ha	Semi-abandoned plantations and yields have been limited to values <100 kg/ha by over shading and lack of weeding and basic management; the principal activity is the harvesting of fruits that grow without any particular management; the trees are from local, unselected germplasm and are 20-40 years old; owing to the mortality of trees the density of productive cocoa trees is often lower than the target of 1000 trees per hectare	
Model 1: Basic revitalization	400 kg/ha (year 3)	Cleaning and weeding of the plantation, adjusting the shade, applying basic pruning to the cocoa trees; gap filling (15%) through new cocoa seedlings; improved production and post-harvest management (drying). Application of basic disease control (especially black pod). Intercropping with bananas.	2,000 farmers (25% of those who revitalize)
Model 2: Enhanced revitalization	1000 kg/ha (year 6) (1 kg per stem)	After basic revitalization, further improvement of management, using farmers' field schools; gap filling and gradual replacement (5% per annum). Disease control. Fertilizer application (50 kg) on an acre to try out the yield response on a per farm basis, then if positive recommend annually 150 kg/ha (3 bags). Intercropping with bananas	6,000 farmers (75% of those who revitalize)
Model 3: Restocking	1500 kg/ha (year 6).	Restocking or replanting. Grafting improved, high-yielding materials on old trees; Planting hybrid or grafted seedlings;	2,000 farmers (of those 6,000

		regular fertilization. Basic pest and disease control, fertilizer application (150 kg/ha), post-harvest handling. Intercropping with plantain/bananas	at enhanced stage)
Model 4: Cocoa cooperative		Revenues from membership fees, marketing of cocoa and the payback of cocoa rehabilitation. Decreasing subsidy of operational costs, as budgeted in the COSTAB. Equipment and vehicles	1,000 members each from year 4 onwards.
Model 5: FFS		Revenue for FFS members fees, marketing of cocoa.	25 members per FFS

4. The following table presents the assumptions regarding cocoa yields, quality and prices at cooperative and farm gate level. The financial models are based on information collected by the ongoing IFAD project and the TCEP design team in April and July 2015. The financial crop models capture: (i) increases in cocoa yield, (ii) increases in quality; (iii) increases in prices for higher quality, as well as a better bargaining power of farmers. The yield assumptions are based on information from other projects in Liberia and the region. Cocoa price assumptions are based on World Bank price information and projections (constant 2015 prices). Assumptions regarding grades are based on experiences of ongoing projects.

Table 2: Assumptions for yield, price and quality

	Without				With project						
	Y0	Y1/	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Cocoa yields (kg/ha)											
Model 1 Basic revitalization	**100**	100	125	150	400	400	400	400	400	400	400
Model 2 Enhanced revitalization	**100**	100	100	300	600	900	1000	1000	1000	1000	1000
Model 3 Restocking	**100**	0	0	300	600	900	1200	1500	1500	1500	1500
% of Famers with acces to each grade by year											
cocoa - grade 1	**0%**	0%	30%	60%	70%	80%	90%	90%	90%	90%	90%
cocoa - grade 2	**100%**	100%	70%	40%	30%	20%	10%	10%	10%	10%	10%
Cocoa price paid to farmers (US$/kg)											
cocoa - grade 1	1.22	1.93	1.84	1.83	1.80	1.76	1.68	1.61	1.53	1.46	1.39
cocoa - grade 2	1.2	1.78	1.70	1.70	1.66	1.63	1.56	1.49	1.42	1.35	1.28
Cocoa price paid to cooperative (US$/kg)											
cocoa - grade 1	1.22	2.05	1.94	1.93	1.90	1.86	1.78	1.71	1.63	1.56	1.49
cocoa - grade 2	1.22	1.88	1.80	1.80	1.76	1.73	1.66	1.59	1.52	1.45	1.38

5. The table below summarizes the key financial flows (total revenue, total costs, incremental cash flow) of the 4 models over a period of 10 years, as well as key financial performance indicators (IRR, return to family labour, NPV and B/C ratio).

6. The detailed models of revitalization show that the cash flow after financing would be positive from year 1 onwards. In order to achieve this, the Project will use the following tools: (a) a subsidy in kind (seedlings, labour for revitalization, ..) of 250 US$ per ha and subsidized solar dryers, for which the farmer contributes his labour; (c) a subsidized bag of fertilizer as farm-level demonstration in the enhanced revitalization model. The analysis also shows the importance of encouraging farmers to go for enhanced revitalization (NPV of US$ 2,922), compared to NPV of US$ 997 for the basic model. The NPV of the replanting model is even US$ 5,867. Overall, the approach of the project is financially sound. In each of the models, the production of bananas contributed to the incremental cash flow. Models 1, 2 and 3 (replanting) are sound in case can ensure the bulk of family labour and planting material is provided through village nurseries.

7. The financial model of an FFS shows that, after the initial phase of establishing with high cost in technical assistance, an annual membership fee of US$ 7 is required to cover the operating costs.

Table 3: Financial models cash flow

Model 1: Basic revitalization													
ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		178	178	268	317	752	745	717	687	657	628	601
Total production costs	US$		40	433	176	176	176	176	176	176	176	176	176
Incremental net income	US$		0	-393	-46	3	439	431	403	373	344	314	287
Return to family labour*	**21.5**												
NPV @ 0.1	**997**												
IRR	**43%**												
B/C ratio	**2.40**												
Model 2: Enhanced revitalization													
ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		178	178	268	583	1,104	1,613	1,718	1,643	1,569	1,494	1,427
Total production costs	US$		40	459	307	412	432	452	375	465	435	425	375
Incremental net income	US$		0	-419	-177	33	533	1,023	1,204	1,040	995	931	914
Return to family labour*	**78**												
NPV @ 0.1	**2,922**												
IRR	**61%**												
B/C ratio	**2.49**												
Model 3: Replanting													
ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$	0	0	0	50	583	1,104	1,613	2,968	2,838	2,708	2,577	2,460
Total production costs	US$	0	40	775	396	412	452	472	445	505	505	445	445
Incremental net income	US$	0	0	-735	-306	211	691	1,181	2,563	2,373	2,242	2,172	2,055
Return to family labour*	**55**												
NPV @ 0.1	**5,867**												
IRR	**62%**												
B/C ratio	**2.84**												
Model 4: Cocoa cooperative													
ITEMS	UNIT		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Total revenue	US$		1,250	5,250	15,703	41,034	78,863	118,125	161,875	169,375	169,375	169,375	169,375
Total costs	US$		0	117,225	39,000	18,000	18,000	112,500	38,000	18,000	18,000	18,000	112,500
Incremental net income	US$		0	-113,225	-24,547	21,784	59,613	4,375	122,625	150,125	150,125	150,125	55,625
NPV @ 0.1	**237,986**												
IRR	**34%**												
B/C ratio	**1.76**												

C. Project costs and indicators of the logical framework

8. The following table provides information on project costs and beneficiaries. The average cost per beneficiary is approximately US$ 2,409, of which US$ 888 under component A and US$ 929 under component B. The additional beneficiaries of Component B (improvement of roads) are approximately 2,400 households. The key logical framework indicators that are directly sourced from the logical framework are presented in Table 5.

