

Republic of Ghana

**Ghana Agricultural Sector Investment Programme
(GASIP)**

Design report

Main report and appendices

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Currency Equivalents

Currency Unit	=	Ghana Cedis (GHS)
US\$1.0	=	2.0 GHS

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

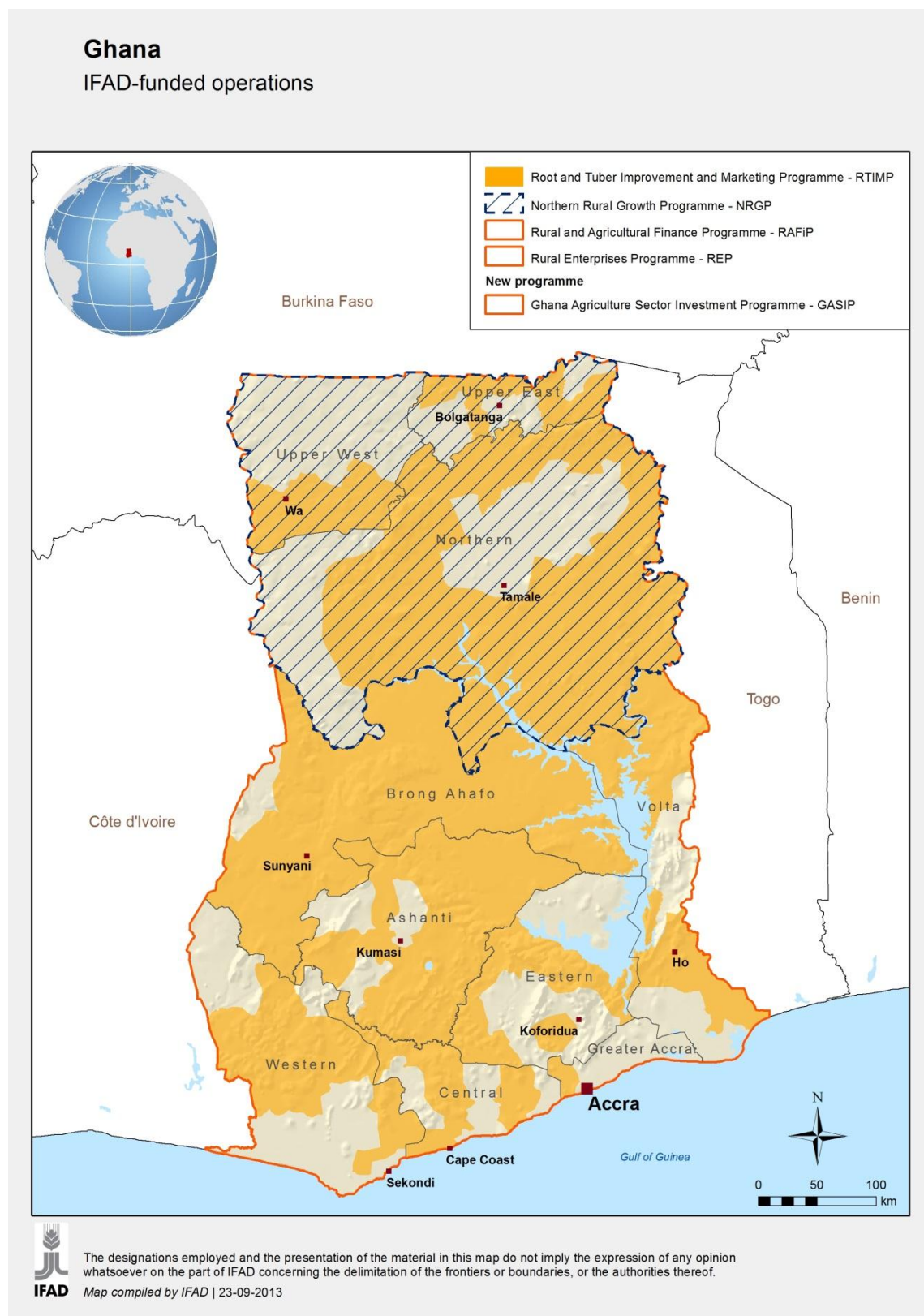
Abbreviations and Acronyms

ACP	Agreement at Completion Point
ADVANCE	Ghana Agricultural Development and Value Chain Enhancement Program
AfDB	African Development Bank
ARB Apex Bank	Association of Rural and Community Banks
ASAP	Adaptation for Smallholder Agriculture Programme
ASWG	Agricultural Sector Working Group
AWPB	Annual Work Plan and Budget
BAC	Business Advisory Centre
B/C	Benefit / Cost
BOG	Bank of Ghana
CAADP	Comprehensive Africa Agriculture Development Programme
CAGD	Controller and Accountant General's Department
CBRDP	Community Based Rural Development Project
CERSGIS	Centre for Remote Sensing and Geographic Information Services
CCS	Cashless Credit Scheme
CDKN	Climate and Development Knowledge Network
CIDA	Canadian International Development Agency
COSOP	Country strategic opportunities programme
CPE	Country Program Evaluation
CPI	Corruption Perception Index
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organisation
DA	District Assembly
DADU	District Agricultural Development Unit
DFR	Department for Feeder Roads
DOC	Department of Cooperatives
DPs	Development Partner
DSF	Debt Sustainability Framework
DVCC	District Value Chain Committee
ERR	Economic Rate of Return
EOI	Expression of Interest
EPA	Environmental Protection Agency
ERB	Enterprise Record Book
ESMP	Environmental and Social Management Plan
ESRN	Environmental and Social Review Note
ESSM	Environmental and Social Safeguard Management
FAM	Finance & Administration Manual
FAO	Food and Agriculture Organisation
FASDEP II	Food and Agriculture Sector Development Policy
FBB	Farmer's Business Book
FBO	Farmer Based Organization
FFF	Farmer Field Forum
FIRR	Financial Internal Rate of Return
FM	Financial Management
GALS	Gender Action Learning System
GAP	Gender Action Plan
GAS	Ghana Audit Service
GDP	Gross Domestic Product
GASIP	Ghana Agricultural Sector Investment Programme

GEF	Global Environment Facility
GHAMFIN	Ghana Microfinance Institution's Network
GHS	Ghana Health Service
GIDA	Ghana Irrigation Development Agency
GIFMIS	Ghana Integrated Financial Management Information System
GIS	Geo-referenced Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
G-JAS	Ghana Joint Assistance Strategy
GLSS	Ghana Living Standards Survey
GMET	Ghana Meteorological Agency
GOG	Government of Ghana
GPC	Good Practice Centre
GRATIS	Ghana Regional Appropriate Technology Industrial Service
GSA	Ghana Standards Authority
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Service
ICB	International Competitive Bidding
ICO	IFAD Country Office
IFR	Interim Financial Report
IQC	Indefinite Quantity Contract
IRR	Internal Rate of Return
IRM	Inter-cycle Review Mission
JICA	Japan International Cooperation Agency
JSR	Joint Sector Review
KM	Knowledge Management
LACOSREP	Land Conservation and Smallholder Rehabilitation Project
LBA	Local Business Association
LTB	Letter to the Borrower
MMDAs	Metropolitan, Municipal and District Assembly
MDA	Ministries, Departments and Agencies
MDBS	Multi-Donor Budget Support
MDG	Millennium Development Goal
MEF	Micro-enterprise Fund
METASIP	Medium Term Agriculture Sector Investment Plan
M&E	Monitoring & Evaluation
MFI	Microfinance Institution
MG	Matching Grant
MICS	Multiple Indicator Cluster Survey
MLGRD	Ministry for Local Government and Rural Development
MOAP	Market Oriented Agriculture Development Programme
MOFA	Ministry of Food and Agriculture
MOFAD	Ministry of Fisheries and Aquaculture Development
MOFEP	Ministry of Finance and Economic Planning
MOTI	Ministry of Trade and Industry
MOU	Memorandum of Understanding
MTR	Mid-term Review
NBSSI	National Board of Small-Scale Industries
NCB	National Competitive Bidding
NDPC	National Development Planning Commission
NIB	National Investment Bank
NRGP	Northern Rural Growth Programme
NORPREP	Northern Region Poverty Reduction Programme
NPV	Net Present Value

NSPC	National Programme Steering Committee
NYEP	National Youth Employment Programme
PAF	Performance Assessment Framework
PBAS	Performance Based Allocation System
PCU	Programme Coordination Unit
PDO	Programme Development Objective
PDR	Programme Design Report
PEF	Private Enterprise Foundation
PFI	Participating Financial Institution
PFM	Public financial management
PIM	Programme Implementation Manual
PPA	Public Procurement Authority
PPMED	Policy, Planning, Monitoring and Evaluation Division
PPP	Public Private Partnership
PY	Programme Year
RADU	Regional Agriculture Development Unit
RCB	Rural and Community Bank
RAFIP	Rural & Agricultural Finance Programme
RELC	Research and Extension Linkage Committee
REP	Rural Enterprise Programme
RIMS	Results and Impact Management System
RTF	Rural Technology Facility
RTIMP	Roots & Tuber Improvement and Marketing Programme
SADA	Savannah Accelerated Development Authority
SAKSS	Strategy Analysis and Knowledge Support System
SAMCERT	Strengthening Smallholders' Access to Markets for Certified Sustainable Products
SIC	Social Insurance Company
SME	Small and Medium Enterprise
SOE	Statement of Expenditure
SPSD	Support to Private Sector Development
SSNIY	Social Security and National Insurance Thrust
SWAp	Sector-wide Approach
ToR	Terms of Reference
UWADEP	Upper West Agricultural Development Project
UN	United Nations
UNCT	UN Country Team
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VCC	Value Chain Committee
VCF	Value Chain Facilitator
VCIF	Value Chain Initiative Fund
VCTF	Venture Capital Thrust Fund
WEAI	Women's Empowerment in Agriculture Index
WFP	World Food Programme
WUA	Water Users' Association
YIAP	Youth into Agriculture Programme
ZPO	Zonal Programme Office
ZPOC	Zonal Programme Office Central
ZPON	Zonal Programme Office North
ZPOS	Zonal Programme Office South

Map of the Programme Area



Executive Summary

A. Rationale

- i. The Ghana Agricultural Sector Investment Programme (GASIP) aims at providing a framework and institutional basis for a long-term engagement and supplementary financing for scaling up investments in private sector-led pro-poor agricultural value chain development. GASIP will contribute to the realization of Ghana's Medium Term Agriculture Sector Investment Programme (METASIP), which provides the road map for the CAADP compact in Ghana. The Ministry of Food and Agriculture (MOFA) will implement GASIP with the aim to promote a "standard setting approach" that will drive its policy, serve as a core investment for value chain development in Ghana, and for aligning parallel financing to complement, following the modalities that each of the Development Partners (DP) prefer. In line with the agreed Strategic Framework for IFAD in Ghana (2012 COSOP), GASIP is built along four (4) strategic axis: (i) linking smallholder farmers to agribusinesses to enhance pro-poor growth; (ii) nationwide scaling up of a successful value chain investment approach; (iii) promoting and mainstreaming climate change resilience approaches in Ghana, in particular in the northern regions, financed through the Adaptation for Smallholder Agriculture Programme (ASAP); and (iv) knowledge management, harmonization of intervention approaches and policy support.
- ii. GASIP is designed as a long-term Programme that will be implemented in cycles of three years each. This initial design covers the first two cycles or six years, with significant core financing earmarked by IFAD. Prior to the end of each cycle, an Inter-cycle Review Mission (IRM) will be organized to assess progress, prepare the next cycle and justify new funding. This approach will allow institutionalizing permanent learning in the programme concept.
- iii. MOFA has invited all Development Partners and interested parties to a stakeholder process towards making GASIP a sector wide approach. In order to avoid the classic weaknesses of past SWAPs (rigid mechanism, lack of focus and broad visible impact, long start-up phase), it was decided to use the achievements of NRGF and RTIMP as starting point, and to use the first cycle of GASIP to develop tools for a flexible sector wide approach. In order to allow other stakeholders stepping in or align to this sector approach, GASIP will work during the first cycle on: (a) the harmonization of value chain development tools, including climate change vulnerability analysis; (b) the institutionalization of a mechanism to finance value chain infrastructure at District level, in line with decentralization; (c) the institutionalization of a matching grant mechanism to leverage investments in equipment, (d) the set-up of an initiative fund to support innovations in value chains.
- iv. This report provides reference to the initial financing earmarked by IFAD. Within a flexible approach, additional co-financing will serve to (i) deepen and enhance the impact on the targeted population; (ii) increase outreach of the programme to additional clients; and (iii) widen the scope of GASIP to achieve the METASIP objectives.

B. Intervention Area, Value Chains and Target Group

- v. GASIP will be national in scope and governed by a demand and market-driven approach. Districts, FBOs, businesses and individuals will have access to Programme benefits based on their eligibility for support coupled with opportunities for viable value chain ventures. GASIP will make resources available for value chain development in 160 districts by the end of the first cycle (PY3), and in at least 180 districts by the end of the second cycle (PY6).
- vi. Selected value chains for initial support, for which evidence is provided by on-going projects, may include (a) cassava; (b) maize; (c) sorghum; (d) yam; (e) fruits and vegetables. GASIP will also start working on conservation agriculture in northern Ghana, using a maize-sorghum-cowpea/soybean rotation. Additional value chains would be selected and taken on board based on following criteria: (i) evidence of increased financial return for smallholders, in particular youth and women; (ii) proven tools that link smallholders into commercial value chains; (iii) proposals from agribusinesses and Value Chain Committees (VCCs); and (iv) potential for climate change adaptation.

- vii. GASIP will target smallholder farmers and resource-poor rural people, in particular women, youth (15-24 years) and young adults (25-34 years). ASAP will sub-target households, which are vulnerable to shocks induced by climate change, particularly in the three northern regions.

C. Programme Development Objective

- viii. The overall goal of GASIP is to contribute to sustainable poverty reduction in rural Ghana. The Programme Development Objective (PDO) is: “agribusinesses, including smallholders, have enhanced their profitability and climate change resilience”.