Table 4: Project costs

Component	Cost IFAD, ASAP million USD	Beneficiaries	Cost US$/Beneficiary
A. Revitalization of cocoa plantations	7.1	8,000	888
B. Rehabilitation and maintenance of roads	9.7	10,400	929
C. Service provision for value chain development	5.4	11,000	495
D. Project Coordination, M&E	4.3	11,000	391
Total	**26.5**	**11,000**	**2,409**

9. The key logical framework indicators that are directly sourced from the logical framework are presented in Table 5.

Table 5: Logical framework indicators derived from the EFA

Outcome	Indicateur	Baseline	MTR	FINAL
Improved incomes and clm;ate change resilience of 8,000 smaalholder cocoa producers	Number of farmers who increased their income from cocoa	0	4,250	8,000
	Gross sales per farm	178	583	1,718
Increased quality and quantity of cocoa sold by smallholders	% of grade 1	0%	60%	90%
	Ha of cocoa rehabilitated	0	6,500	10,000
Improved access to markets	Km of roads rehabilitated	0	75	200
Improved service provision to cocoa smallholder farmers	Number of farmers selling their produce through coops	0	3,000	8,000
	Number of farmers receiving inputs from cooperatives	0	4,250	8,000

E. Economic Analysis

Main assumptions and shadow prices

10. An economic analysis has been carried out to assess the economic viability of the project as a whole from the perspective of the country's economy and of the general interest.

11. A cost-benefit analysis was carried out to assess the economic viability of the proposed project. The analysis was conducted over a 20-year period and in constant 2015 prices. Economic benefits considered in the analysis are: (i) incremental net economic benefits from production and marketing of cocoa and bananas; (ii) the incremental net economic benefits from the cocoa cooperatives that would be supported; (iii) the economic impact of rehabilitation of roads on other farmers (30% or 2,400 additional farmers in the same communities); (iv) environmental externalities; (v) maintenance of roads (3% per annum of initial investment cost; (vi) benefits from FFS have not been integrated as they overlap with those from the crop models; (vii) the economic cost of the project has been calculated using COSTAB; corrections have been made in order to avoid double counting (cost of revitalization, ..). Financial prices and costs and benefit streams derived from cocoa crop models have been transformed into economic values. Assumptions regarding shadow prices are presented in the table below.

Table 6: Main assumptions and shadow prices

Shadow prices	Factor
Tradable goods	0.90
Labour skilled	US$ 3.5
Labour unskilled	US$ 2.0
Pesticides	0.90
Fertilizer	0.90
Output conversion factor	1.10
Social discount rate	4.3%

Economic impact of road rehabilitation and maintenance

12. Road investments (Component B) will provide benefits to users in the form of (i) reduction in vehicle operating costs, (ii) travel time savings, (iii) increased traffic flow, (iv) reduced post-harvest losses, (v) increased cultivated land, and, (vi) broader socio-economic opportunities for the rural population (e.g. increased schools and health centers access). In areas where traffic is low or when traffic volume or count is unknown or not measurable as in the case of Nimba County, the vehicle operating costs (VOCS) and travel time costs (TTC) approaches cannot be used. Some IFAD and World Bank cases have shown that benefits from road improvements can be estimated using different parameters. The following parameters have been used: (i) the increased volume of transported agricultural products from farm-gate to markets by 25%; (ii) increased commerce along the road and, (v) increases in land areas under cultivation near the roads, by 5%. The additional economic impact of

road rehabilitation, which is not captured by the net incremental benefits at the level of the 8,000 cocoa smallholders who will participate in the revitalization schemes, is assumed to be 30% of this benefit (2,400).

Environmental externalities

13. One additional element considered in this analysis are quantified positive environmental externalities with the help of the Ex-Ante Carbon-balance Tool (EX-ACT), which is an appraisal system developed by FAO providing ex-ante estimates of the impact of agriculture and forestry development projects, programmes, and policies on the carbon-balance[54].

14. The economic analysis also takes into account quantified environmental externalities. Due to replanting of 16% of the land with additional, new cocoa trees the speed of biomass generation is higher[55]. The overall biomass reduction due to under brushing and adjust shading will be balanced by providing seeds and seedlings for additional banana, plantain and oil palm trees. Minor deforestation will be avoided when 8,000 farmers do not have to go out and look for firewood since enough wood is available after under brushing and de-shading. The model assumes an aggregated 1 ha of tropical rain forest will not be deforested in the course of project implementation. As illustrated in figure 1, Ex-ACT indicates the following impacts on greenhouse gas emissions and carbon stock changes:

Table 7: Results of EX-ACT analysis

Name of the project	Tree Crops Extensior	Climate	Tropical (Moist)					Duration (yr)	20	
Continent	Africa	Soil	LAC Soils					Total area (ha)	12001	
Component of the project	Gross fluxes Without	With	Balance	Share per GHG of the Balance Result per GHG CO_2 Biomass	Soil	Other	N_2O	CH_4	Results per year without	with	Balance
	All GHG in tCO_2eq Positive = source / negative = sink										
Land Use Changes											
Deforestation	754	0	-754	-727	-27		0	0	38	0	-38
Afforestation	0	0	0	0	0		0	0	0	0	0
Other	0	0	0	0	0		0	0	0	0	0
Agriculture											
Annual	0	0	0	0	0		0	0	0	0	0
Perennial	-168,000	-389,760	-221,760	-221,760	0		0	0	-8,400	-19,488	-11,088
Rice	0	0	0	0	0		0	0	0	0	0
Grassland & Livestocks											
Grassland	0	0	0	0	0		0	0	0	0	0
Livestock	0	0	0				0	0	0	0	0
Degradation	0	0	0	0	0		0	0	0	0	0
Inputs & Investments	0	0	0			0	0		0	0	0
Total	-167,246	-389,760	**-222,514**	-222,487	-27	0	0	0	-8,362	-19,488	-11,126
Per hectare	-14	-32	-19	-18.5	0.0	0.0	0.0	0.0			
Per hectare per year	-0.7	-1.6	-0.9	-0.9	0.0	0.0	0.0	0.0	-0.7	-1.6	-0.9

15. Both project activities preserve a carbon sink accounting for 222,514 tons of carbon dioxide (CO2) -equivalent throughout the 20 year analysis or 0.9 tons of CO2-equivalent per hectare per year. The social value of carbon or social value of the effort to reduce carbon emissions as per Guidance note to the World Bank Group staff of 14 July 2014 starts at US$30 in 2015 and increases to US$80 in real terms by 2050. Total quantified benefits over the period of 20 years are US$725. Other, non-quantified benefits could be that the wood from under brushing and adjust shading could be used for income-generating activities.

Aggregation of beneficiaries and phasing

16. The following table shows the total number of project beneficiaries, subdivided into activities and phased following the inclusion pattern envisaged by the Project and respected in the EFA and COSTAB.

[54] For more information see: http://www.fao.org/tc/exact/ex-act-home/en/
[55] Growth rate of 0.3 was used (1.8x0.16).

Table 8: Phasing of revitalization and replanting (ha)

		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
Basic revitalization	farmers	250	750	1,375	2,000	2,000	2,000	2,000	2,000	2,000
Enhanced rvitalization	farmers	750	2,250	4,125	6,000	6,000	6,000	6,000	6,000	6,000
Replanting	farmers	0	500	1,000	2,000	2,000	2,000	2,000	2,000	2,000
Total cocoa farmers	farmers	1,000	3,000	5,500	8,000	8,000	8,000	8,000	8,000	8,000
Total cocoa plantations	ha	1,000	3,500	6,500	10,000	10,000	10,000	10,000	10,000	10,000
Cocoa cooperatives	coops	8	8	8	8	8	8	8	8	8

Project economic cash flow

17. The Project economic cash flow represents the overall project aggregation. It includes the net incremental benefits of each financial model in economic terms, converted with shadow prices, and multiplied by the number of direct beneficiaries of each category.

Table 9: Project economic cash flow, benefits and costs for the first ten years

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Incremental net benefit components 1 an	-0.479	-0.390	0.805	5.565	9.013	12.497	11.344	10.844	10.296	9.947
Incremental impact roads (component 2)	0.000	-0.144	-0.117	0.241	1.670	2.704	3.749	3.403	3.253	3.089
Environmental impact	0.027	0.098	0.187	0.297	0.315	0.324	0.333	0.342	0.351	0.360
Total economic benefits	-0.452	-0.436	0.875	6.104	10.997	15.525	15.427	14.589	13.900	13.396
Economic cost project	-4.009	-5.889	-6.987	-7.639	-2.356	-1.541	-0.300	-0.300	-0.300	-0.300
Total net economic incremental benefit	-4.461	-6.325	-6.112	-1.535	8.641	13.985	15.127	14.289	13.600	13.096

ERR, NPV and sensitivity analysis

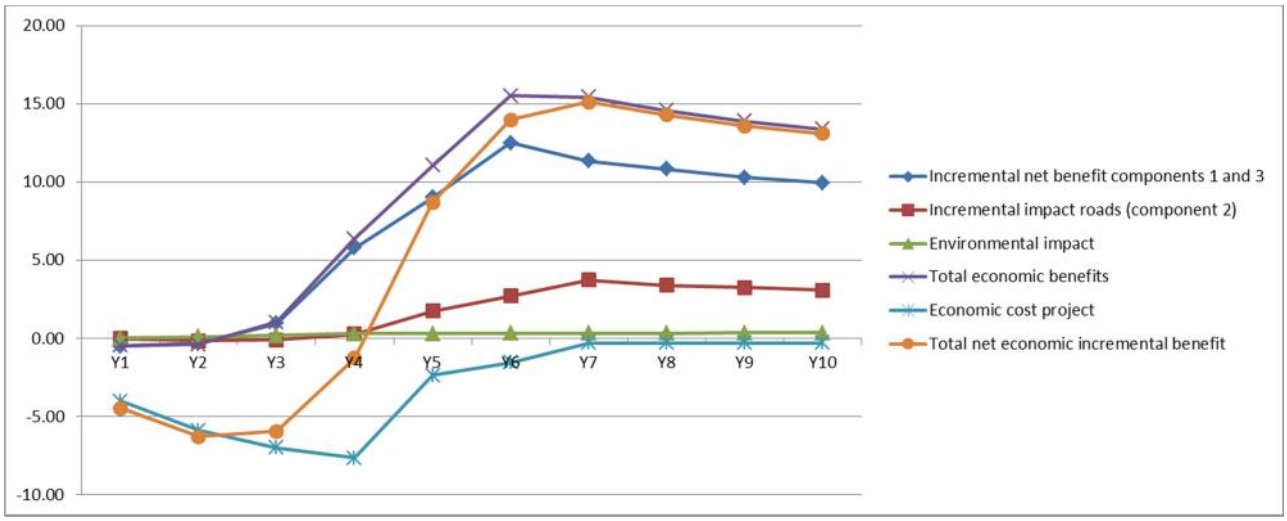
18. The ERR of 37.2% over 20 years is profitable from an economic stand point and generates a total of US$ 109.3 million in the same period. Starting from a very low level of production, project activities will lead to substantial results with basic management and adequate supply of inputs. While the analysis considers achievable yield increases, the biggest challenge will lie in the continuous farm maintenance and also supply of inputs to reach an enhanced production level. The sensitivity analysis indicates a solid resilience to increases in costs and reduction, as shown in the table below. The adoption rate and time lags of benefits are the most sensitive factors.

Table 10: Summary of economic analysis and sensitivity analysis

		ERR	NPV (mio US$)	Link with risk matrix
Base Scenario		37.2%	108.8	
Project benefits	-20%	31.0%	81.6	Combination of risks affecting output prices, yields and adoption rates
Project benefits	-10%	34.2%	95.2	
Adoption rate	-10%	28.7%	96.2	Extension sservice outreach is limited, low upteak of good practices,
Adoption rate	-20%	25.6%	79.7	
Project costs	10%	34.5%	106.1	Increase of price of service providers, road construction, fertilizer, etc..
Project costs	20%	32.1%	103.4	
1 year lag in benefits		29.9%	97.7	Low implementation capacity, risks affectingadoption rates
2 year lag in benefits		25.0%	87.0	

Graph: Project economic cash flow

19. The graph below depicts and compares over time project's net benefits and incremental costs alongside project cash flow.



Appendix 11: Draft project implementation manual

1. The approaches and manuals, developed under STCRSP, will be further improved and its implementation arrangements will be harmonized with those of TCEP. The TCEP will build on the existing expertise and human resources of the STCRSP.

2. The Project Implementation Manual (PIM) comprises three volumes:

- The Operations Manual, describing the implementation of field activities and implementation arrangements;
- The Financial and Administration Procedures Manual, describing all procedures pertaining to administration and personnel, financial, and asset management and procurement;
- The M&E Manual, describing the procedures to develop the M&E System based on RIMS and to implement it.

3. All three volumes of the current STCRSP PIM will be reviewed and up-dated by the IFAD PIU team before TCEP become effective.

Appendix 12: Compliance with IFAD policies

I. Compliance with IFAD Policies

IFAD policies	Compliance
Strategic Framework (SF) 2011-2015	TCEP is highly compliant with IFADs Strategic Framework 2011-2015. TCEP has a clear focus on enabling poor rural women and men to overcome poverty. TCEP is aligned to the 5 strategic objectives of the framework, especially: (i) a natural resource and economic asset base for poor rural women and men that is more resilient to climate change, environmental degradation and market transformation; (ii) access for poor rural women and men to services to reduce poverty, improve nutrition, raise incomes and build resilience in a changing environment; (iii) poor rural women and men and their organizations able to manage profitable, sustainable and resilient farm and non-farm enterprises or take advantage of decent work opportunities; (iv) poor rural women and men and their organizations are able to influence policies and institutions that affect their livelihoods.
Private sector development and partnership strategy	Compliant. The key areas of action in TCEP are: (i) formalization of value chain linkages; (ii) technical and management skills training; (iii) investment support; (iv) knowledge management.
Rural Enterprises Policy	Compliant. IFAD's longer term vision in Liberia is to support development of formalized agribusiness linkages for better income generation. In this respect, TCEP will facilitate access to financial and non-financial services and skills training. The approach will be demand-driven.
Rural Finance Policy	Compliant. Prefinancing of working capital of cooperatives would be ensured by the PSP..
Targeting Policy	Compliant. TCEP uses (i) targeting of pro-poor value chain; (ii) self-targeting; (iii) direct targeting; (iv) enabling factors to reach rural poor and empower them. TCEP will also support institutional strengthening of those actors who provide services to rural poor. A particular focus will be placed on investment support that enables disadvantaged groups, including women and youth, to integrate commercial cocoa value chains and improve their livelihoods.
IFAD gender policy	Compliant and innovative. Due cognizance will be given to women in cocoa value chains (see also: Appendix 2).
Climate change strategy	Focus on scaling up good practices – targeting the most vulnerable ecosystems and groups to climate risks and shocks. Focus on smallholder farmers.
ASAP	Focus on smallholder farmers, fully mainstreamed within the TCEP and directly responding to ASAP objectives and expected results.