D. Outcomes and Components

Component 1: Value Chain Development

- ix. Subcomponent 1.1 (Agribusiness Linkages Development) aims at formalizing agribusiness agreements with smallholders farmers, allowing them to reliably access factor and output markets. In order to achieve this, the Programme will support the selection and analysis of value chains, facilitation support, Value Chain Committees (VCCs), technical and institutional capacity building of Farmer Based Organizations (FBOs) and other stakeholders, and innovation mainstreaming.
- x. Subcomponent 1.2 (Value Chain Financing) aims at ensuring increased and systematic access to and use of short and long term financing for value chain businesses. GASIP will: (i) in collaboration other projects, provide capacity building Rural and Community Banks (RCBs) to improve performance in liquidity management, delinquency management, structured trade finance and savings mobilization; (ii) support universal banks in strategic and operational development for structured trade finance; (iii) promote equity style investments in value chain enterprises including finance leasing and venture capital; (iv) promote equity development in RCBs through direct investment and linkage with larger banks; and (v) through grant mechanisms match high potential, weakly capitalized value chain actors' equity to leverage finance for investments in equipment and infrastructure.
- xi. Subcomponent 1.3 (Climate Change Resilience) aims at mainstreaming climate change resilience across the selected agricultural value chains through a broad promotion of technologies proven elsewhere. GASIP will focus on three domains. Firstly, commercially valid adaptive trials and demonstrations of modern conservation agriculture techniques under rain fed conditions and in –situ rainwater conservation techniques will be undertaken. Secondly, demonstrations of efficient water-use techniques within new and existing irrigation systems will be undertaken. Thirdly, institutional capacity building and enhanced public awareness of private and public value chain actors in the field of climate change resilience will be supported. Initial funding will be provided through the Adaptation for Smallholder Agriculture Programme (ASAP). The demonstrated activities will thereafter be taken up under the financing from the IFAD resources and those of other future co-financiers.

Component 2: Enabling Rural Infrastructure

- xii. Subcomponent 2.1 (Productive Infrastructure and Facilities) aims to leverage investments in commercial infrastructure and facilities. These will be facilities, owned by a private sector player or a District Assembly, but operated by a private sector entity for the benefit of all value chain participants.
- xiii. Subcomponent 2.2 (Enabling Public Infrastructure) aims to finance essential public infrastructure for the growth and viability of associated value chains. These are facilities completely operated and maintained by the public sector. Examples are access roads and farm tracks, rural electrification to enable pump irrigation and processing, small dams, water management and water harvesting schemes. Investment made in water harvesting and control infrastructure will be financed by ASAP initially and then scaled up as outlined in Subcomponent 1.3.

Component 3: Knowledge Management, Policy Support and Coordination

- xiv. Subcomponent 3.1 (Knowledge Management, Harmonization and Policy Support) aims at creating an enabling environment for smallholders to participate in profitable and climate change resilient agricultural value chains. Subcomponent 3.2 (Coordination, Monitoring and Evaluation) will cover costs for coordination, management, and monitoring and evaluation (M&E).

E. Implementation Arrangements

xv. MOFA will have overall responsibility for the implementation of GASIP. A National Programme Steering Committee (NPSC) will orient programme strategy, oversee planning, review progress and ensure linkages with related entities. The Programme Coordination Unit (PCU) will be based in Accra and ensure overall coordination of the Programme, implementation of Subcomponent 3.1, support supervision, Inter-cycle Review and evaluation missions, consolidation of the Annual Work Programme and Budget (AWPB) and progress reports, fiduciary and procurement oversight, and promotion of transversal themes. The MOFA shall establish three Zonal Programme Offices (ZPO), to provide day to day coordination of Programme activities. The ZPO shall work in close collaboration with the Regional Agriculture Development Units (RADUs). The existing Programme Management Unit of the IFAD co-financed Northern Rural Growth Programme (NRGP) located in Tamale shall be strengthened to coordinate the activities of the Programme in Northern Ghana until the completion of the NRG. At that time it shall become the Northern ZPO (ZPON) of the Programme. A ZPO Central (ZPOC) shall be established in Kumasi, and a ZPO South (ZPOS) shall be established in Dodowa.

xvi. The core function of PCU and ZPOs will be coordination, while specialized services will be largely outsourced to value chain facilitators, public services, specialized technical service providers and PFIs on the basis of performance-based contracts. In line with decentralization, coordination will gradually be mainstreamed into the regional and district structures during the second cycle, on the basis of recommendations made by the IRM.

F. Cost and Financing

xvii. Basic programme costs over 6 years, including contingencies, taxes and duties, are estimated at US\$ 113.0 million or the equivalent of GHS 297.9 million. A total of US\$ 71.6 million of IFAD funding will be mobilized for the first 6 years (2 cycles). GASIP will absorb the entire PBAS allocation of US\$ 36.6 million of the 2013-2015 PBAS allocation for Ghana under concessional lending terms, as well as US\$ 10 million ASAP grant funding for climate change adaptation activities. Subject to availability and implementation performance, additional financing of US\$ 35 million will be earmarked from the 2016-2018 PBAS cycle. GoG will finance taxes and duties on imported goods, and Value Added Tax (VAT) for a total amount of US\$ 7.6 million. The PFIs are expected to provide credit of at least US\$ 17.5 million. Contribution in cash or kind of beneficiaries is estimated at US\$ 4.6 million, that of the District Assemblies at US\$ 1.7 million.

xviii. Co-financing opportunities will be explored by GoG and the IFAD country office (ICO) during the pre-project phase and the first cycle. These resources will mainly be used to (i) top-up Component 2 (rural roads, rural electrification, commercial infrastructure and facilities); (ii) top-up the budget lines for matching grants to leverage private sector investments in equipment for production and processing; (iii) increase the number of targeted value chains, in particular in the livestock and fisheries sector; (iv) related institutional strengthening of MOFA at national and District level.

G. Small Grant

xix. A small country grant of US\$ 500,000 was proposed to pilot activities during 2014.

H. Benefits and Impact

xx. GASIP is expected to directly benefit at least 62,900 farmers by PY3 and 86,400 farmers by PY6. At grassroots level, 4,000 FBOs would be involved in implementation and receive support to integrate in formalized value chains and are more climate change resilient. Most FBOs would be linked to domestic and export markets, agro-industries, input suppliers and at least 150 PFIs or their branches. These linkages would be established through 200 agribusiness arrangements. Total outreach is estimated at 514,000 people.

Logical Framework

Narrative Summary	Key Performance Indicators ¹	Baseline*	Cycle 1	Cycle 2	Means of Verification	Assumptions (A) / Risks (R)
Goal:						
Contribute to a sustainable poverty reduction in rural areas of Ghana	▪ Decreased rural poverty incidence in Ghana	29% (2011)			▪ Ghana Statistical Services	
	▪ Increased agricultural GDP	16,687m GHS			▪ Ghana Statistical Services	
	▪ Decreased 0-5 year child malnutrition	14% (2011)			▪ Multiple Indicator Cluster Survey (MICS) – UNICEF	
Programme Development Objective (PDO):						
Smallholder farmers have enhanced their profitability and climate change resilience	▪ Direct clients (of which 50% women, 20% 15-24 years, 30% 25-34 years)	50,000	62,900	86,400	▪ Value Chain Facilitator	Favorable macro-economic environment (A)
	▪ Estimated number of households	44,000	55,000	75,600	▪ PCU estimation	
	▪ Total number of beneficiaries	300,000	374,000	514,200	▪ PCU estimation	
	▪ Direct clients that are more climate change resilient	0	5,000	10,000	▪ Value Chain Facilitator	
	▪ Average crop yields (MT/ha) – cassava (c), maize (m)	C:9.4 M:2.0	18.0 3.8	16.4 3.5	▪ Farmers book, tracer study	
	▪ Net farm income (GHS/ha) – cassava (C), maize (M)	C:212 M:37	425 362	875 875	▪ Farmers book, tracer study	
	▪ Additional volume of produce marketed by smallholders (MT)	C:-0 M:-0	36,000 7,000	216,000 40,000	▪ Farmers book, tracer study	
Outcome 1: Smallholders have formalized commercial linkages to factor and output markets including small agribusinesses	▪ Number of agribusinesses experiencing sustainable growth	n/a	180	270	▪ Tracer study	Inability of VCCs to formalize commercial linkages (R)
	▪ Number of farmers linked to markets by programme	45,000	55,000	80,000	▪	
	▪ Number of FBOs reaching category four (4) status (sustainability)	0	300	800	▪ Value Chain Facilitator	
	▪ Hectares under improved production techniques	0	30,000	74,300	▪ Value Chain Facilitator	
Outputs: 1. VCCs and FBOs are strengthened and value chain actors are linked 2. Commercial	▪ Number of functional VCCs (RIMS)	43	134	180	▪ Value Chain Facilitator	Agribusinesses are willing to work with smallholders (A)
	▪ Number of agribusinesses supported	105	200	300	▪ Value Chain Facilitator	
	▪ Number of FBOs involved (RIMS)	0	3,100	4,300	▪ Value Chain Facilitator	
	▪ Number of farmers trained (RIMS)	0	30,000	60,000	▪ Value Chain Facilitator	
	▪ Number of commercial facilities constructed (by type) (RIMS)	0	50	100	▪ ZPO	

¹ All indicators are disaggregated by Gender and Age. * Baseline indicators to be verified.

Narrative Summary	Key Performance Indicators ¹	Baseline*	Cycle 1	Cycle 2	Means of Verification	Assumptions (A) / Risks (R)
Infrastructure is improved	▪ Km of rural roads rehabilitated (RIMS)	0 km	1000 km	Tbd	▪ ZPO	
	▪ Km of rural electrical connections	0 km	450 km	Tbd	▪ ZPO	
Outcome 2: Increased and systematic access to and use of short and long term financing for value chain businesses	▪ Number of clients using structured trade financing	10,000	30,000	50,000	▪ PFIs quarterly reporting	Low capacity of programme to interest PFIs in financing value chains (R) PFIs have liquidity available (internally or through credit lines) (A)
	▪ Number of clients accessing leasing, equity investments and/or mezzanine debt	0	4,000	10,000	▪ Funds and PFIs quarterly reporting	
	▪ Number of savers among clients	30,000	50,000	70,000	▪ PFIs quarterly reporting	
	▪ Value of loans facilitated by GASIP with tenure <= 1 year	n/a	1.0 mio \$	1.5 mio \$	▪ PFIs quarterly reporting	
	▪ Value of loans facilitated by GASIP with tenure > 1 year	n/a	0.5 mio \$	0.75 mio \$	▪ PFIs quarterly reporting	
	▪ Improvement in PAR among PFIs	n/a	n/a	n/a	▪ PFIs quarterly reporting	
Outputs: 1. Partnerships with PFIs built 2. Matching grant scheme operating	▪ Number of active PFIs (universal banks and RCBs)	50	100	150	▪ ZPO	
	▪ Number of PFI staff trained	0	500	...	▪ ZPO	
	▪ Value of loans leveraged by matching grants	0	7mio \$	20 mio \$	▪ ZPO	
Outcome 3: Value chain stakeholders are climate resilient	▪ Hectares under conservation agriculture practices, increase	0	7,500	10,000	▪ Value Chain Facilitator	Low capacity of Programme to mainstream commercial Climate change technologies (R)
	▪ Hectares of irrigated land using efficient technology, increase	0	200	1,000	▪ Value Chain Facilitator	
Outputs : 1. Stakeholders have been trained in CCR 2. CCR development has been supported	▪ Direct clients having improved water management (ASAP)	0	1,000	4,000	▪ Value Chain Facilitator	
	▪ Number of functional WUAs (ASAP) supported by GASIP	0	30	50	▪ Value Chain Facilitator	
	▪ Hectares with reliable access to water (ASAP), under GASIP	0	250	350	▪ Value Chain Facilitator	
	▪ Yield from conservation farming (by crop) (maize (M), soja (S))	M:1.0t/ha S:0.7t/ha	2.5t/ha 1.6/ha	3t/ha 2.0/ha	▪ Value Chain Facilitator	
Outcome 4: The policy framework for smallholder farmers has improved	▪ Number of clients trained in CCR (ASAP)	0	10,000	15,000	▪ Value Chain Facilitator	
	▪ General satisfaction with the policy framework among value chain actors (scale 1 – 6)	tbd	tbd	5	▪ Participatory outcome assesment	Inefficient data collection and analysis (R)
Outputs: Policy development supported	▪ Number of policy forums held	0	3	6	▪ PCU	MOFA provides leadership (A)
	▪ Number of white papers addressing key policy issues	0	3	6	▪ PCU	

I. Strategic Context and Rationale

A. Country and Rural Development Context

1. Agriculture has driven Ghana's economic growth in recent years and remains the primary livelihood for the majority of its population of 22.5 million inhabitants, especially for the rural poor. Agricultural Gross Domestic Product (GDP) grew by around 6% per annum over 2007 – 2010, driven largely by the liberalization of the sector and by domestic and regional market demand. Agriculture accounts for 30% of GDP and 60% of employment, indicating a significant labour productivity gap with other economic sectors and the need to increase labour productivity and attract capital investment.

2. With approximately 90% of farm holdings of less than 2 hectares, Ghanaian agriculture is still dominated by traditional smallholder farms. Rural poor and food insecure households are mainly smallholder food crop farmers with limited access to factor and output markets. This results in low productivity of land and labour, poverty, low investment capacity, and lack of opportunities for young people. Nevertheless, domestic and regional demand for food crops is strong and agribusinesses are interested in working with smallholders, but they are asking for more formalized business relationships along the value chains. Rural women and girls contribute significantly to farm labour, particularly in view of high migration rates of young men because of the lack of economic opportunities, resulting in an ageing and generally less dynamic rural population, high rates of youth unemployment, underemployment and social inequality. The focus on employment opportunities for rural youth is a top priority of Government of Ghana (GoG).

3. Between 1991 and 2006, the poverty profile of Ghana has remarkably improved both at national level and in urban areas. Extreme poverty has been halved from 36.5% to 18.2%², while the proportion of people living below the upper poverty line decreased from 51.7% to 28.5%. Nevertheless rural poverty remains the topmost challenge of GoG, in particular because of its impact on livelihoods of young people and women. Ghana is reasonably food secure at national level, but household food insecurity is a concern in particular in the Northern, Upper East and Upper West Regions, where respectively 20%, 38% and 24% of households are food insecure³.

4. Through implementation of its Medium Term Agriculture Sector Investment Programme (METASIP), GoG aims giving food crop production a more commercial orientation in order to enhance incomes of smallholders and reduce structural food insecurity and poverty in rural areas. Unfortunately, weak institutional capacity and decades of supply-driven development interventions with inadequate attention to private sector and market linkages have not helped transform smallholder farms and cooperatives into entrepreneurial entities. Meanwhile, weak capacity of public extension to respond to the needs of commercial agriculture has left a climate characterized by high production and transaction costs for smallholders and mistrust which undermines the scope for contractual relationships between value chain actors.