II. Social, environmental and climate assessment note

The SECAP note is presented in Appendix 14.

Appendix 13: Contents of the Project Life File

Liberia Portfolio:

1. Liberia Country Strategic Opportunities Programme (COSOP) 2011-2014
2. PIM of the PMU

Policy documents of the Government of Liberia

1. Liberia Agriculture Sector Investment Program (LASIP) report – 2010.
2. National Cocoa Export Strategy 2014-2018

STCRSP Documents:

1. President Report, December 2011
2. Project Design Report, October 2011
3. STCRSP Supervision Mission Report, May 2014
4. STCRSP Supervision Mission Report, December 2013

TCEP OSC documents:

1. TCEP OSC Concept Note
2. TCEP OSC Issues Paper

TCEP QE documents:

1. Project Design Report and annexes
2. Minutes of previous CPMT
3. QE memo
4. Economic and Financial Analysis files
5. Link to the working papers

Appendix 14: SECAP Note

A. Principal agro-physical characteristics and conditions (social, environmental and climatic) of the intervention zone

Socio-cultural context

1. Liberia's land area is 96,320 sq km of which about half is classified as forest (42,000 sq km). As of July 2014, the population of Liberia was about 4 million with an annual growth rate of 2.5% (CIA, 2014). The median age is 17.9 years and the life expectancy at birth is 58 years. Liberia's economy is still recovering from civil war that lasted from 1989 to 2003. Liberia remains one of the world's poorest countries with a per capita GDP of only US$362 in 2009, slowly recovering from the collapse of the economy during the war years. According to Republic of Liberia (2010 p.vii), Liberia had a human development index of 0.442 in 2009, ranked 169 out of 182 countries in the world. 62% of women and 29% of men are illiterate. Unemployment is widespread; in 2008 only 295,354 persons in a labor force estimated to be 1 million had jobs, and agriculture and forestry accounted for 60% of that number. It is estimated that at least two-thirds of Liberians live on less than one US dollar per day. Approximately half of the population is either food insecure or highly vulnerable to food insecurity.

2. Liberia is number one in the world for health expenditure as a percentage of GDP (19.5%) (CIA, 2014), although many Liberians lack access to health care (UNDAF, 2013). Access to modern health services is estimated at 41% (Rep. of Liberia 2010 p.vii). The 2014 Ebola crisis highlights the vulnerability of the health sector.

3. With the collapse of the formal economy during the war, the share of agriculture and forestry of total GDP has risen to over 70%. Agriculture is the primary livelihood of over 60% of Liberia's population and has been essential for economic recovery after the civil war. Large-scale plantations grow rubber and palm oil, with rubber accounting for 90% of exports and substantial interest from international (including Asian) companies in oil palm development. In comparison, cocoa contributed a modest 5.1% to Liberia's agriculture and forestry exports in 2005, while the contribution of coffee exports was negligible (CAAS 2007, p.77). UNDAF (2013) estimate the number of households engaged in smallholder agriculture at 330,000. In 2008, rice and cassava, the two staple food crops of the country, contributed 22% and 23% to agricultural GDP, while tree crops (rubber, cocoa) accounted for 34% of agricultural GDP in the same year (CBL, 2009). Given the food insecurity in the country and the still fragile situation of the marketing chains for cash crops like cocoa, it is likely that these will have to compete with food crops for farmers' attention and farm space.

4. According to CAAS (2007), about 40,000 households in Liberia were engaged in the production of cocoa at that time, the country's second most important export crop after rubber. According to the 2012 agricultural survey, the number of households growing cocoa is still approximately the same with 38,350. Cocoa accounts for as much as 12.6 % of total employment in the agriculture sector (Rep. Liberia 2010, p.10). Most of those cocoa producers are in Lofa, Nimba and Bong counties (the "cocoa belt"), while most other counties host a small number of cocoa producers. Average cocoa farm size is 1-3 ha, in the same range as many cocoa farms in Ghana where small farm size is often seen as an obstacle to the adoption of more intensive and profitable practices. Already low average yields of 400 kg/ha experienced in the 1980s have further declined during the war, often to values as low as 100–200 kg/ha (Rep. Liberia 2010), or even below 100 kg/ha (ACDI-VOCA, pers. comm.). Compared to cocoa, Robusta coffee is much less significant as a smallholder crop in Liberia, while the two other coffee species, Arabica and Liberica, are insignificant.

5. According to the CAAS (2007) survey, most cocoa farmers work their own farm. Sharecropping is not common in Liberia, different from cocoa farmers in Côte d'Ivoire and Ghana that have received large migrant flows in the past. This may reduce certain forms of conflict over land that act as a disincentive to farm intensification in those countries. The same survey found that cocoa farm labor is not as dominated by old people as is often the case in Côte d'Ivoire and Ghana, with many young

people present on the farms. Whether the presence of children on farms indicates an unacceptable child labor problem requires project attention. Similar to Ghana and especially Côte d'Ivoire, tree crop production in Liberia is a relatively male dominated enterprise in terms of access to benefits, while women are traditionally tasked with tending food crops for household consumption and surplus sales. However, women are highly involved with cocoa production, particularly in production and processing, while men dominate at the marketing level.

6. The availability of credit is a severe constraint to farming activities in the cocoa sectors of Liberia. Credit is mostly provided by the trade, as is common in the cocoa sectors elsewhere in West Africa. There are indications that farmers often invest credit money not in their farms but on medication, food, school fees, or even in non-agriculture business such as gold mining, suggesting that 1) the access to finance is a general constraint in the region and 2) agriculture is not always seen as the highest priority to use available income for. Both situations are not specific to Liberia.

7. Cocoa farms use very few inputs such as fertilizer or pesticides. This implies that so far there are few health concerns related to the use of pesticides, although the use of fungicides, insecticides and possibly herbicides is likely to increase as farms get rehabilitated and intensified. Poor road conditions and market access have been identified as major constraints to rural development, especially in the more remote parts of the region.

Environment

8. Liberia is by far the country with the highest forest cover in the Upper Guinea hotspot of biodiversity (Figure 1). Despite the small size of the country, it is among the highest priorities for biodiversity conservation in West Africa. The country has a number of rare and endemic species. It has currently 16 protected areas including three in Bong and Nimba Counties, although these are small and only a very small percentage of the area of these counties is legally protected. Most protected areas and the larger ones are located in the more forested north and south of the country (Figure 1).

9. Among the principal environmental problems of the country are the risk of deforestation for logging and agriculture, and local deforestation and contamination problems related to the mining sector. Coastal erosion is also an important concern.

10. The predominance of slash-and-burn agriculture of food crops (rice, cassava) has the potential to cause deforestation and the wasting of forest resources. Liberia has generally infertile soils,which suggests that this type of agriculture will only be possible if it includes relatively long fallow periods. With increasing population pressure, the degradation of the more accessible soils and progressive expansion of slash-and-burn farming into forested areas is a likely scenario.

11. Liberia is also the target of international investments in the plantation tree crop sector, especially oil palm and rubber that could cause direct or indirect deforestation if no specific safeguards are in place.

12. International agreements are being developed to help the country protect its forest cover and biodiversity against the pressure of logging and land use change for agriculture, including the 2014 REDD+ agreement with Norway. These agreements respond to the difficult situation of an extremely poor country with a large number of unemployed people that strives to increase its economy and the livelihoods of its population while at the same time conserving its natural resources, and reflect the high priority that is afforded to forest and biodiversity conservation in Liberia by the international community.

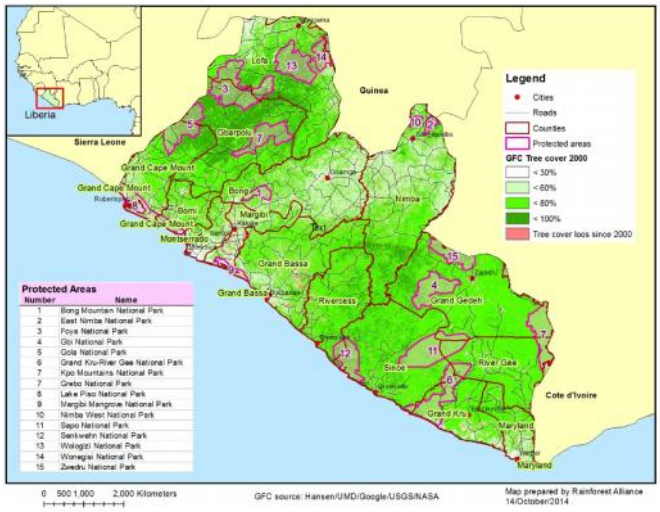


Figure 1: Forest cover and recent forest cover change of Liberia

Climate

13. Liberia's climate has a high year-to-year variability, like all of West Africa. Over the past decades, it has been characterized by a decrease in rainfall and an increase in temperature by 0.8ºC since the 1960s. Presumably because of this historic drying, which has been observed for the whole West Africa region and especially the Sahel and savanna zones, many people in Liberia feel that the dry season has become more severe (ACDI-VOCA, pers. comm.). It should however be noted that according to the available data, the regional drying trend has stopped in the 1990s. For the coming decades, internationally recognized climate models project on average no further decrease in rainfall and a shortening of the dry season in Liberia (and West Africa in general). It should be mentioned that rainfall projections for West Africa are fairly uncertain and that there is considerable variation in this regard among different, internationally recognized Global Circulation Models.

14. Over the next decades average and maximum temperatures during the dry season are projected to further increase, for example in northern Nimba county from currently 34.3ºC to 35.6ºC in the 2030s and 36.0ºC in the 2050s, approaching the maximum temperatures supported by Robusta coffee (36ºC according to FAO's EcoCrop database) and cocoa (38ºC according to EcoCrop), with possibly higher temperatures in unusually hot years. This suggests that maximum temperatures may increasingly become limiting for these shade-adapted crops. Increasing temperatures also imply an increase in plant water demand, which is projected to be largely compensated by the projected decrease in length of the dry season. However, the risk of drought in particularly dry years will remain, and the need for a substantial shade tree stratum to protect the tree crops from extreme temperatures will also increase total water demand. This implies that the selection of suitable soils with sufficient water holding capacity (i.e. not shallow or sandy) for cocoa farms will remain important.

15. For cocoa (and to a lesser extent coffee), the more humid conditions are expected to result in an increasing pressure from fungal diseases (especially black pod of cocoa) that may increase the need for fungicide applications, although it should be mentioned that black pod pressure is already generally high in West Africa and cocoa difficult to grow there without fungicides. An increased percentage of the cocoa yield harvested during the rainy season also implies in a greater need for artificial drying (solar driers) and adequate storage and road infrastructure to produce high-quality products and bring them to market.

Principal problem areas identified for the project

- Increasing **maximum temperatures** approaching the limits of tolerance of cocoa in the northern parts of the intervention zone over the next decades;

- Overall decline of average climatic suitability and risk of years with above-average temperatures and below-average dry-season rainfall imply an **increased risk of crop failure;**
- Increased need for **artificial drying, storage and transport** for produce harvested during the rainy season;
- Possibly increase in disease and pest pressure which, in concert with the overall intensification of tree crop farms, is expected to result in an **increase in pesticide use;**
- With increased profitability of tree crop sector and improved road access to remote communities, expansion of cocoa farms into old-growth forest areas or tree crops displacing lower-value crops such as food crops into forest areas and causing indirect **deforestation;**
- Risk of the use of **child labor** on tree crop farms as demand for rural labor increases while many young people look for work in cities, commercial plantations or the mining sector;
- Risk of **exclusion of women** from tree crop sector as it becomes more profitable, with negative repercussions on food security of households.
- If successful in increasing farmers' income from tree crop cultivation, the project sites could attract national and international **migrants** in search for land, and this could lead to land conflicts and encroachment into forest areas, as has happened in neighboring countries.

B. Potential social and environmental impacts of the project and climate change vulnerabilities

Potential social impacts

16. The project targets smallholder farmers in Liberia's Nimba and Bong counties. The target population is poor and their current farming practices are of low profitability and provide little income. By increasing the profitability of the tree crop farms and emphasizing the diversification of tree crops with food crops, the project has the potential to improve the economic situation of the participant farmers and improve their food security, both through own production of food and through increased income.

17. Tree crop farming is male-dominated in terms of access to benefits, while women are traditionally tasked with tending food crops for household consumption and surplus sales. However, women are highly involved with cocoa production, particularly in production and processing, while men dominate at the marketing level. The project will include female-led tree crop farms and will emphasize the integration of food crops, which are typically managed by women. It will also include young people including for specialized tasks such as pesticide spraying and grafting. Any risk of emerging child labor problems as a result of labor shortage will be carefully monitored.

18. The project will focus on existing agricultural areas, specifically the rehabilitation of abandoned tree crop farms. It will not support the expansion of farm land (although it may support the expansion of the tree crop area on existing farms) and poses therefore no risk of encroaching on culturally important sites. The rehabilitation of roads and the building of infrastructure such as warehouses will be coordinated with the local communities and take the existence of any culturally important sites into account. Any project investments or activities in community land will be based on SECAP's principle of *Free Prior and Informed Consent* (**FPIC**).

19. The project will take specific care that the rehabilitation and improvement of farms does not result in the displacement of their previous users, specifically in the case where farms are managed not by their owners but by sharecroppers, or in the case of farms managed by women. In such cases, the project will ensure that the previous users benefit from the improvements resulting from the project investments.

20. The project will be careful that the increase in labor demand resulting from the farm rehabilitation and intensification does not result in the employment of children in violation of national

and international laws and agreements. It will also be careful that farm intensification does not result in health hazards for farm owners, their families or workers, including through the use of pesticides[56].

Potential environmental impacts

21. The increased profitability of tree crop agriculture that is likely to result from the project intervention could result in tree crop farms expanding into forest land (**direct deforestation**), or tree crop farms being established on land currently used for less valuable crops (including food crops) and displacing these into forest land (**indirect deforestation**). The project has built safeguards against these risks into its design in the form of agreements with communities to jointly with the project map and monitor land use and forest cover and to prevent the encroachment of agriculture into old-growth forest and protected areas.

22. The rehabilitation of old and partly abandoned cocoa farms could also lead to excessive felling of old farm trees and emissions of carbon stocks from the farming landscape, unless safeguards are in place to conserve old farm trees. Old and large trees contain a disproportionally large percentage of carbon in farming landscapes. The project addresses this risk by emphasizing rehabilitation methods that conserve to the extent possible old and large trees, including because of their role in buffering farms and their landscape against future climate extremes, and conserving 30-40% of shade cover preferably from old and large trees on the farms, removing preferably small trees during the shade reduction interventions that are part of the farm rehabilitation.