5. Agriculture is predominantly rain-fed in Ghana where the climate is dominated by the inter-tropical convergence zone and the hot, dry Harmattan winds blowing from the Sahara. The south of the country experiences a bi-modal rainfall regime, with a major and a minor rainfall season while the north of the country has a uni-modal rainfall regime. Climate change scenarios show that mean temperatures in the Savannah Zones, predominantly in the north, can be expected to increase by approximately 2°C by 2050. Rainfall is not anticipated to change much (projected decreases of 0.1-1.5%) but dry season rainfall is expected to increase by 16-20% following a cyclic pattern, with high rainfall periods being followed by droughts more or less each decade. The most prominent climate related hazards affecting the agricultural sector include: (i) water stress for crops with increasing dry spells, (ii) degradation and erosion of arable land (with compound effects across wider landscapes); and (iii) intermittent floods and the resulting damage to critical infrastructure. GoG approved a Climate

² UNDP Report (2006) on MDGs.

³ WFP, MOFA & GSS. Comprehensive Food Security & Vulnerability Analysis 2012,

Change Policy⁴ in November 2012, including sector based strategies, which include agriculture and food security as one of the five policy themes and strategic focus areas with particular emphasis on developing climate resilient agriculture and food systems. Another focus area is disaster preparedness and responses which prioritizes the building of climate resilient infrastructure and increasing the resilience of vulnerable communities to climate related risk.

B. Rationale

GASIP as Basis of a Sector Approach

6. The Ghana Agricultural Sector Investment Programme (GASIP) aims at providing a framework for a long-term engagement and supplementary financing for private sector-led, pro-poor agricultural value chain development. The Programme is fully aligned and contributes to the Medium Term Agriculture Sector Investment Plan (METASIP), which provides the road map for the Comprehensive Africa Agriculture Development Programme (CAADP) in Ghana.

7. The Programme will be implemented by the Ministry of Food and Agriculture (MOFA) with the aim (i) to promote the GASIP approach as a standard-setting approach, (ii) to serve as a core investment for value chain development in Ghana, (iii) to drive its efforts to harmonize value chain intervention tools, and (iv) to mobilize additional parallel financing, following the modalities that each of the Development Partners (DP) prefer. Nationwide and sector-wide coverage, alignment to decentralization and the programmatic approach of GASIP will imply (a) mainstreaming gradually implementation into District Assembly and regional institutions; (b) institutionalizing mechanisms to leverage private and public investments in value chains.

8. The strategic focus of GASIP will be on smallholder farmers to make them more competitive by increasing their capacity to respond to market demand in terms of quality, price, time and volume. This will be operationalized through the formalization of relationships with agribusinesses, in order to give smallholders reliable access to technologies, financial services, factor and output markets. The approach aims to be pro-poor, pro-youth, gender-equitable, inclusive and private-sector driven. Partnerships with agribusinesses will be expanded through targeted facilitation support, smart subsidies to leverage private investments, and adequate provision of public goods and enabling infrastructure to reduce risk. As recommended by the IFAD-GoG Country Program Evaluation (CPE), a careful balance will be sought with regard to IFAD's financing between supporting sector-wide interventions, driving broader institutional reforms, geographically targeted investments to address rural poverty, and climate change resilience.

Scaling Up a Value Chain Investment Approach

9. GASIP will scale up a value chain investment approach and contribute to the METASIP. The GASIP approach will be based on successfully-used building blocks, in particular: (a) formalized linkages to agribusiness, input suppliers and participating financial institutions; (b) Value Chain Committees (VCC) at community and District levels; (c) enhanced farmers' based organizations (FBO) to build confidence along the chain; (d) external value chain facilitation; (e) partnerships with public services to provide technical knowhow; (f) collaboration with rural banks to finance seasonal credit and investments; (g) matching grants to leverage external financing; (h) enabling public rural infrastructure. Under Subcomponent 1.1, these more formalized linkages and agreements between agribusinesses and smallholders will be promoted.

10. The Northern Rural Growth Programme (NRGP) successfully intervened in value chains of maize, soybean, sorghum and irrigated vegetables, which allowed during 2011-2012 building district-level linkages between 1,800 FBOs representing approximately 18,000 farmers, input suppliers, rural banks, service providers and agribusinesses. Improved access to and use of inputs has resulted in significant productivity increases from 0.5mt/ha to 1.08mt/ha (+216%) for sorghum and from 0.8mt/ha

⁴ Ghana National Climate Change Policy, Ministry of Environment Science and Technology, November 2012.

to 2.0mt/ha (+150%) for maize notwithstanding the fact that these increased yields are still below the optimum. Boxes in appendix 1, 2 and 3 will give examples of results of the NRGIP approach. Evidence from the Roots and Tubers Improvement and Marketing Programme (RTIMP) exists for cassava and yam, where project support has resulted in (i) markedly higher incomes for farmers, small processors and labourers; (ii) the establishment of 24 highly profitable Good Practice Centres (GPC) for gari processing as value chain drivers, but also for testing and promoting processing technology, outgrower schemes and structured market linkages, including certification, traceability, packaging and market prospection. These successful examples will be scaled up.

Value Chain Financing

11. Effective value chain function is governed by the speed at which each value chain actor can execute his/her role. Frequently, the cause of inefficiencies in rural value chains is not simply low competency of a given actor but is rather the actor's inability to scale up, make deals or speed up because they lack the financial resources to do these things. In most rural Districts in Ghana, there are four significant, finance related, problems: (i) while Rural Community Banks (RCBs) are willing to lend to producers and small and medium enterprises (SMEs), they themselves are weakly capitalized and cannot effectively expand their lending operations as it would result in over leverage and violate the regulations they must abide by; (ii) larger universal banks lack outreach and familiarity with low risk agribusiness financing strategies, particularly structured trade arrangements, which causes them to favor what they perceive as lower risk opportunities such as consumer lending, salary loans and purchase of treasury bills; (iii) small, medium and large agribusinesses along the value chains are themselves undercapitalized which leads both to under investment in productive assets and, by implication, an inability to use their productive assets as collateral to leverage financing; and (iv) both lenders and agribusinesses frequently lack fundamental business proficiencies for accounting and using accounts as a management tool; analysing opportunities for expanding business while minimizing risks; and simply negotiating, agreeing and enforcing contracts.

12. In order to comprehensively address the finance related problems, GASIP will employ several strategies, which have been successful in the past. These will include: (i) research in value chain financing opportunities stemming from chains targeted and understood by Subcomponent 1.1; (ii) provide technical assistance to universal banks and RCBs to understand and apply low risk structured trade financing concepts such as forward contract finance, invoice discounting and inventory credit; (iii) facilitate financial linkages between universal banks and RCBs for both collaboration in financing linked large, SME and small value chain actors and for enhancing the availability of loanable funds for RCBs; and (iv) provide capacity building to FBOs and VCCs to better manage and use their financial records and their contracts with suppliers and buyers to become more creditworthy. After a comprehensive impact evaluation⁵, it was decided to use matching grants (MG), combined with loans, to provide value chain actors enough equity to borrow for assets they are capable of maintaining while at the same time limiting, but not eliminating, the risk to lenders by enhancing the grantee's collateral position. The MG are required to lower the access barrier of the core target group of IFAD clients to the position of value chain drivers (e.g. collective cassava processing centres for women groups, collective warehousing, etc.). Interventions with a clear public good element would be prioritized.

Climate Change Resilience

13. IFAD's current portfolio in Ghana has no explicit focus on climate change (CC) adaptation. The Country Programme Evaluation (CPE) conducted by IFAD's Independent Office of Evaluation called for attention to climate-related risks and environmental sustainability. The Ghana COSOP 2012 has recognised the importance of making smallholder farms more resilient to climate change.

⁵ IFAD & FAO. Impact of matching grants in Ghana. December 2013. 68 p.

14. The Adaptation for Smallholder Agriculture Programme (ASAP)⁶ will provide earmarked funding for GASIP to mainstream climate change adaptation and resilience in smallholder farms which will contribute to sustainability of the promoted business models and value chain interventions. ASAP will mainly focus on the northern regions, which have the higher levels of exposure to climate risks and lower adaptive capacity. The investments of ASAP will be on: (i) increasing the availability and efficient use of water in smallholder crop and livestock systems to counter growing trends of water stress; (ii) mainstreaming on a commercial basis proven technologies such as conservation agriculture⁷, irrigation and integrated soil fertility management; (iii) additional interventions emphasising climate data collection and management through cross-cutting institutional capacity building activities, linked to the knowledge management, policy support and monitoring and evaluation (M&E). The need for mainstreaming climate variability and change into agriculture development planning is recognised as a necessity to ensure sustainability of achievements in Ghana's national climate change policy. Deepening the understanding of farmers regarding current climatic trends and also improving their skills to cope effectively is essential. Support to water conservation and irrigation systems with the aim of ensuring availability of water for multiple uses whilst reducing flood related disaster risk in rural communities; and promoting climate resilient cropping the two areas that the GASIP will directly support through Subcomponents 1.3 (Climate Change Resilience) and 2.2 (Enabling Public Infrastructure). CC adaptation and CC resilience will be brought to the fore in all trainings under GASIP, to ensure broad sensitization of this cross-cutting issue.

Policy Support, Harmonization & Knowledge Management

15. GASIP will serve as a flexible vehicle to support MOFA's METASIP framework for value chain development, so as to create an enabling socio-economic and regulatory environment for pro-poor private sector led value chain development. To achieve this, the GASIP agenda can be seen as having three main thrusts. First, it would support the implementation of existing policies, and in that context assist GoG both to mainstream good practice for smallholder engagement in value chains, and to provide an umbrella under which additional and complementary funding from the development partners can be slotted. Secondly, it would help to build processes that link operational experiences and lessons learnt to improved policy outcomes and institutional practice (and seek to moderate policies that work against the establishment of an enabling framework). Thirdly, GASIP will support implementing agencies to enhance learning and knowledge management based on lessons learned in the field, as well as to empower apex FBOs and business organizations advocate for their members' interests. This work will be complemented by assisting GoG shape its policy agenda through the Agriculture Sector Working Group (ASWG) and other working groups, Joint Sector Reviews, the Ghana Rural and Microfinance Finance Forum and Government-led processes with Development Partners and the United Nations (UN) system. Particular focus will be given to strengthen linkages with the business community, rural banks, representatives of the corporate private sector, and farmers' and business organizations. The IFAD Country Office (ICO) will also enhance dialogue with the METASIP steering committee and Secretariat, as well as with the parliamentary select committee for agriculture. In addition, the establishment of data bases on programme clients and comprehensive knowledge management on climate change resilience adaptation will contribute to more efficient decision making and planning.

⁶ ASAP was launched by IFAD in 2012 to make climate and environmental finance work for smallholder farmers. As multi-year and multi-DP financing window, ASAP provides a new source of co-financing to scale up and integrate climate change adaptation across IFAD's new investments.

⁷ The programme will primarily promote conservation agriculture through the implementation of its three key principles (rotation, minimal soil disturbance and mulching). However, the approach would remain at the same time flexible in adjusting them to the local agro-ecological conditions (including agro-forestry, adapting additional soil and water conservation techniques like Zai and/or half-moons, promoting composting etc.).

II. Programme Description

A. Programme Area and Target Group

Programme Outreach

16. GASIP will be governed by a demand and market-driven approach and will be national in scope. Districts, FBOs, agribusinesses and individuals will have access to Programme benefits based on their eligibility for support coupled with opportunities for viable value chain development. GASIP will execute its work using a geographical expansion. Table 1 presents the targets of GASIP in terms of eligible Districts, expected FBOs, expected direct clients and total outreach for the first six years or two cycles. GASIP will make resources available for value chain development in 160 Districts by the end of the first cycle (PY3), and in at least 180 Districts by the end of the second cycle (PY6). The targets for the second cycle will be confirmed by the Inter-cycle Review Mission (IRM) in PY3.

Target Group

17. GASIP will target smallholder farmers and resource-poor rural people, in particular women, youth (15-24 years) and young adults (25-34 years). GASIP is expected to reach at least 62,900 clients or direct beneficiaries by PY3 and 86,400 clients by PY6. Therefore, the Programme is expected to work with 3,140 FBOs by PY3 and 4,320 by PY6. ASAP will sub-target groups, which are vulnerable to climate change induced shocks, in particular those practicing rain-fed cereal cropping and small-scale irrigation. The inclusion of vulnerable groups will be assessed and monitored for each targeted value chain.

18. Some agribusinesses, input dealers, financial institutions and commercial farmers, involved in partnerships with GASIP, will have relatively large but mainly indirect benefits. Their involvement is crucial to ensure for smallholders effective access to productive assets, capital, services, know-how and markets. GASIP will develop internal controls, proper governance and management, checks and balances to ensure that private operators and FBOs do not suffer elite capture.

Table 1: Projected Outreach of GASIP

	PY1	PY2	PY3	PY4	PY5	PY6
Eligible Districts ⁸	107	107	134	160	180	180
FBOs	500	710	3.140	3.540	3.960	4.320
Direct clients	10.000	14.300	62.900	70.800	79.200	86.400
Estimated number of households	8,800	12,500	55,000	62,000	69,300	75,600
Estimated Population outreach	59.500	85.000	374.000	421.400	471.400	514.200

Value Chains

19. The selection of value chains will be based on: (i) evidence of increased financial return for smallholders and others in their communities; (ii) availability of proven tools that link smallholders into commercial value chains; and, (iii) proposals from private sector stakeholders and agribusinesses, including those identified through Value Chain Committees (VCCs). It would be prudent not to take too many value chains, as the Programme's capacity to understand and affect them will progressively weaken the more diverse the targets become.

20. GASIP will follow a two-phase process to select new value chains for piloting⁹. The first step is identifying candidate value chains. On a regular basis GASIP will invite Expressions of Interest (EOIs) which any party can submit to explain an opportunity to further develop an existing agricultural value

⁸ Including 50 NRGP Districts in PY1 and PY2.

⁹ The detailed selection process is presented in Appendix 4.

chain. Those EOIs, which are consistent with GASIP's goal and objective, will be considered for support. For EOIs that merit further review, GASIP will commission a study of impact potential. The study will focus on understanding the commercial buyer-seller relationships, gross margins and benefit/cost (B/C) ratio along the chain. The study will clarify which value chain segments can be expanded or made more efficient to bring the greatest impact to smallholders and propose climate change adaptation measures that may be necessary. The estimated cumulative impact for each value chain studied will be compared to prioritize which value chains GASIP will support. In case of an effective demand from private sector, priority could be given to livestock, including poultry and aquaculture. Further, agroforestry systems to enhance climate change resilience using productive species (i.e. shea, baobab) will be promoted as a continuation of the work initiated by NRGF.