23. The project is likely to result in an increase in the use of mineral fertilizers and pesticides on the beneficiary farms. It will ensure that fertilizers are applied in quantities that are not so high as to result in any concerns of soil or water contamination. Best practices in fertilizer application, such as safe storage of fertilizers and not applying fertilizer close to water courses, will be implemented. The project will also ensure that the application of pesticides does not result in environmental or health concerns. For this reason, the project has opted for setting up specialized spraying gangs or specialists within coops and farmer groups that receive specific training and equipment for the safe handling of pesticides and their containers, rather than training each individual farmer in the use of pesticides. The project will put special emphasis on raising awareness among coops and farmers for the economic, environmental and health advantages of the application of pesticides through these spraying gangs or specialists. These include the use of specialized equipment (motorized sprayers) that save time and include the effectiveness of applications but are not affordable to individual farmers. The use of spraying gangs or specialists also eliminates the need for pesticides to be stored in individual households.

24. The improvement of rural roads and warehouses will have small, local environmental impacts including through the extraction of building materials. The rehabilitation of extraction sites by the contractors will be included as a clause in the respective contracts.

Climate risks

25. The northeastern part of Liberia, especially northern Nimba and Lofa counties, are projected to become affected by increasing maximum temperatures during the dry season, reaching values close to the limits of tolerance of coffee and cocoa during the coming decades. The temperature increase is projected to result in an overall decrease of climatic suitability of these areas for growing cocoa, which may imply an increased risk of crop failure, especially in particularly hot and dry years.

26. The projected trend of a progressive shortening of the dry season, while in principle positive for the crops, could result in increased fungal disease pressures, especially black pod of cocoa, and thus an increased need for the application of fungicides. It also implies that an increased percentage of the

[56] The project will apply in permanence the appropriate methods of pesticide management of the International Code for the Distribution and Use of Pesticides of the Food and Agriculture Organization of the United Nations (FAO) and its updates, and it will ensure that the pesticides provided within the frame of the project do not include any pesticide classified as extremely dangerous (class Ia) or very dangerous (class Ib) according to *The WHO Recommended Classification of Pesticides by Hazard* and its updates.

cocoa yield will be harvested and will have to be dried, stored and transported during the rainy season than is currently the case.

Adaptation to climate change

27. The identified climate risks will reduce the success of the tree crop rehabilitation program and increase the risk of yield and commercial failure if no climate change adaptation measures are taken.

28. The following activities will in this context be supported by the ASAP funds:

- Setting up of a germplasm station in Nimba County for the collection, screening, and multiplication of planting material (bud wood and possibly hybrid seeds of cocoa and seeds of coffee) of varieties adapted to the hotter, drier conditions of the northern parts of the cocoa production zone which are markedly different from those of the wetter areas where previously seed gardens had been located in the country.
- Supply of suitable planting materials of fruit and food crops (e.g. plantains, oil palm) for farm diversification, to be produced in decentralized nurseries.
- A capacity building program to ensure the mainstreaming of climate change considerations into agronomic practices of the project, including the use of shade as a buffer against climate extremes, the diversification of farms to reduce the risk of crop failure, and the progressive adaptation of tree crop germplasm to changing climatic conditions.
- Participatory land use planning and monitoring in the participating communities to prevent tree crop rehabilitation from directly or indirectly causing deforestation.
- The increased use of solar driers to ensure high quality of products despite decreasing length of the dry season making sun drying more precarious.
- The setting up and training of specialized pesticide spraying gangs to attend to the increased need for fungicide and other pesticide applications as farms are intensified and the shorter dry season may lead to increased disease pressures.

29. By reducing the impact of climate extremes on tree crops and diversifying farming systems, the component will directly reduce climate-related risks to the project beneficiaries and the overall success of the project. By building safeguards against tree crop driven deforestation into the project design, the risk of environmental impacts related to deforestation in the target communities will also be reduced or eliminated.

C. Environmental and social risk category

Anticipated negativ environmental impact	***Proposed mitigation measures***
Increased profitability of tree crops directly or indirectly causing deforestation	The project interventions are restricted to existing farm land and will not support the establishment of new farms; forest conservation agreements and participatory land use monitoring in the communities benefiting from the project will control direct and indirect deforestation risks
Farm rehabilitation and de-shading leading to reduction of carbon storage and biodiversity, and deterioration of microclimatic conditions in farming landscape	The project will encourage retention of 30-40% shade on farms with preference given to retention of existing, large trees, including as a buffer against climate change impacts
Increased use of pesticides and fertilizers causing soil and water contamination as well as health risks	Fertilizer application promoted by the project will be in doses too low to cause environmental harm and will follow good agricultural practices; pesticides will be applied through specially set up, trained and equipped spraying gangs or specialists thereby reducing environmental and health risks
Rehabilitation of roads and construction of warehouses can cause local environmental impacts, especially where building materials are extracted	Inclusion in contracts that extraction sites need to be authorized by the competent government entities and to be restored at the end of the contract
Anticipated negative social impacts	***Proposed mitigation measures***

Since cocoa are typically managed by men, the project focus on these cash crops could lead to exclusion and increased marginalization of women and young people	Include tree crop farms led by women and young farmers in the project to the extent possible; include women and young farmers possessing land but not yet tree crops to be included in the project to establish tree crops; focus on diversification of tree crop farms with fruit and food crops that are typically managed by women to strengthen their role in the household; involve young people in special tasks such as pesticide spraying gangs
Increased profitability of rehabilitated cocoa farms could lead to the displacement of sharecroppers from these farms	When negotiating the inclusion of farms in the project, include safeguards guaranteeing that sharecroppers benefit adequately from the project investments
Increased labor demand on rehabilitated cocoa farms could result in the inappropriate use of child labor	Ensure that farms supported by the project have sufficient adult labor; sensitize communities and local government to child labor issues; monitor the use of child labor in participating farms and communities and respond immediately if any cases of child labor use are observed or reported
Increased profitability of tree crop sector could attract national and international migrants and lead to conflicts over land	Sensitize local government about the issue and ensure that policies are in place and being implemented

30. In view of the targeting of existing farms, the safeguards against indirect deforestation, the measures against environmental risks of the application of agrochemicals, and the careful monitoring of negative social impacts, it is proposed to classify the project as posing **moderate socio-environmental risks at this design state, category B**.

Environmental externalities

31. One additional element considered in this analysis are quantified positive environmental externalities with the help of the Ex-Ante Carbon-balance Tool (EX-ACT), which is an appraisal system developed by FAO providing ex-ante estimates of the impact of agriculture and forestry development projects, programmes, and policies on the carbon-balance[57].

32. The economic analysis also takes into account quantified environmental externalities. Due to replanting of 16% of the land with additional, new cocoa trees the speed of biomass generation is higher[58]. The overall biomass reduction due to under brushing and adjust shading will be balanced by providing seeds and seedlings for additional banana, plantain and oil palm trees. Minor deforestation will be avoided when 8,000 farmers do not have to go out and look for firewood since enough wood is available after under brushing and de-shading. The model assumes an aggregated 1 ha of tropical rain forest will not be deforested in the course of project implementation[59]. As illustrated in figure 1, Ex-ACT indicates the following impacts on greenhouse gas emissions and carbon stock changes:

[57] For more information see: http://www.fao.org/tc/exact/ex-act-home/en/
[58] Growth rate of 0.3 was used (1.8x0.16).
[59] During appraisal this assumption could be expanded upon because “what will determine the carbon balance of this project is how many big trees get cut down by the chainsaw gangs. These trees contain almost the entire carbon in the farm.”

Table: Results of EX-ACT analysis

Name of the project	Tree Crops Extensior	Climate	Tropical (Moist)					Duration (yr)	20	
Continent	Africa	Soil	LAC Soils					Total area (ha)	12001	
Component of the project	**Gross fluxes**			**Share per GHG of the Balance**				**Results per year**		
	Without	**With**	**Balance**	**Result per GHG**				**without**	**with**	**Balance**
	All GHG in tCO_2eq			**CO_2**			**N_2O**	**CH_4**			
	Positive = source / negative = sink			**Biomass**	**Soil**	**Other**					
Land Use Changes											
Deforestation	754	0	-754	-727	-27		0	0	38	0	-38
Afforestation	0	0	0	0	0		0	0	0	0	0
Other	0	0	0	0	0		0	0	0	0	0
Agriculture											
Annual	0	0	0	0	0		0	0	0	0	0
Perennial	-168,000	-389,760	-221,760	-221,760	0		0	0	-8,400	-19,488	-11,088
Rice	0	0	0	0	0		0	0	0	0	0
Grassland & Livestocks											
Grassland	0	0	0	0	0		0	0	0	0	0
Livestock	0	0	0				0	0	0	0	0
Degradation	0	0	0	0	0		0	0	0	0	0
Inputs & Investments	0	0	0			0	0		0	0	0
Total	-167,246	-389,760	**-222,514**	-222,487	-27	0	0	0	-8,362	-19,488	-11,126
Per hectare	-14	-32	-19	-18.5	0.0	0.0	0.0	0.0			
Per hectare per year	-0.7	-1.6	-0.9	-0.9	0.0	0.0	0.0	0.0	-0.7	-1.6	-0.9

33. Both project activities preserve a carbon sink accounting for 222,514 tons of carbon dioxide (CO2) -equivalent throughout the 20 year analysis or 0.9 tons of CO2-equivalent per hectare per year. The social value of carbon or social value of the effort to reduce carbon emissions as per Guidance note to the World Bank Group staff of 14 July 2014 starts at US$30 in 2015 and increases to US$80 in real terms by 2050. Total quantified benefits over the period of 20 years are US$725. Other, non-quantified benefits could be that the wood from under brushing and adjust shading could be used for income-generating activities.

D. Classification in terms of climate risks

34. The following elements are key for the climate risk classification:

- The impact of climate change on the target zone, and especially its northern parts, will be moderately negative at a 2030 horizon, with increasing maximum temperatures that are however not yet projected to reach the physiological limits of cocoa;
- The projected trend of progressive shortening of the dry season is expected to lead to increased disease pressure and an increased need for artificial drying (solar driers);
- The overall deterioration of climatic suitability of the area for cocoa may imply an increased risk of crop failure that will be managed by increased diversification of the tree crop farms, including with food crops.

35. Safeguards against these climate vulnerabilities are built into the project through the components supported by ASAP, notably the establishment of a germplasm station for selecting and multiplying planting material specifically adapted to the conditions of the northern part of the cocoa growing zone, the promotion of farm practices that buffer the crops against climate extremes and reduce the risk of crop failure, the formation of spraying gangs, and the construction of solar driers. However, for certain of these elements it is not currently known how well they will be adopted by the farmers (e.g. shade practices, considering that across the border in Côte d'Ivoire low-shade practices are in use). Therefore, a preliminary classification of a **moderate climate risk** is proposed at this stage.

E. Recommended elements for the conception and implementation of the project

Recommended actions

36. Cofunding through ASAP allows to reduce the expected impacts of climate change on the beneficiaries and the economic impact of the project. The ASAP actions will specifically allow to:

- Set up a germplasm station in Nimba County for the collection, screening, and multiplication of planting material of cocoa varieties adapted to the hotter, drier conditions of the northern parts of the cocoa production zone;
- Supply suitable planting materials for fruit and food crops for farm diversification and shade;
- Implement a capacity building program to ensure the mainstreaming of climate change considerations into agronomic practices of the project, including the conservation of shade from large trees as a buffer against climate extremes, the diversification of farms to reduce the risk of crop failure, and the progressive adaptation of tree crop germplasm to changing climatic conditions;
- Implement participatory land use planning and monitoring in the participating communities to prevent tree crop rehabilitation from directly or indirectly causing deforestation;
- Increase the availability of solar driers to ensure high quality of products despite decreasing length of the dry season making sun drying more precarious;
- Set up and train specialized pesticide spraying gangs to attend to the increased need for fungicide and other pesticide applications as farms are intensified and the shorter dry season may lead to increased disease pressures.

37. At the occasion of the design mission, risks of negative social impacts including the marginalization of women and young people, use of child labor, displacement of sharecroppers, and increased land conflicts through and increased flow of migrants searching for farm land need to be assessed and effective safeguards be designed.

Multiple benefits approach

38. Several design elements of the project have multiple benefits that should be taken into account during the project design:

- The increased shading of tree crops to protect them from expected climate extremes will also allow to diversify the farms with useful trees including food crops (plantains, oil palm), thereby increasing food security and diversifying income, while increasing involvement of women.
- The participatory land use planning and monitoring as a safeguard against direct or indirect deforestation is also an excellent tool to support the project's M&E strategy.
- The formation of spraying gangs is not only a good approach to reduce the environmental and health risks of inappropriate pesticide use by a large number of individual farmers, but also provides opportunities to create more qualified and better paid jobs for young people.
- The emphasis on shaded practices and the avoidance of deforestation of the project reduces the carbon footprint of the commodities produced and creates synergies with the country's REDD+ strategy.

Incentives for adoption

39. Several elements of the project lend themselves for cost-sharing with the beneficiaries. Notably high-quality planting material could initially be distributed for free until its benefits are demonstrated, but could then be sold at affordable prices. This would also incentivize private service providers and NGOs to enter the market for improved plant materials and related services (e.g. grafting). With ASAP funding, the project intends to provide up to 1.2 million improved cocoa seeds for free, as well as 600,000 plantain or banana seedlings and 120,000 hybrid oil palm seeds.

40. Similarly, spraying gangs could initially be paid by the project but the costs increasingly be shifted to the coops and individual farmers, thereby also providing an economic incentive to avoid unnecessary applications.

41. The project intends to provide large solar driers to each cooperative and up to 1000 small solar driers for use by small farmer groups for free from ASAP funds. Additional solar driers could in a later phase of the project partly be funded through micro-loans to be repaid by the beneficiaries or the trade as their income from higher-quality cocoa increases.

Participatory process

42. The selection of the farms and roads to be rehabilitated will be made in full participation with the communities and other stakeholders (coops, local government) of the zone, following always the principle of FPIC. At the beginning of the engagement with a community, an agreement will be made about the participatory mapping and monitoring of the community land with the objective of avoiding direct or indirect deforestation. The zoning of the land into (active or abandoned) farm land and forest land will then be made together with the communities. Communities will also play a key role in the monitoring of land use activities of their members and thus in the avoidance of deforestation.