21. Selected chains for initial support during the first 3-year cycle, for which evidence is already provided by on-going projects, may include: (a) gari (processed cassava); (b) maize, (c) sorghum; (d) yam & seed yam; (e) fruits & vegetables, using pump irrigation. In addition, other value chains would be selected, using the above selection process, and taken on board for piloting. The Programme would also pilot from PY1 onwards conservation agriculture, using a crop rotation based on maize, sorghum, cowpea/soybean. At least one value chain proposed by the Ministry of Fisheries and Aquaculture Development (MOFAD) will be taken into consideration for development. Complementarities and synergies with other initiatives will be taken into account¹⁰. The outcome will be assessed regularly and the most promising value chains will be taken on board, while unsuccessful value chain initiatives will be stopped.

Targeting Tools to Ensure Inclusiveness of Rural Poor

22. Targeting and self-targeting of vulnerable groups, youth, women and smallholders will be achieved by using empowerment and capacity-building measures to encourage active participation of people who traditionally have less voice and power. These measures include: (i) information and mobilisation campaigns, using mass media and local information meetings; (ii) FBO-based approaches to lower thresholds for rural poor; (iii) matching grants to leverage investment capacity; (iv) policy dialogue and information campaigns on rural labor conditions, food safety, enforcement of regulations in agriculture and agribusiness; (v) institutional strengthening of FBOs and management training of their members; (vi) extension, technical training and individual business counselling, also for the poorest groups. GASIP could adopt direct targeting of specific categories that may otherwise miss the opportunities of GASIP, in particular groups of unskilled women and unemployed & underemployed youth and young people.

Gender Action Plan

23. Gender issues¹¹ will be addressed through the implementation of a Gender Action Plan (GAP). In addition, the successful gender-approaches of NRGF¹² and RIMP will be promoted nationwide. The GAP will therefore include: (i) priority will be given to value chains that are important for women and young people; (ii) empowering women in FBOs and VCCs and providing leadership training; (iii) sensitizing District Assemblies and Regional House of Chiefs; (iv) establishing regional gender teams; (v) short-term gender specialists to conduct good gender and value chain diagnostics; (vi) adequate capacity-building in targeting of gender for core staff of coordinating and implementing entities; (vii) direct targeting of women groups, in particular in very poor districts, but also encouraging mixed groups allowing men and women to work together under equal terms; (viii) using the Gender Action Learning System (GALS) methodology, so that both women and men will develop their vision for change; the GALS methodology can also be used to identify win-win options along the value chain; (ix) using gender-disaggregated indicators to monitor outreach to women; (x) using indicators of the Women's Empowerment in Agriculture Index (WEAI), which are part of the RIMS indicators; (xi) as a target, at least 50% of all direct programme clients should be women; (xii) awareness creation.

¹⁰ Complementarities & synergies with other interventions are presented in Appendix 1.

¹¹ A detailed analysis of women and youth in agricultural value chains is presented in Appendix 2.

¹² NRGF won the IFAD Gender Award 2013 for its successful mechanism to mainstream gender-related issues.

Coordination of gender and youth related activities would be ensured by the Gender Specialist of NRG, who will be integrated in the GASIP team.

Youth Action Plan

24. A range of mechanisms will be used to reach at least 20% youth (between 15 and 24 years) and 30% young adults (between 25 and 34 years) as direct clients. Within these age groups gender equality will be sought and closely monitored. It is acknowledged that rural youth and women are among the most vulnerable groups to the effects of climate change, which could aggravate existing gender disparities. The M&E system will monitor outputs and outcomes for the two age groups. The Youth Action Plan (YAP) would support the following activities for young people: (a) direct targeting of young women in all activities of the YAP; (b) peer education; (c) integration of young people in FBOs, extension groups and VCCs; (d) participation in business networks; (e) promotion of value chains that are interesting for young people (horticulture, intensive livestock production, etc.); (f) provision of start-up kits and facilitation of access to finance; (g) agribusiness education; (h) promotion campaigns using role models. Coordination of implementation would be ensured by the Senior Policy and Evaluation Expert of the Programme Coordination Unit (PCU). In addition, a GASIP youth council attached to Zonal Programme Offices in Tamale and Kumasi would ensure an active participation of young people in planning and implementation.

B. Development Objective and Impact Indicators

25. The overall goal of GASIP is to contribute to sustainable poverty reduction in rural Ghana. The Programme Development Objective (PDO) is: "agribusinesses, including smallholders, have enhanced their profitability and climate change resilience".

26. The impact indicators of the PDO will measure: (i) outreach to smallholders, including women, youth and young people, (ii) profitability of interventions at all stages of the value chain; and (iii) adoption of climate change adaptation measures.

C. Outcomes and Components¹³

Component 1: Value Chain Development

27. **Subcomponent 1.1: Agribusiness Linkages Development.** The aim of this Subcomponent is to build and formalize commercial relationships between agribusinesses and smallholders. These linkages will generally be based on written agreements between agribusinesses, smallholders, public and private service providers, Participating Financial Institutions (PFIs), input suppliers and Value Chain Committees (VCC). This will allow all stakeholders to develop the economic activities along the chain. The involvement of GASIP will: (i) ensure the emergence and inclusive character of these agreements; (ii) ensure that proper standards of engagement are used between the large commercial entities and smallholders; (iii) ensure the adoption of sustainable technologies and undertaking of environmental impact mitigation measures.

28. The Subcomponent will support the selection process of value chains (see: Appendix 4), starting with information campaigns and collection and analysis of the required quantitative and qualitative information¹⁴, including inclusiveness of women and young people. Inclusive VCC will be organized at local level to coordinate and plan implementation. Once a value chain is selected, smallholders' participation in the agribusiness linkages will be assisted by Value Chain Facilitators (VCFs), who will be recruited for each value chain¹⁵. They will work in close collaboration with district-level MOFA staff, BACs and private service providers to organize training and services for VCCs, FBOs and smallholders for the chosen value chains.

¹³ A detailed description of the Components is presented in Appendix 4.

¹⁴ Gross margins, Internal Rate of Return (IRR), Benefit-Cost (B/C) ratio for actors along the value chain, crop yields.

¹⁵ The VCFs will be encouraged to recruit women and young adults and be asked to ensure the participation of women and young people in the VCCs.

29. Programme support will mainly consist of mentoring of FBOs and VCCs, extension, institutional and technical training, demonstrations, a contribution to start-up costs and specialized technical assistance, facilitation of FBOs and VCCs to develop contractual arrangements with effective means for enforcement. Also investments in public services and institutional capacity required for implementation of the activities will be financed. In addition, the Programme will support innovations and pilots in value chain development. Eligible investments will include: (a) all studies that are part of the selection process of value chains; (b) trials and demonstrations of emerging business opportunities along value chain being selected for piloting or further development; (c) specialized technical assistance; (d) seed money for innovative value chain adaptation and upgrading proposals, including certification, traceability, food safety, etc.; (e) fabrication of prototype equipment and small scale processing plants; and (e) testing of climate change resilience technologies along selected value chains.

30. **Subcomponent 1.2: Rural Financial Services.** The aim of Subcomponent 1.2 is to ensure increased and systematic access to and use of short and long-term financing for value chain businesses. Underpinning this Subcomponent are several guiding principles based on lessons learned by Ghana's value chain finance initiatives and from international best practices in rural finance. These include: (i) default risk mitigation embedded in the PFI financing strategy; (ii) specific liquidity risk management embedded in the PFI financing strategy, (iii) financing against appropriate contracts that bind buyers and sellers as well as having clear and enforceable penalties for non-performance; (iv) client saving for reinvestment, self-insurance and household opportunities; (v) anchoring finance to the strongest market makers with links to established and reliable retail or export markets; and (vi) scaling up proven strategies.

31. While adhering to these guiding principles, GASIP will: (i) in collaboration with Subcomponent 1.1, research value chain financing opportunities based on candidate value chains; (ii) continue support provided by projects such as NRGF and GIZ/MOAP capacity building RCBs to improve performance in liquidity management, delinquency management, structured trade finance and savings mobilization; (iii) support universal banks in strategic and operational development for structured trade finance, including forward contract finance, invoice discounting and warehouse receipts; (iv) promote equity style investments in value chain enterprises including finance leasing and venture capital; (v) promote equity development in RCBs through direct investment and linkage with larger banks; and (vi) through grant mechanisms match¹⁶ high potential, weakly capitalized value chain actors' equity to leverage finance for investments in equipment and infrastructure and, under appropriate conditions, finance high potential, critical innovations.

32. Technical assistance to RCBs will include, inter alia: (i) training, mentoring and product development for RCBs; (ii) clearly documenting value chain finance opportunities and equity investment opportunities; (iii) developing industry standard documentation for buyer-seller contracts, assignable invoices, inventory receipts, finance leases; (iv) strategic consulting with universal banks for structured trade financing; and (v) training FBOs in saving up.

33. **Subcomponent 1.3: Climate Change Resilience.** The aim of Subcomponent 1.3 is to mainstream climate change adaptation across the selected value chains. The Subcomponent will focus on three domains: (a) demonstrations and promotion of uptake of commercial conservation agriculture; (b) efficient use of water in irrigation; and (c) institutional support for climate change resilience. These activities will be financed by ASAP in the first cycle. From the second cycle onwards, the activities will be financed with IFAD funding.

34. To address the increasing dry spells, drought occurrence and the issues of land degradation, commercially valid adaptive trials and demonstrations of modern conservation agriculture techniques under rain-fed conditions will be undertaken, using the GASIP value chain approach, including VCF, VCC and agribusiness linkages. A crop rotation based on maize, sorghum, cowpea/soybean would be piloted and promoted at a larger scale. These interventions will be hosted by leading nucleus farmers,

¹⁶ Details of the Matching Grant Mechanism are presented in Appendix 4.

stronger FBOs and specialist farm services providers. They will provide location specific adaptation of technology for conservation farming which is already a mature technique in other countries, but are not used yet in Ghana. Such technology would include zero-tillage cropping, soil moisture conservation, crop residue retention, appropriate crop rotations and proper crop nutrition. The trials and demonstrations will specifically demonstrate a technically viable approach which provides enhanced yields, yield security, profitability and thus enhanced climate change resilience. Field trials will take into account the considerable number of lessons learned and recommendations from previous research, and national and international researchers will be involved in designing and evaluating field trials. A total of about 25 sites will be established during the first cycle, mainly in the SADA regions. Support, including technical assistance and equipment, would be provided to the hosts of the trials during a start-up phase of 3 years. Apart from the support through nucleus farms and service providers, the uptake of the conservation agriculture and soil fertility improvement techniques will be promoted through local and regional exchange visits for farmers and the capacity building activities.

35. Although investment in irrigation systems has often been proposed as a means of providing resilience to climate change, these same investments often fail to deliver in terms of reliability of water supply, good yields and most importantly value for money in terms of water-availability per unit of investment cost. A central reason for this is that existing irrigation systems rely on wasteful and inefficient water delivery and application methods. The Programme will therefore support, training, technical assistance, trials and demonstrations of improved water-use efficiency techniques within existing irrigation systems and from available water sources, as well as training of Water Users Associations (WUA), environmental mitigation measures, and land tenure issues.

36. The Programme would provide support for institutional capacity building and enhanced public awareness in the field of climate change resilience. Specific capacity building will also include support to DADUs, FBOs, Water User Associations and other members of the VCCs. Some of the activities which would be supported include: (a) dissemination of climate change adaptation toolkits (b) awareness raising on climate change; (c) international and national exchange visits; (d) production of technical briefs and notes, dissemination of good practices and training; (e) technical assistance for feasibility and design studies and planning including the development of environmental and climate change management plans.

37. The VCF will have a key role in promoting the adoption of climate change adaptation technologies and practices as they bring together various actors and provide capacity building and support to these actors along the value chain. As such it will be important that they are aware of the various climate change adaptation options available. This awareness can be ensured both by the internal capacity of the VCF and also by the Climate Change adaptation expert that will be part of the GASIP team and the technical assistants that will support the implementation of the climate change resilience sub-component.

Component 2: Rural Value Chain Infrastructure

38. **Subcomponent 2.1: Productive Infrastructure and Facilities.** The aim of Subcomponent 2.1 is to leverage investments in commercial infrastructure and facilities for the selected value chains. These will be facilities operated by a private sector entity for the benefit of the entity and for all other value chain participants. Ownership can be the District Assembly (DA) or FBOs. Targeting of these facilities will be governed by an Objective Ranking System¹⁷ that quantifies magnitude of both local community and private sector benefit. Examples of such infrastructure include: warehouses, pack-houses, processing facilities, irrigation facilities, etc. All will have to show a viable management and business plan and an observable benefit for smallholders. In the case of private investors, the Programme will provide up to 70% of the cost of these facilities, matching a financial commitment from the proposed operators and/or beneficiaries of at least 30% of the value of the facilities. In the case of District Assemblies, the Programme will provide up to 90% of the cost.

¹⁷ See: Programme Implementation Manual

39. **Subcomponent 2.2: Enabling Public Infrastructure.** The aim of Subcomponent 2.2 is to finance essential public infrastructure for the growth and viability of associated value chains. These are facilities completely operated by the public sector. Examples are access roads and farm tracks, rural electrification (to enable low-cost pump irrigation and processing) and water harvesting and management systems (e.g. livestock watering, flood recession schemes, small dams). ASAP will finance initial investments in water management schemes. Livestock watering points will be constructed along the rural roads at locations with high risk of flooding. These investments would then be scaled-out through the subsequent GASIP investments. The Programme will provide 100% financing, but the public entity must provide evidence that it will provide necessary operation and maintenance.

Component 3: Knowledge Management, Policy Support and Coordination

40. **Subcomponent 3.1: Knowledge Management, Harmonization and Policy Support.** Subcomponent 3.1 aims at creating an enabling environment for smallholders to participate in profitable and climate change resilient value chains. In order to achieve this, it will: (a) strengthen GOG capacity for data collection and database development, policy analysis and development, as well as harmonization of value chain tools; (b) provide institutional support to umbrella organization of relevant private sector organizations and strengthen multi-stakeholder processes for advocacy. Principal among these will be policies that optimize GoG's support to agribusiness and will specifically address climate change resilience, trade policy, land tenure, and create a positive environment for women, youth and young people's businesses.

41. Knowledge management and innovation mainstreaming play a central role in the GASIP concept, both to facilitate internal learning and to provide empirical evidence for Programme implementation and policy development. Support will be made available to document progress, share and disseminate information. Earmarked ASAP funding will target policy issues related to climate change adaptation and natural resource management. GASIP will engage with partners to: (i) develop a web-based geo-referenced environmental and climate information system for the mapping and management of natural resources and climate risks;¹⁸ (ii) enhance capacity in the collection and processing of relevant data in the Savannah Regions; (iii) capacity building of MOFA regional environmental and EPA desks on climate change; (iv) provide weather forecasters and rain gauges for MOFA; and (v) develop and disseminate knowledge products to capture and promote local adaptation measures. .

42. **Subcomponent 3.2: Coordination, Monitoring and Evaluation.** Subcomponent 3.2 will cover costs for coordination, management, monitoring and evaluation (M&E). A detailed description is presented in Chapter IV (Programme Implementation) and Appendices 5 and 6.

D. Lessons Learned and Adherence to IFAD Policies

43. Lessons learned¹⁹ from past and ongoing projects have been integrated in the design of GASIP. The main lessons are summarized as follows:

- i. the understanding and capacity to support value chain development based on commercial principles is very limited in most public services and at all levels; therefore, Subcomponent 1.1 is demand-driven, value chains are mainly selected on the basis of their commercial potential, agribusiness agreements and their enforcement are key features in the design; in addition, value chain development is business and public interventions must be backed by private sector expertise;
- ii. there is an immense need for facilitation support and technical assistance at all levels to establish the formalized agribusiness linkages and negotiate business agreements; weak performance of the agricultural extension service, in particular with respect to commercial

¹⁸ This activity will build on the data available at the ICRAF Geoscience Lab.

¹⁹ A more detailed analysis of lessons learned is presented in Appendix 3.

- food production and relationships with agribusinesses, has resulted in risks for farmers, agribusinesses and PFIs;
- iii. Subcomponent 1.2 focuses on structured trade financing, combined with formalization of agreements. Many DPs have approached universal banks with lines of credit and guarantee funds to kick-start their engagement in agriculture. The banks are very eager to engage in structured trade financing for opportunities that are based on enforceable contracts and which are large or numerous enough to merit dedicating finance, systems and human resources. Cashless credit is a strong model, when executed properly. Capacity building and facilitation support of PFIs is required and has been built in the design.
 - iv. On the basis of an impact assessment²⁰, it was decided to adopt the matching grant-cum-loan approach, as used by IFAD interventions in Ghana. The mechanism has been improved and streamlined, awareness creation has been enhanced. The approach had a positive impact on clients as measured along various dimensions and is definitely an advancement over pure matching grants or subsidized credit lines. In the case of Ghana, the formula of 30% for the MG, 10% equity contribution and 60% bank loan has been appropriate. The combination of training, coaching and financial support has proved useful. Regarding financial outcomes of the MG-cofinanced investments, survey results paint a very positive picture. About four fifths of all interviewed beneficiaries reported a doubling or even tripling of their sales and profits. Regarding technical dimensions, the quality of the financed equipment appeared generally satisfactory. Regarding operational aspects, the projects using the MG cum loan approach faced considerable implementation delays. Problems included attracting and accrediting PFIs, some of which had had negative experiences with other donor funded programs, and building capacity and full understanding of the approach among project implementers. Despite the hesitation at start, most of the interviewed banks were quite positive about the experiences with the scheme and expressed their interest to continue and expand their participation.
 - v. An important lesson from RTIMP and NRGIP implementation is that outsourcing of expertise has delivered better results than an approach where expertise is contained primarily within the PMU/PCU framework. In both programmes, progress was significantly accelerated when competent service providers were engaged, especially in commercial value chain development. This does not necessarily imply criticism of the in house experts, but rather the scale of the task required. Further experience has shown that expertise in commercial activities is more important than commodity-specific expertise.
 - vi. GASIP is not designed as a classic sector-wide approach (SWAp). SWAps with basket funding were piloted by IFAD and its partners in Tanzania, without major success because of a lack of thematic focus, visible impact, transparency and problems to monitor the funds. The start-up phase of a classic SWAp is very long, while GoG insisted on quick impact. Design is therefore based on the assumption that GASIP would provide leadership in harmonizing concepts and developing and institutionalizing building blocks of a value chain approach, in particular systems to leverage investments in equipment and infrastructure, to mobilize and allocate funding for innovation.

44. The design of GASIP is compliant with 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 Environmental and Social Review Policy. Compliance with these policies is discussed in Appendix 12.

²⁰ IFAD & FAO. Impact of Matching Grants in Ghana. December 2013. P. 28

III. Programme Implementation

A. Approach

45. GASIP is designed as a long-term Programme that will be implemented in cycles of three years each. This initial design covers the first two cycles (six years). Prior to the end of each cycle, an Inter-cycle Review Mission (IRM) will be organized to assess progress and prepare the next cycle. In addition, the first cycle will focus on (i) setting-up of the Programme structure and systems, (ii) the harmonization of value chain development and monitoring tools (e.g. VCCs, FBO-support mechanism); (iii) the institutionalization of a decentralized mechanism to (co-)finance infrastructure at District level, (iv) the harmonization of the use of matching grants to leverage private investments in equipment and commercial infrastructure and facilities, as well as (v) effective scaling up through mobilization of supplementary financing for cycle 2 based on detailed investment plans. Each IRM will consider: (a) effectiveness of the approach to reduce rural poverty; (b) readiness of qualified investment proposals from each component for the next phase.

46. The selection, screening and evaluation of value chains will be a continuous task. As mentioned above, the Programme will start in the first year to work on cassava, yam, maize, sorghum, fruits & vegetables, as well as conservation agriculture. Additional chains will be selected for piloting, using the selection process described in Appendix 4. This continuous process of value chain analyses would lead to a wealth of value chain information and feed the logical framework, guide implementation and be used as baseline and reference material for the IRM.

B. Organizational Framework

Overall Responsibility and Orientation

47. The Ministry of Food and Agriculture (MOFA) is designated as the Lead Programme Agency. The MOFA shall have the overall responsibility for the implementation of the Programme and shall ensure linkages to other relevant Ministries, Departments and Agencies.

48. The Lead Programme Agency shall establish a National Programme Steering Committee (NPSC) which shall orient the strategy of the Programme, oversee planning, review progress and impact and ensure linkages with related projects, government services and relevant value chain stakeholders. The NPSC shall be chaired by the MOFA and shall meet at least twice a year. Its membership and specific responsibilities shall be detailed in the Programme Implementation Manual.

Programme Management²¹

49. The function of Programme Management will focus on coordination, technical leadership, Knowledge Management and policy linkages, and not specialized management of activities, which will be largely outsourced to value chain facilitators, public services, specialized technical service providers and participating financial institutions (PFIs). In line with decentralization, coordination will be gradually mainstreamed into the regional and district institutions during the life of the Programme.

50. A Programme Coordination Unit (PCU) shall be established by the MOFA and shall be based in Accra. The responsibilities of the PCU shall include the overall coordination of the activities implemented under the Programme; direct implementation of subcomponent 3.1 (Knowledge Management, Harmonization and Policy Support); and subcomponent 3.2 (Coordination, Monitoring and Evaluation). The PCU shall have overall fiduciary responsibility for Programme implementation, including consolidation of Programme accounts, preparation of annual financial statements, disbursements, consolidation of Annual Work Programme and Budget (AWPB) and procurement plans; quarterly financial reports; consolidation of progress reports; organization of annual audits in line with IFAD's guidelines; assistance for supervisions, support mission and other missions including

²¹ Details are presented in Appendix 5.

inter-cycle; promotion of transversal themes such as gender and youth; and preparation and updating of Programme Implementation and other required Manuals.

51. The MOFA shall establish three Zonal Programme Offices (ZPO), to provide day to day coordination of Programme activities. The ZPO shall work in close collaboration with the Regional Agriculture Development Units (RADUs). The existing Programme Management Unit of the IFAD co-financed Northern Rural Growth Programme (NRGP) located in Tamale shall be strengthened to coordinate the activities of the Programme in Northern Ghana until the completion of the NRG. At that time it shall become the Northern ZPO (ZPON) of the Programme. A ZPO Central (ZPOC) shall be established in Kumasi, and a ZPO South (ZPOS) shall be established in Dodowa. Under the general coordination of the PCU, the responsibilities of each ZPO in their respective area of intervention shall include the preparation of the zonal AWPB and submission to the PCU for consolidation; the coordination of implementation of activities under the respective zonal AWPB; monitoring of Programme activities and elaboration of progress and financial reports; and provision of technical support to RADUs and other decentralized Programme Parties to strengthen coordination and M&E capacities. Additionally, the ZPON will have a key role in the implementation of activities financed by the ASAP Grant.

52. At the end of each cycle, the effectiveness of the implementation arrangements, including the composition of the PCU & ZPO teams will be assessed and adapted to the needs of the Programme. A performance based evaluation system of human resources will be used to appraise results achieved by staff. To achieve this, the PCU will adopt annual performance plans that are linked to the AWPB. Provision will be made to ensure that general Programme performance is regularly reviewed with major stakeholders, including clients, PFI and DA.

53. Overall, the PCU will need TA to implement the programme in view of its highly flexible and demand-driven nature, particularly in its initial phase and in the preparation of new VCs for support.

Role of Regions and District Assemblies

54. MOFA's Regional Agricultural Development Units (RADUs) will be involved in external monitoring and coordination at regional and district levels. The ZPO will liaise directly with RADUs and other regional-level public services.

55. The District Assemblies (DA) will: (i) provide funding and logistics to the relevant departments to implement their core mandate as far as VCC strengthening and agribusiness development are concerned, including support through the District Departments of Agriculture (DDA), the Department of Co-operatives (DOC) and the BACs; (ii) support the establishment and operation of VCCs, give access to their facilities for VCC meetings, and facilitate their registration to give them legal authority and mandate for their operations in the District; (iii) provide incentives and enabling measures for agribusinesses in their Districts; (iv) for water management schemes, mobilize the community and organize the selection process of intervention sites, undertake reconnaissance studies and all procedures to acquire the land area via Lease, sign agreements with WUA to define mutual responsibilities; (v) for commercial infrastructure and facilities, provide the land and contribute to investments, organize procurement and implementation; (vi) for feeder roads and farm tracks, propose a selection on the basis of agreed criteria, include them in their annual maintenance plan; (vii) contribute through MOFA to the implementation of the Environmental and Social Management Plans (ESMPs); and (viii) provide monitoring of outputs.

Implementation of Components

56. **Agribusiness Linkages Development (Subcomponent 1.1).** The Value Chain Facilitators (VCF) will be recruited on the basis of a performance-based contract, renewed on an annual basis, by the ZPO with a clear mandate and targets to develop a well-defined value chain from production to end-user or export market. The VCF will identify and work in collaboration with a broad platform of private sector end-users, entrepreneurs, suppliers of raw material. In addition, other required services providers will be recruited if/when needed to solve specific bottlenecks. Progress will be assessed on

a regular basis by the ZPO and the required corrective measures will be taken. The VCF will work in close collaboration with the DADU. The DOC will provide guidance to FBOs, ensure audits and register FBOs. Requests to support the establishment of a VCC will come from the agribusiness and FBO community and DA and will be addressed to the ZPO. The VCC will: (a) participate in the identification and selection of farmers or FBOs; (b) facilitate the signing of MoUs between all stakeholders so as to create more formalized agribusiness linkages; (c) facilitate linkages with PFIs; and (d) coordinate district-level planning with support from the DADU, VCF and BAC. Given the critical role of quality facilitation, the programme will build on the capacity and experience already embedded in the VCF of NRGP by mobilizing them to partner with GASIP and support a transfer of concepts and skills to NGOs/private sector, MOFA staff and consultants.

57. **Rural Financial Services (Subcomponent 1.2).** Subcomponent 1.2 will be administered by the Zonal Agricultural Economists under the overall supervision of the Zonal Programme Coordinators. The majority of technical assistance activities will be managed by consultants on a contractual basis. Consultants will include both local and international engagements depending on the degree to which the appropriate skills are available in the local market. It is recommended that GASIP adopt an Indefinite Quantity Contract (IQC) mechanism to engage consultants whereby the programme signs agreements with a limited number of reputable firms for a three-years tenure and the firms compete to provide the appropriate consultants within 30 days of receiving Terms of Reference (ToR) from the Programme.

58. **Matching Grants²².** In sync with the manuals of NRGP and REP, Matching Grants (MGs) are essentially a challenge mechanism. The grant is governed by strict criteria and only for pre-determined physical assets (or types of assets). The grantee avails at least 10% in cash toward the asset and then applies to the ZPO. The ZPO then verifying the cash is in place and the asset conforms to the pre-set criteria. If that is the case, the Zonal Programme Coordinator writes the applicant a *letter of support*. The letter states that if within 12 months the applicant can find a lender to lend 60% of the value of the asset to the grantee, then the Programme will offer a down payment of 30% to complement the cash down payment of 10% (or more). This forces the lender to take risk on the grantee and to do a thorough due diligence of the grantee as a borrower. Only if the lender is satisfied will the lender agree to lend 60% of the asset value. Only if a lender agrees does the Programme release the other 30% as grant.

59. **Climate Change Resilience (Subcomponent 1.3).** Implementation of Subcomponent 1.3 will be coordinated by the ZPO North and undertaken in collaboration with the relevant actors including VCF, VCC, MOFA, Environmental Protection Agency (EPA), Ghana Meteorological Agency (GMet) and Ghana Irrigation Development Agency (GIDA). The selection of demonstration sites for conservation agriculture, as well as other soil and water conservation techniques will be done using predetermined criteria. The ZPON will validate the selected sites, which will be proposed by VCC and agribusinesses. Each demonstration will include smallholders, either as out growers for nucleus estates or as FBO members within a VCC arrangement. The ZPON will also procure consultancy services for the preparation of awareness raising and training materials on climate change resilience. This will be carried out in collaboration with EPA, in view of their experienced in the collation and dissemination of knowledge relating to climate change.

60. **Productive Infrastructure and Facilities (Subcomponent 2.1).** Identification of potential investments will be the responsibility of the VCC in close collaboration with the DA. The DA will apply eligibility criteria that will be provided by the Programme. Private investors can also apply for Matching Grants. In case of a public investment (to be managed by the private sector), the DAs will undertake the reconnaissance studies, while GIDA will conduct site feasibility studies if required. The final ranking and selection will be done by the ZPO. The DA undertakes all procedures to acquire the land area via Lease (survey and production of cadastral plans and issuance of lease from the Lands Commission).

²² Details in Appendix 4 and in the Programme Implementation Manual.