43. The project will not oblige the participating farmers to adopt fixed technology packages but leave flexibility for the choice of main (cocoa, coffee) and diversification crops, shade trees, the use of technologies such as grafting etc. Farmer training will follow the principle of the farmer field school, emphasizing demonstration and discussion in the field rather than the communication of pre-defined technologies in the class room.

F. Analysis of alternatives

44. The principal alternative to the use of climate-resilient tree crop farming practices (e.g. shade use) would be the progressive shifting of the cocoa production zone of Liberia into the wetter and cooler coastal climates, replacing cocoa in Nimba, Lofa and (later) Bong counties progressively with more heat and drought resistant crops. It is possible that this crop change will occur at some point on the farmers' own decision, but it is not possible to predict when and, indeed, whether this change will be necessary, especially if the selection and breeding of tree crop germplasm takes the changing climatic conditions into account. In contrast, it is advisable to consider a progressive, controlled enlargement (rather than shift) of the cocoa production zone into the wetter parts of the country, where they will however have to compete with crops such as oil palm and rubber for space and farmer time.

45. An alternative to the medium input system promoted by the project with use of moderate quantities of mineral fertilizers and the use of pesticides when needed would be the promotion of organic practices. The production of organic cocoa is however difficult in West Africa because of the high pest and disease pressure and, specifically in Liberia, the low fertility of the soils. Liberia is therefore at a comparative disadvantage compared to leading producers of organic cocoa on the global market, such as the Dominican Republic (low pest and disease pressure) and São Tomé (fertile volcanic soils). The pursuit of organic practices could also incentivize the farmers to use low-shade practices to reduce the pressure from black pod of cocoa, but this would counteract the recommended climate change adaptation measures, specifically the use of shade to protect the trees from increasing maximum temperatures.

G. Institutional analysis

Institutional framework

46. The activities planned for the project include mitigation actions for several identified risks (climatic, environmental, social). Responsibility for mitigating climatic and environmental risks will be largely with the project technicians funded by ASAP (see Capacity Building below). These technicians will ensure that project activities are carried out in such a way that they reduce future climate and environmental risks (e.g. use of high-shade practices and diversification in cocoa farms). They will however be fully embedded within the general project staff and interact constantly with other project technicians, including those in charge of farm rehabilitation and infrastructure. For the social risks identified above, mitigation measures have been built into the project design and responsibility for monitoring and mitigating these risks will be with all project staff.

47. A key component of the climate change adaptation strategy of the project is the setting up of a germplasm station in Nimba county, at the most climate change affected end of the Liberian cocoa belt. The design, management and roles of this seed station within an overall tree crop strategy will be carefully coordinated with CARI and the Ministry of Agriculture, to ensure that these can take this

station over during or at the end of the project. Appropriate agreements will need to be negotiated between the project and these government institutions before or early in the project.

48. The participatory land use mapping and deforestation monitoring component will be contracted out to an NGO with strong environmental (in addition to agricultural) profile. This is preferable to its implementation by one of the institutions directly involved in the other project components because it ensures a certain independence of this component and thus of the assessment of overall project impact on trends in land use and forest conservation.

49. No need for further socio-environmental studies or socio-environmental management plans has been identified.

Capacity building

50. Capacity building for the mainstreaming of climate change adaptation into the practices in cocoa farming and farm rehabilitation is one of the main components of the project. The project will hire two specialized technicians with ASAP funds. One of these will be responsible for mainstreaming climate change adaptation into the technical procedures and guidelines of the project and to provide training to project staff and the target farmer groups of the project. The other one will provide training to farmers and other interested stakeholders (e.g. coop technicians) in tree improvement through grafting, the selection of improved tree germplasm, and farm diversification. The project will also specifically train spraying gangs or specialists in the safe use of pesticides. Furthermore, the project intends to support two workshops (at the beginning and the end of the project) about climate change adaptation in tree crop production.

Additional finance

51. The climate change adaptation activities are supported by the ASAP fund. They are completely integrated into the activities of the TCEP project. The ASAP funds for this project are USD 4.5 million.

H. Monitoring and evaluation

52. The indicators related to adaptation to climate change that are required by the ASAP fund have been included in the logical framework of the project. The activities related to environment and climate will also be the object of mid-term and final project evaluation missions.

53. During these missions, particular attention will be given to the following indicators:

- availability of suitable planting material and its adoption by farmers
- adoption of recommended shade and diversification practices by the farmers
- adequate and safe treatment of pesticides
- evidence for direct or indirect deforestation

54. The project will develop a participatory land use planning and monitoring component through which it will engage with the target communities in agreements of zero-deforestation and non-encroachment of agriculture into old-growth forest. On the basis of these agreements, the project will map the boundaries of old-growth forest (continuous or patches) within the community land in collaboration with the communities, and will then monitor the compliance with the agreement. This activity will help to ensure that the tree crop rehabilitation and profitability increase does not provoke direct or indirect deforestation and may provide a basis and methodology for a country-wide "zero-deforestation cocoa" policy that may strengthen the position of Liberia’s tree crop products on the market. The GIS developed for the deforestation monitoring can also be used to store and represent all other project activities, including farm rehabilitation, road improvement, location of coops etc. so that there will be strong synergies with the M&E of the project.

I. Budgetary resources and time plan

55. If the socio-environmental category is maintained at level B, any supplementary studies that could be required by national laws should be supported by government counterpart funding.

J. Consultations with the beneficiaries, civil society and public at large

56. The list of stakeholders that has been met by the design mission is in the annex of the design document. Some meetings with the final beneficiaries of the project (farmers) as well as traders have been held during the 2nd design mission which helped to refine the project approach. The public at large has not been consulted because it is not expected that the project will have an impact at this general level.

K. References

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Annex 1.2
SECAP Guiding Questions for Climate Risk Screening

Question	Yes	No	Additional Explanation of 'Yes' response
Is the target group of the project dependent on climate-sensitive natural resources (such as drought-prone crops, rainwater-fed agricultural plots, migratory fishstocks)?	X		The target group is dependent on rain-fed farming and specifically tree crops that are sensitive to extreme temperatures and drought.
Has the project area been subject to extreme weather events in the past, such as flooding, drought, tropical storms, or heat waves?	(x)		It is likely that heat waves have occurred in northern Liberia especially in the 1980s but there are no records.
Could changes in temperature, rainfall, or extreme weather affect the project impact, sustainability or cost over its lifetime?	X		Increasing maximum temperatures can influence the performance of the tree crop systems especially in extreme years unless buffered by appropriate shade practices.
Will climate variability likely affect agricultural productivity within the project (crops/ livestock/fisheries) or incidence of pests and diseases?	X		The projected shortening of the dry season is likely to lead to increased disease pressure and increased need for artificial drying.
Would weather-related risks or climatic extremes adversely impact upon key stages of identified value chains in the project (from production to markets)?	X		The drying, storage and transport of the products to market could suffer from the reduced length of the dry season unless the corresponding infrastructure is improved.
Does the project have potential to integrate climate resilience measures without extensive additional costs (such as applying improved building codes; expanding capacity building programmes; or including climate risk issues in policy processes)	X		The proposed adaptation measures are generally low-cost and build synergies with other benefits, such as between shading of tree crops and farm diversification.
Would the project benefit from a more detailed climate risk and vulnerability analysis to identify the most vulnerable rural population, improve targeting and identify additional complementary investment actions to manage climate risks?		X	The project has already at its disposal a detailed climate change vulnerability assessment carried out by CIAT.