61. **Enabling Public Infrastructure (Subcomponent 2.2).** For feeder roads, rural electrification and water management schemes, the DA will apply eligibility criteria of GASIP. Selection criteria must include but not limited to the following: (i) investments that are required to develop Programme intervention sites; (ii) environmental impacts that can be mitigated at an affordable cost; (iii) investments that benefit smallholders; (iv) vulnerability assessment to identify hotspots for impacts of climatic events such as floods. The selection proposed by the DA and validated by the ZPO will be included in the DA Consolidated Plan and Budget, as well as in the GASIP AWPB. The ZPO will procure consultancy services for the design and supervision of works, and a contractor for works. The DA will include the investments in their annual maintenance plan.

62. **Knowledge Management and Policy Support (Subcomponent 3.1).** Policy development and Knowledge management (KM) activities will be included in the AWPB of the PCU and implemented by the Senior Policy and Evaluation Specialist in the PCU. Annual planning and implementation will be undertaken in close collaboration with MOFA, in particular with the Policy, Planning, Monitoring and Evaluation Division (PPMED). The environmental & climate change GIS will be implemented in collaboration with key stakeholders, such as the Centre for Remote Sensing and Geographic Information Services (CERSGIS) based at the University of Ghana, MOFA, EPA and GMet.

C. Planning, M&E, Learning and Knowledge Management

Planning

63. GASIP will be implemented on the basis of an approved rolling two-year Annual Work Plan and Budget (AWPB), drawn from an overall cycle plan, in which yearly activities and budget allocations are estimated at the start of the cycle. Each year, a participatory planning process will take place at the district, regional and zonal level to develop the AWPB. This bottom-up approach will ensure strong stakeholder participation, engender a sense of ownership of the Programme and, to a large extent, facilitate smooth implementation for maximum impact. The planning will be guided by: (a) annual budget ceilings that will be provided by the ZPO, (b) the components and targets set for each expected outcome and output; (c) the half-yearly progress reports and Participatory Outcome Assessments. The VCF will organize AWPB preparation meetings at the District level in August. A first consolidation will be done at the regional level by the VCF, RADU and ZPO. Each ZPO will forward its zonal AWPB to the PCU, which will consolidate and prepare the overall AWPB of GASIP. The consolidated AWPB will be submitted to the NPSC for review and approval prior to submission to the various financiers for non-objection.

Monitoring and Evaluation

64. The Logical Framework of GASIP will form the basis of measuring outputs, outcomes and impact. The M&E system will take targeting of women and young people into account by whenever possible disaggregating data in gender and age. The overall responsibility for M&E will be vested in the Senior Policy and Evaluation Specialist at PCU, who will work through the two Zonal Monitoring and Evaluation Officers. Strict subsidiarity will be respected between zonal and national levels.

65. Each ZPO will mainly focus on programming and internal monitoring of progress in its intervention zone. Internal monitoring will concentrate on an agreed national list of indicators. The ToR of the ZPO's will include: (a) organisation of Annual Review Workshops and their reports; (b) preparation of zonal AWPBs; (c) preparation of quarterly and annual progress reports; (d) preparation of status reports for supervision missions; (e) preparation of ad-hoc reports, as required; (f) preparation of ad hoc value chain analysis reports.

66. The PCU will (i) gather information from each ZPO and compile it in comprehensive reports, namely the AWPB, quarterly, half-yearly and annual reports; (ii) ensure the internal monitoring of Component 3; (iii) assure quality of internal monitoring done by the ZPOs; (iv) conduct Participatory Outcome Assessments as well as ad hoc studies. The PCU will cooperate closely with MOFA M&E, including SAKSS, as well as other relevant forums.

67. **External Monitoring** of GASIP will be assured by MOFA in close collaboration with Ministry of Finance, IFAD and other co-financiers (see: supervision). The PCU will provide logistics to the external monitoring (supervision) missions.

68. **Inter-cycle Review Mission.** Prior to the end of each cycle, an Inter-cycle Review Mission (IRM) shall be organized to assess progress, prepare the next cycle and justify new funding, if applicable. The IRM shall take place six to nine months before the end of each cycle. The Lead Programme Agency, the Fund and other co-financiers shall carry out the IRM, supported by the PCU and the ZPO. Value chain analyses and ad-hoc surveys shall be completed and assessed by the IRM.

69. **Evaluation.** GASIP, being a national programme, does not require the classic area-based baseline survey. However, sources of information will be: (a) desk review of relevant indicators, including information on rural poverty, youth unemployment and malnutrition; (b) detailed and preferably quantitative analysis of value chains and farming systems, which is also part of the selection process of value chains; (c) a panel survey with a control to be carried out before programme start (part of the selection process of value chains); (d) the public institutions that supervise the financial sector. The focus will be on tracking indicators of the outcome and output level of the logical framework, which will provide evidence on the effectiveness of programme mechanisms for each value chain. Other sources of data would be: (a) the client database; (b) Enterprise books and Farm books.

70. In addition to the panel survey and the desk review, a dynamic web-based **client database** that will track the services delivered to each client and the evolution of each client in terms of business performance. The system would provide GIS-based data presented in different map layers for visualisation. A harmonized client ID/bar code system will be developed to facilitate data registration.

Learning and Knowledge Management

71. Learning and knowledge management play a central role in GASIP's innovation mainstreaming and scaling up agenda. The M&E system will focus on efficiency and effectiveness of value chain development tools and provide learning backed by rigorous data collection and scientifically accepted evidence to fine-tune the models for systematic scaling up. Knowledge management is also at the heart of IFAD's partnership efforts and policy dialogue with Government. Institutional learning will be assured by 6-monthly coordination meetings, organized by the PCU, where good practices and challenges can be shared within the partners.

72. The Programme will also capture lessons and deliver knowledge products on climate change adaptation in value chain programmes. Facilitated by ASAP funding, learning and knowledge management related to smallholder adaptation to climate change will focus on the commercial profitability and will generate publications, technical notes, briefs and other communication material that will be disseminated in-country and in international networks (i.e. UNFCCC, CDKN and others). Further, cross-learning within the country and with other countries in the region will be encouraged. The goal is to scale up good adaptation practices.

D. Financial Management, Procurement and Governance

Financial Management

73. The Financial Management (FM) arrangements will, to the extent feasible, be mainstreamed in the GOG system. It is expected that mainstreaming will be progressively achieved during the life of the Programme. The Directorate of Finance in MOFA will be responsible for ensuring that adequate FM arrangements exist throughout GASIP implementation. The operational day-to-day fiduciary functions will be the responsibility of a GASIP Finance and Administration Manager. In compliance with IFAD's General Conditions, the GASIP financial statements, prepared by the PCU, will be audited on an annual basis and the auditor's report submitted to IFAD no later than six months after the end of each fiscal year. The guidelines and operational procedures required to support implementation will be consistent with the GoGs financial procedures (Financial Administration Act (Act 644, 2003), The

Public Procurement Act (Act 663, 2003), Internal Audit Agency Act (Act 658, 2003)) and in line with IFAD policies. Details with respect to Financial Management, Budgeting, Accounting, Fund Flow, Disbursements, Financial Reporting, Internal Control and Auditing are presented in Appendix 7. The overall financial management gross risk for the Programme is rated “high” and the residual FM risk as mitigated is rated “medium”.

Procurement

74. The Procurement Manual published by the Public Procurement Authority (PPA) Ghana, in line with the Public Procurement Act, 2003 (Act 663), was reviewed. The review confirms that national procurement procedures are conform to the IFAD procurement principles and can be used. However, IFAD’s procedures shall supersede the Borrower’s procedures in case of inconsistencies between the two procedures. Overall procurement responsibility at all levels will rest with the PCU and the ZPOs. All procurement financed from proceeds of the IFAD loan and grant will be exempt from national and local duties and taxes. All procurement will be authorised only against the procurement plans in approved AWPBs, specifying items to be procured, responsibility for the procurement and the appropriate procurement methodology. Details are presented in Appendix 8.

Governance

75. Ghana’s fiduciary environment is considered broadly adequate. GoG has made progress in strengthening its public financial management (PFM) systems. In the Transparency International's Global Corruption Perception Index (CPI) for 2012, Ghana gained five positions up as 64th country in the world and sixth country in Africa. Its rating improved from 33 in 2006 to 45 in 2012. No specific Governance and Anticorruption (GAC) strategy is included in the design of GASIP as the IFAD threshold is 30. Nevertheless, design includes measures to enhance good governance in implementation, including: (i) institutional capacity building of FBOs and VCCs; (ii) bottom-up participatory evaluation and programming meetings; (iii) capacity building of Programme staff, implementing agencies and DA in financial management and procurement; (iv) internal and external audits.

E. Supervision

76. 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 Programme 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 Programme.

77. GASIP supervision will be carried out directly by IFAD, GOG and the co-financiers. The supervision plan will include two supervision missions annually in the first two years. Additional implementation support missions will be organized on a needs basis, with the IFAD Country Office (ICO), providing backstopping. During the first year, the supervision and implementation support focus will be on (i) the efficiency of the scaling up process; (ii) the AWPB preparation process; (iii) progressive involvement of decentralised structures in programming, implementation monitoring and financial management; (iv) the operational capacity of the PCU and ZPOs and the adequacy of the FM arrangements.

F. Risk Identification and Mitigation

78. This section identifies the risks with the greatest likelihood of occurring and the highest potential impact on the achievement of the Programme Outcomes.

Table 2: Risks and Mitigation Measures

Risk	Implications	Mitigation Measures
Inability of VCCs to formalize	Limited interest of formal value chain stakeholders to	Strengthening FBOs, as core members of VCC.

Risk	Implications	Mitigation Measures
linkages	work with smallholders	Development of easily understood and enforceable contracts between buyers and sellers as a critical element for GASIP. Research into value chain opportunities that spell out value the proposition of dealing with smallholders in plain language to larger buyers and financiers.
Low capacity of Programme to interest PFIs in financing value chains.	Limited outreach to smallholder farmers. Low willingness to finance value chain actors	Proper support to GASIP staff and consultants at programme start to ensure high standards of value chain analysis and presentation. Training in agricultural VC analysis, risk identification and management. Facilitation of contractual linkages by VCC to perfect lender security. Replication of successful structured trade financing strategies by RCBs working with NRGF. Matching grants to improve borrower's collateral position. Collaboration with RAFiP and other programmes. Piloting innovation in value chain financing.
Matching Grants fail to leverage PFI loans	Value Chain financing doesn't increase; Liquidity along value chains remains an impediment to commercialization; SMEs fail to scale up operations with higher throughput technology	Begin with MGs on a modest scale; Prove the concept beyond any doubt, before scaling up; Provide strong orientation to PFIs underpinned by business cases. Research into value chain opportunities that spell out value the proposition of dealing with smallholders in plain language to financiers, as above.
Matching Grants are captured by agribusinesses which do not link to smallholders	Grant funds are used up quickly by businesses that do not impact rural poverty	On grants above a US\$ 20,000 threshold, require that the business plan clearly demonstrate benefits to the entire value chain by either lowering costs or expanding revenues to smallholders.
Lack of technical knowhow on commercial climate change adaptation technologies	Low adaptation rate. Agribusiness not interested in technologies Scattered disbursement of funds with low impact.	Focus on commercial demonstrations in partnership with agribusiness and out growers. Specialized technical assistance.
Decentralisation of MOFA to District Assemblies	Inadequate capacity for DA co-financing. Delays in programming and implementation	Adoption of tools that can be mainstreamed in DA structures. Direct collaboration between the ZPO and the regional and district levels. Policy dialogue with MOFA and MLGRD
Agriculture SWAp.	Reluctance of DP to provide additional financing. Low sustainability	Programme approach, based on mainstreaming Institutionalization during the first cycle of value chain financing mechanisms to finance infrastructure, matching grants innovations in value chains

IV. Programme Costs, Financing, Benefits and Sustainability

A. Programme Costs

79. Basic programme costs over six years, including contingencies, taxes and duties, are estimated at US\$ 113.0 million or the equivalent of GHS 297.9 million. Details are presented in Table 3.

B. Programme Financing

80. A total of US\$ 71.6 million of IFAD funding is expected to be mobilized for GASIP for the first six years (two cycles). GASIP will absorb the entire PBAS allocation of US\$ 36.6 million of the 2013-2015 PBAS allocation for Ghana as highly concessional loan, as well as US\$ 10 million ASAP grant funding for climate change adaptation activities. Subject to availability, additional financing of US\$ 35 million will be earmarked from the 2016-2018 PBAS cycle.

81. IFAD will also provide a small grant of US\$ 500,000, as parallel financing to develop and pilot project tools and mechanisms.

82. The ASAP grant of US\$ 10 million will be mobilised within this first cycle for climate change adaptation activities. This grant will focus on activities that will target the drivers of vulnerability to climate-change related risks in Subcomponent 1.3, Subcomponent 2.2 (water harvesting infrastructure) and Subcomponent 3.1 (policy support and knowledge management around climate change and natural resource management issues). ASAP will mainly target the geographical areas that are ecologically and socially most vulnerable to climate-related risks.

83. Co-financing opportunities will be explored by GoG and the IFAD Country Office (ICO) during the pre-project phase and the first cycle. These resources will mainly be used to (i) top-up Component 2 (rural roads, rural electrification, commercial infrastructure and facilities); (ii) top-up the budget lines for matching grants to encourage private sector investments in equipment for production and processing; (iii) increase the number of targeted value chains, in particular in the livestock and fisheries sector; (iv) general institutional strengthening (MOFA and District level). Additional investments in infrastructure would allow increasing the outreach of the Programme (increased number of clients), deepening the impact at household level (higher prices due to reduced transportation cost). MOFA has initiated a process to develop a framework that is expected to lead towards an effective sector-wide approach to programming and implementation.

84. The Government of Ghana will finance taxes and duties on imported goods, and Value Added Tax (VAT) for a total amount of US\$ 7.6 million. In addition, Government will finance part of the recurrent costs and office space of the PCU and ZPOs. All assets of RTIMP will be transferred to GASIP (offices, furniture, vehicles, etc.). The contribution of Municipal and Districts Assemblies (MDA) amounts to US\$ 1.7 million, which covers a 10% contribution to public infrastructure. This amount can be paid in cash or kind (land, maintenance, facilitation support). Other MDA contributions (listed under Chapter III.B) have not been budgeted as they consist mainly of contributions in kind (district staff & facilities).

85. The PFIs are expected to provide credit of at least US\$ 17.5 million to the beneficiaries of the matching grants.

86. Clients will be expected to contribute, either in cash or kind, to training courses. Their contribution will be 10% of the cost of training, 10% of investment eligible for the matching grants and 30% of commercial infrastructure and facilities. In addition, they will apply for credit to finance equipment and inputs. Their total contribution is estimated at US\$ 4.6million (plus US\$ 17.5 of credit). A contribution of FBOs and their members will be demanded in-kind in the following areas: (a) for demonstrations, provision of land and labour; (b) for credit, FBOs will be required to open bank accounts and make regular deposits into it; (c) for certification. In addition, cost sharing opportunities will be explored where this is demand-driven and cost-effective.

Table 3: Programme costs by Component

	(GHS '000)			(USD '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign	Base
							Exchange	Costs
A. Value Chain Development								
1. Agribusiness Linkages Development	39.876	4.523	44.399	19.938	2.261	22.200	10	20
2. Value Chain Financing	24.313	41.407	65.720	12.156	20.704	32.860	63	30
3. Climate Change Resilience	14.185	10.122	24.308	7.093	5.061	12.154	42	11
Subtotal Value Chain Development	78.374	56.052	134.427	39.187	28.026	67.213	42	61
B. Rural Value Chain Infrastructure								
1. Productive Infrastructure and Facilities	14.865	4.875	19.740	7.433	2.438	9.870	25	9
2. Enabling Public Infrastructure	27.930	9.210	37.140	13.965	4.605	18.570	25	17
Subtotal Rural Value Chain Infrastructure	42.795	14.085	56.880	21.398	7.043	28.440	25	26
C. Knowledge Management, Policy Support and Coordination								
1. Knowledge Management & Policy Support	4.257	1.083	5.341	2.129	542	2.670	20	2
2. Coordination, Monitoring & Evaluation	21.512	3.710	25.222	10.756	1.855	12.611	15	11
Subtotal Knowledge Management, Policy Support and Coordination	25.769	4.793	30.562	12.885	2.396	15.281	16	14
Total BASELINE COSTS	146.939	74.930	221.869	73.469	37.465	110.934	34	100
Physical Contingencies	-	34	34	-	17	17	100	-
Price Contingencies	50.381	25.607	75.988	1.349	687	2.036	34	2
Total PROJECT COSTS	197.319	100.572	297.891	74.818	38.169	112.987	34	102

Table 4: Components by Financier

	IFAD 1		IFAD 2		ASAP		Government		District Assembly		Local Banks		Beneficiaries		Total		
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	
A. Value Chain Development																	
1. Agribusiness Linkages Development	10.919	48,4	10.786	47,9	-	-	832	3,7	-	-	-	-	-	-	-	22.537	19,9
2. Value Chain Financing	5.836	17,4	7.239	21,6	-	-	196	0,6	-	-	17.474	52,0	2.835	8,4	33.579	29,7	
3. Climate Change Resilience	-	-	2.960	23,9	7.750	62,7	1.336	10,8	-	-	-	-	317	2,6	12.364	10,9	
Subtotal Value Chain Development	16.755	24,5	20.985	30,6	7.750	11,3	2.363	3,5	-	-	17.474	25,5	3.153	4,6	68.479	60,6	
B. Rural Value Chain Infrastructure																	
1. Productive Infrastructure and Facilities	3.324	33,0	3.559	35,3	-	-	1.506	14,9	219	2,2	-	-	1.473	14,6	10.081	8,9	
2. Enabling Public Infrastructure	9.786	51,9	3.289	17,4	1.510	8,0	2.828	15,0	1.441	7,6	-	-	-	-	18.853	16,7	
Subtotal Rural Value Chain Infrastructure	13.110	45,3	6.848	23,7	1.510	5,2	4.334	15,0	1.661	5,7	-	-	1.473	5,1	28.935	25,6	
C. Knowledge Management, Policy Support and Coordination																	
1. Knowledge Management & Policy Support	908	33,4	883	32,5	740	27,3	185	6,8	-	-	-	-	-	-	2.716	2,4	
2. Coordination, Monitoring & Evaluation	5.827	45,3	6.285	48,9	-	-	746	5,8	-	-	-	-	-	-	12.858	11,4	
Subtotal Knowledge Management, Policy Support and Coordination	6.735	43,2	7.168	46,0	740	4,8	930	6,0	-	-	-	-	-	-	15.574	13,8	
Total PROJECT COSTS	36.600	32,4	35.000	31,0	10.000	8,9	7.628	6,8	1.661	1,5	17.474	15,5	4.625	4,1	112.987	100,0	

C. Summary Benefits and Economic Analysis

Programme Benefits

87. At the level of the Programme development objective (PDO), GASIP will target at least 62,860 clients or direct beneficiaries towards the end of PY3 and 86,400 clients by PY6, of which at least 50% will be women, 20% youth (15-24 years) and 30% young adults (25-34 years). The total number of beneficiaries in the households reached would be 601,000. The direct clients would cultivate 74,300 ha under improved technologies, mostly as part of an agribusiness arrangement. Most direct clients would be linked to other value chain actors, which would lead to access to improved seeds (at least 60,000 farmers), extension support, seasonal credit, investment support (32,000 farmers & 1,500 FBOs), irrigation schemes, storage facilities group-owned processing units, etc.. The support would lead to significant increases in social (FBOs, VCCs) and economic capital (assets and linkages with value chain actors). The support would lead to significant increases in yield and revenues for crops that will be targeted through local PPPs from 212 GHS/ha to 425 GHS/ha for cassava production (yield increase from 7 to 14 MT/ha), from 37 GHS/ha to 362 GHS/ha for maize, from 90 GHS/ha to 325 GHS/ha for sorghum. Young adults would benefit from pump irrigation, with high incomes from vegetable and fruit production. In northern Ghana, conservation agriculture would be mainstreamed, leading to stable yields, improved soil fertility and lower requirements for external inputs. Net income would be up to 382 GHS/ha for maize and 1,645 GHS/ha for soybean in a conservation agriculture rotation.

88. At grassroots level 4,300 FBOs would be involved in Programme implementation in PY6 and receive institutional support and training to sustain their operations. In addition, at least 40 apex FBOs would be established at district level. Most FBOs would be linked to agribusinesses, agro-industries, input suppliers and at least 150 financial institutions or their branches.

89. At district level, 120 VCCs would be established by PY6 and strengthened in order to become sustainable local facilitators for agribusiness linkages development. The matching grant scheme would be mainstreamed under the leadership of IFAD cofounded programmes, including REP, RAFiP and GASIP, to become a tool for GoG to channel investment support to farmers to modernize their equipment.

90. MOFA staff at national, regional and district would receive capacity building in the fields of value chain development, climate change adaptation and resilience of agricultural production systems. Also private sector capacity in value chain development would be established at the level of the VCFs.

Value Chain Analysis

91. Nine (9) models for crop production were made for frequent activities that will be promoted by GASIP. The analysis covers: (a) upland crops (cassava (new clients), cassava (RTIMP clients), maize (new clients), maize (NRGP clients), sorghum); (b) irrigated crops (maize, pineapple); and (c) conservation agriculture (maize and soya in crop rotation).

92. The cassava gari chain was very profitable for all actors in 2012 and has high potential for employment creation in rural areas, in particular for women in processing and young men in outgrower schemes. A typical Good Practice Centre (GPC) for gari processing, as promoted by RTIMP, has an IRR of 67%. The GPCs can be used as value chain drivers by GASIP. However, the initial investment barrier is high for women groups; private investors do not have incentives to do environmental impact mitigation investments; market prices are characterized by a strong cyclical component (cycle of 4-5 years) which as an impact on creditworthiness of investors. Maize accounts for 50 to 60% of total cereal production in Ghana. NRGF is successfully working with wholesalers as market drivers in local agribusiness agreements. Overall, the production and trade is profitable, but more risky in northern Ghana that has only one cropping season per year, because of erratic rains and limited seasonal price fluctuations (limited price increases to remunerate storage after harvest,

because southern Ghana has two harvests). Soybean is a weak value chain in Ghana because it's not well understood, but important for its potential impact on nutrition, animal feed and soil fertility. Improving on farm productivity is immediately critical and this work is being undertaken, in part, by NRG. The sorghum value chain is being promoted by NRG that uses aggregators. The chain is important for food security and poverty reduction, in particular for subsistence farmers.

93. As irrigated crops, pineapple and irrigated fresh maize chains are typically targeted through national value chains, as these chains are quite sophisticated in terms of technology and market linkages. Without stable market linkages, markets are easily saturated. Requirements for investment capital and working capital are typically high. The pineapple value chain is healthy and seemingly capable of expansion, both for the domestic and export market. The IRR for pineapple is 144%, that for irrigated fresh maize 76%.

Financial Analysis

94. Overall, all financial crop models are profitable. Table 5 demonstrates gross revenue, working capital, net present value (opportunity cost of capital: 10%), benefit/cost (B/C) ratio, and return to family labour. Gross revenue is the gross receipts from selling the commodity produced by a typical farmer for a hectare under production. The working capital needs includes all variable cash inputs (seed, fertilizer, bags,...), hired labor, rents and services paid for by a typical farmer. Under NRG and GASIP, the cashless credit scheme (CCS) is promoted to finance working capital of these seasonal crops, with the farmer receiving the inputs and services in kind and reimbursing after harvest. The B/C ratio gives an indication of the adequacy of the CCS. The typical CCS of 5 months costs 10% (interest rate of 2% per month). The B/C ratio is most remarkable for premium crops consumed fresh - pineapple and irrigated maize (2.24 and 2.55) but these crops are niche products or target a specialized market and linkages. The B/C ratio is also acceptable for the conservation agriculture models (1.27 for maize and 1.73 for soya), but the investment barrier in terms of working capital is also quite high, compared to traditional crops. In addition, investment capital is required. However, the models assume that farmers pay for mechanization services. Specialized service providers are not yet available, but would be supported by the Programme. The B/C ratio is remarkably lower for staple commodities: cassava 1.44, maize 1.32 and sorghum.1.26. Former RTIMP (model 2) and NRG (model 3) clients invest further in inputs which would lead to further increases in yields, from 14 to 21 MT/ha for cassava and from 2.5 to 4 MT/ha for maize. These models have interesting B/C ratios, but require also more working capital.

Table 5: Gross revenue, cost of production and benefit/cost ratio

	Gross revenue (GHS/ha)	Working capital (GHS/ha)	Net present value (GHS/ha)	B/C Ratio	Return to family labour (GHS/day)
Improved Upland Cropping					
1. Cassava	1,400	600	1,306	1.44	5.67
2. Cassava (former RTIMP clients)	2,100	850	2,765	1.71	11.67
3. Maize mono-cropping	1,500	662	762	1.32	3.82
4. Maize (former NRG clients)	2,400	1,050	2,863	1.57	9.21
5. Sorghum mono-cropping	1,575	675	1,444	1.26	3.42
Irrigated Crops (pump irrigation)					
6. Fresh maize	7,500	2,562	12,454	2.55	60.83
7. Pineapple	27,562	11,925	74,939	2.24	203.50
Conservation agriculture					
8. Maize in rotation	1,800	1,288	773	1.27	14.70
9. Soybean in rotation	2,750	975	8,345	1.73	63.27

Sources: Own analysis on the basis of information from RTIMP; NRG; JICA; GIZ-MOAP

95. Table 6 compares yields and net revenue in a "without programme" and "with programme" situation. All models indicate that technologies to be promoted leads to significantly higher yields and gross margins. However, the experience also shows that price, yield and market risks have to be taken into account.

Table 6: Programmatic impact on producers' yields and net revenues

Example	Yield before intervention (MT/ha)	Yield after intervention (MT/ha)	Net income without GASIP (GHS/ha)	Net income with GASIP (GHS/ha)	Incremental income (GHS/ha)
Improved Upland Cropping					
1. Cassava mono-cropping	7.00	15.0	212.5	500.0	287.5
2. Maize mono-cropping	1.00	2.50	37.5	362.5	325.0
3. Sorghum mono-cropping	0.75	1.50	90.0	325.0	235.0
Irrigated Crops (pump irrigation)					
4. Fresh maize	1.87	3.75	2,400	4,562	2,162
5. Pineapple	13.5	61.25	2,250	15,252	13,012
Conservation agriculture					
6. Maize in rotation	1.00	3.00	256.0	382.0	126.0
7. Soybean in rotation	0.70	2.00	79.0	1,645.0	1,566.0

Sources: Own analysis on the basis of information from RTIMP; NRGP; JICA; GIZ-MOAP

96. Good Practice Centres (GPC) for processing of cassava into gari are promoted and used by RTIMP as learning centres, but managed and owned by women groups on a commercial basis. RTIMP intervenes only in the initial investment. An investment analysis on a sample of 10 GPCs in 2012 shows a Financial Internal Rate of Return (FIRR) that varies between 2% and 319% with a medium FIRR of 67% (details are presented in Appendix 10). The quality of daily management seems to be the key success factor of the GPC. The average investment cost in these 10 GPCs was GHS 69,000 during 2007-2012. Currently, the investment cost would be about GHS 130,000, as requirements for product quality, health and environmental impact mitigation are more stringent. In addition, the GPC concept has been fine-tuned by RTIMP. A well-managed GPC creates between 90 and 130 jobs, often for women in processing but also for farmers in outgrower schemes, transporters, artisans and retail traders. Since the MTR of RTIMP, it was decided to link these centres upstream to outgrowers for supply of raw material and downstream to wholesale buyers, supermarkets and export markets at the demand side. In addition, RTIMP is working on certification and traceability.

Economic Analysis of GASIP

97. In order to calculate the Economic Rate of Return (ERR) of the Programme, the economic benefits were calculated for a 20-year period. The opportunity cost of capital is 12%. The analysis takes into consideration the phasing in of programme interventions over the six years of the first two cycles of GASIP. It is based on the 86,400 direct clients targeted by PY6, using a cash flow model that includes all investment and operational costs, the maintenance costs of all public infrastructure purchased by the Programme (5% annually for 20 years), the incremental net revenues from the above financial models. The farmers will adopt the technologies on 79,200 hectares, of which 50% existing fields and 50% new fields. The economic cost of GASIP has been calculated using the COSTAB Programme. The seven models are in no way exhaustive as GASIP itself will adopt an adaptive, opportunistic approach to choose value chains in targeted geographies as they show promise. Investment and incremental recurrent costs of all programme components have been included in the analysis. Financial flows from credit or grant facilities have been deducted, so as to avoid double counting. The analysis is based on direct costs and benefits, social and indirect benefits have not been taken into account. A number of scenarios were tested to establish the economic viability of the total Programme in the event of adverse factors.

98. On the basis of the above assumptions, the ERR of GASIP will be 18.6%; the Net Present Value (NPV) will amount to US\$ 31.3 million. The following table demonstrates a sensitivity analysis of the ERR to estimate the cash benefit to Ghana's economy from the investments. Key success factors at the level of the PDO are clearly (a) the outreach or number of farmers reached or total acreage

cultivated; (b) the increase in income per hectare. In case only 65,700 farmers are reached, the ERR drops to 12.1. Also delays of benefits have serious consequences for the ERR.

Table 7: Economic Rate of Return (ERR)

Assumption	Related risks	ERR	NPV (mio USD)
Base case (86,400 farmers)		18.6%	31.3
Decrease in incremental benefits per ha: -10%	Good market prices, good adoption of technologies	16.3%	19.9
Decrease in incremental benefits per ha: -20%	Low crop yield, reluctance to adopt technologies, low farm gate prices, weak bargaining power of farmers, low willingness of PFIs to give loans	13.9%	8.4
Programme Cost Rise of 10%	Low management capacity of PCU and ZPOs, not enough focus on core activities	16.5%	23.0
Programme Cost Rise of 20%		14.7%	14.7
Number of farmers -15% (73,440 farmers)	Low implementation capacity of ZPOs and VCF	15.1%	14.0
Number of farmers -27% (65,700 farmers)	Low capacity of district extension services, elite capturing	12.1%	0.4
Benefits delayed 1 year	Weak local linkages, weak capacity of ZPOs, programme structure not enough decentralised	15.2%	16.7
Benefits delayed 2 years		12.6%	3.6

D. Sustainability

Exit Strategy

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

Climate Change Adaptation

100. Sustainability is at the centre of design considerations for the interventions funded through ASAP. The activities are aimed at enhancing the adaptive capacity of social and agro-ecological systems to climate change impacts. The support provided through GASIP will enhance capacity within national systems for promoting climate resilient agricultural production by: (i) mainstreaming commercial climate resilient agricultural production within the value chain approach; (ii) promoting training support and knowledge sharing amongst smallholder farmers; consequently, there is considerable potential for replication and up-scaling as these lessons learned are transferred to other localities; (iii) promoting more efficient water use in water management schemes, also in commercial value chains; (v) encouraging the active participation of government staff in the implementation of GASIP interventions and the development of planning and strategies for climate change adaptation that is country-specific and aligned with national priorities. Furthermore, capacity building of government staff will promote replication and sustainability of activities related to climate resilient production systems. The sustainability of the programme results will largely depend on the effectiveness of stakeholder involvement, the appropriateness of the implementation of the adaptation measures whilst using proven technologies and practices, adequate technical, legal and institutional capacity and expertise at the national level, and long-term political and financial commitment of policy-makers. In order to address climate change impacts the actors must have a long term perspective in

planning and development while dealing with the increasing climate variability that adversely impacts agricultural value chains.

Environmental and Social Scoping Measures

101. Based on the relatively minor negative impacts of the targeted economic activities on the environment, the Programme has been classified for the purposes of environmental scrutiny as Category B. To ensure environmental and social safeguards compliance, Environmental and Social Management Plans (ESMPs) will be developed and monitored for all road works, warehouses, water management schemes, processing facilities, and each of the value chain. This will be done through consultations and monitoring visits by the various stakeholders (ZPO, DADUs, GHS and EPA). Periodic environmental and social compliance monitoring reports will be prepared and shared with all stakeholders. Additionally, EPA will carry out their statutory environmental and social compliance monitoring, and ensure capacity building of farmers on best environmental practices in agriculture.

102. The Programme will only have positive social impacts. It will not have negative effects on indigenous population groups. Monitoring will be done of labour conditions of smallholders, youth and female labour in the targeted value chains.

Appendix 1: Country and Rural Context Background

A. Evidence for Scaling-Up from On-going IFAD Projects

1. Evidence of NRGPs for scaling up is its successful value chain approach for maize, soybean, sorghum and butternut squash that allowed during 2011-2012 building district-level linkages between 1,800 FBOs representing approximately 18,000 farmers, input suppliers, rural banks, service providers and wholesale buyers and agro-industries. Improving access to and use of inputs has resulted in significant productivity increases from 0.5mt/ha to 1.08mt/ha (216%) for sorghum, from 0.5mt/ha to 1.3mt/ha (160%) for soybean and from 0.8mt/ha to 2.0mt/ha (150%) for maize

notwithstanding the fact that these increased yields are still below the optimum. Evidence from RTIMP are clear in the cassava and yam value chains, where project initiatives have resulted in markedly higher incomes for farmers, small processors and labourers: (i) the establishment and operation of 24 highly profitable Good Practice Centres (GPC) for gari processing as value chain drivers, but also for testing and promoting innovations, outgrower schemes and structured market linkages, including certification, traceability, packaging and market prospection; (ii) the value chains for seed yam, and yam for domestic and export markets. Other promising results are: (a) substantial increases in areas farmed; (b) greater access for women to participate in commercial farming activities in their own right.

2.

3. Promising tools developed by RTIMP and NRGPs that were used in GASIP design are: (a) the engagement of 27 PFIs in NRGPs which have disbursed over US\$ 3 million of their own funds since 2009 through outgrower schemes in the form of seasonal credit achieving very high loan recovery rates with several PFIs; (b) facilitation of market linkages by 43 District Value Chain Committees (DVCC) as local communication and engagement platforms of value chain stakeholders; (c) the use of effective value chain facilitators (VCF); (d) the effective use of the Micro Enterprise Fund (MEF) to co-finance equipment tested under the programme by leveraging both clients' equity and loan funds from PFIs; (e) collaboration with Business Advisory Centres (BACs) for business and management training, with Rural Technology Facilities (RTFs) for manufacturing of equipment, with District Departments of Agriculture (DDA) for technical training; (f) use of the Enterprise Record Book (ERB) by FBOs and processors; (g) collaboration with the Esoko electronic platform for exchange of market information.

B. Venture Capital in Ghanaian Agriculture

4. Following some pilot efforts with venture capital in the 1990s, the Government of Ghana established the Venture Capital Trust Fund (VCTF) in 2004 through an Act of Parliament (Act 680) to

Box 1: NRGPs' Value Chain Approach

NRGP has activated various value chains including; maize, soya and sorghum from the Industrial Commodity Window; Shea and recently sesame from the Women Commodity Window; and vegetables and butternut squash from the High Value Commodity Window.

To date, 1,507 Farmer Based Organizations (FBOs) have been formed along the above value chains. These involve a total of 29,799 individuals making up of 12,755 males and 17,044 females from an estimated 23,900 households. These groups have received various trainings including improved production technologies, group cohesion and dynamics and also management skills.

As a result of the training and improved access to credit, average farm productivity has increased from 0.8 to 2.4mt/ha for maize, 0.5 to 1.5 mt/ha for soya and 0.5 to 1.3mt/ha for sorghum, while maintaining stable prices and assured markets through contracts and MoUs. In addition, farmers who have gained access to credit have significantly expanded their area under cultivation. The combination of increased yields and area under cultivation as well as assured markets has resulted in a substantial increase in incomes.

In support to the value chain approach of NRGPs, an innovative local level Inter-Professional Body known as the District Value Chain Committee (DVCC) has been established in all 43 districts constituting the programme area. The DVCC is a forum for negotiations, agreements and planning among the value chain actors along the specific value chains (FBOs, input dealers, extension services, mechanisation services, off-takers and rural banks).

provide financial resources for the development and promotion of venture capital financing for small and medium enterprises (SMEs) in Ghana. Under a PPP approach, VCTF has supported the establishment of five indigenous Funds with about GHS 22 million to leverage over GHS 50 million in private funds from both domestic institutional investors (such as SSNIT, NIB and SIC)²³ and international partners. VCTF's stake ranges from 18 to 50 %. About GHS 40 million has so far been invested in 50 portfolio companies, of which agro-processing accounts for the largest share of about 28%. In particular, VCTF has facilitated investments in the maize, soybean and sorghum value chains, ranging from wholesale funds for on-lending to producers (e.g., supplying the Ghana Guinness Brewery) to processing plants that can provide a market. VCTF can also invest directly in agriculture through a special purpose vehicle.

5. Two additional venture capital funds are targeting agribusiness investments in Ghana with nearly US\$ 50 million, one private and one supported by several international financial institutions. Furthermore, several international private equity funds are investing in businesses in Ghana, either directly or through a local bank. Hence it can be said that the number of venture capital funds active in Ghana is growing, are adequately resourced, and have both government and international support. In this context GASIP will seek to collaborate with these funds to provide the information and support needed for them to invest in agricultural VC enterprises.

C. GASIP's Relationship to Complementary Development Partner Initiatives

6. Multiple development partners have ongoing and planned agricultural value chain development initiatives. Given that GASIP is, in both its concept and design, a programme embedded in and driven by MOFA, it would play a coordinating role as the practical application of the METASIP. Some similar projects are presented below.

Table 1: Related Development Partner Projects and Programmes

<p>Danida Support to Private Sector Development (SPSD-II) (active through 2014/2015):</p> <ul style="list-style-type: none"> • <u>Establishment of National Value Chain Committees</u> for maize and mango can support agribusiness value chain SMEs; • <u>Agricultural Value Chain Facility</u> implemented through two universal banks and supports term financing to the rice, maize and soya value chains; • <u>Rural Finance Component</u> supports ARB Apex Bank to build capacity of RCBs; and • <u>Climate Innovation Center</u> cofounded with the World Bank and taking an incubator approach to improving public sector policy and private sector business for better climate change resilience.
<p>GIZ Market Orientated Agriculture Programme (active through 2016):</p> <ul style="list-style-type: none"> • Establishment of National Value Chain Committees for Maize and Mango with GASIP; • Support to value chain development for Pineapple, Mango, Citrus, Oil Palm and Maize with GASIP • Establishment of Quality Standards for Agro Exports; • Concentration on value chains other than Northern Ghana (due to heavy DP coverage); • Support for RCBs and Universal Banks engaging in Value Chain finance with GASIP; and • Standardization of support for the formation of Farmer Based Organizations with GASIP.
<p>USAID Feed the Future (active through 2017 concentrated on Northern Ghana):</p> <ul style="list-style-type: none"> • <u>Continuation of Agricultural Development and Value Chain Enhancement Project</u> developing commercial linkages for maize, rice and soybean through supporting commercialization, efficiency and financing to agribusiness; • <u>Agricultural Technology Transfer Project</u> supporting the development of seed and fertilizer markets with research and credit; • Supporting MOFA's <u>Ghana Commercial Agriculture Project</u> with grants to nucleus farmers and large infrastructure; and • <u>Financing Ghanaian Agriculture Project</u> promoting private sector finance and investment in the agriculture sector. • <u>Monitoring and Evaluation Tools</u> is specialist monitoring facility open to provide key studies relevant for food security and commercialization of agriculture.
<p>African Development Bank</p> <ul style="list-style-type: none"> • Cofinancing NRGPs (water management infrastructure and roads)

²³ Social Security and National Insurance Trust; National Investment Bank; State Insurance Corporation.

Agence Française de Développement <ul style="list-style-type: none">• Rice processing, policy and market information
World Bank <ul style="list-style-type: none">• Commercial Agriculture Project: value chain development, in particular rice and horticulture

7. RTIMP will be closed in 2014 as GASIP will become effective and may overlap with GASIP for a few months. It is foreseen that GASIP will adopt the cassava value chain interventions that RTIMP has begun (particularly Good Practice Centers contracting outgrowers for the production of gari) in order to rapidly gain experience as a programme with a value chain proven to raise smallholder income.

8. NRGP and GRPG will overlap for two years. It is foreseen that during the overlap they will pursue thematically similar objectives using similar strategies. At the conclusion of NRGP, GASIP will assume management of NRGP initiatives that fit within GASIP's strategic direction. GASIP is meant to operate with a lighter administrative structure than NRGP and to outsource technical expertise in order to be as demand driven as possible. When GASIP assumes control of some of NRGP's activities, it will operate with this lighter administrative structure.

9. RAFIP, among other objectives, is currently prioritizing the development and delivery of assistance to agricultural value chain financiers. RAFIP is currently engaged in research to identify value chain financing opportunities for both RCBs and universal banks, research to assist the capitalization of RCBs to enable greater stability and expanded lending to agribusiness and continues to support Ghana's various apex organizations including ARB Apex Bank. GASIP will partner with RAFIP to work toward the mutual objectives of both. In technical areas where RAFIP has a clear strategic advantage -perhaps financial product development- RAFIP will take the lead. In technical areas where GASIP has a clear strategic advantage - perhaps interaction with value chain actors - GASIP will take the lead. When RAFIP concludes, GASIP will continue its work. RAFIP will undergo a midterm review late 2013 and one objective of this review will be to strengthen ties to GASIP.

10. REP III is a continuation of a very successful project supporting BACs and RTFs for the purpose of driving rural enterprise on a district-by-district basis. REP III has taken a specific value chain approach, includes support to agribusiness and will operate Ghana-wide. It is foreseen that REP's capacity to support the commercial proliferation of the design, manufacture and marketing of productive assets and REP's capacity to develop and deliver business training to value chain actors will underpin a very strong collaboration between REP and GASIP.

	2015-2017	2018-2020	
		GASIP	
	Cycle 1	Cycle 2	Cycle 3
RTIMP RTIMP concludes in December 2014. Key value chains such as cassava and yam with proven business cases and impact on smallholder income will be adopted by GASIP and expanded.			
NRGP NRGP concludes in December 2016. Key value chain interventions with proven business cases, such as structured trade finance, PPPs and inter-professional bodies impacting critical value chains will be adopted by GASIP and expanded. NRG operations will be absorbed, in part, by GASIP.			
RAFIP RAFIP concludes in December 2016. GASIP will collaborate with RAFIP. Successes in value chain financing and financial inclusion for value chain actors will be adopted by GASIP and expanded. Other specialist functions will not be duplicated by the programmes but sourced by one from the other as appropriate.			
REP REP will collaborate with GASIP to provide support to value chain enterprises through its existing and expanding RTFs and BACs.			
Other VC Initiatives Other initiatives, based on their proven impact on smallholder incomes and with a business case will be adopted and expanded by GASIP.			

Ghana

Land area (km2 thousand) 2010 1/	228	GNI per capita (USD) 2010 1/	50
Total population (million) 2010 1/	24.39	GDP per capita growth (annual %) 2010 1/	5
Population density (people per km2) 2010 1/	107	Inflation, consumer prices (annual %) 2010 1/	11
Local currency Ghana Cedi (GHS)		Exchange rate: US\$ 1 = 2.0 GHS	
Social Indicators		Economic Indicators	
Population growth (annual %) 2010 1/	2	GDP (USD million) 2010 1/	
Crude birth rate (per thousand people) 2010 1/	32	GDP growth (annual %) 1/	
Crude death rate (per thousand people) 2010 1/	8	2000	3.7
Infant mortality rate (per thousand live births) 2010 1/	50	2010	7.7
Life expectancy at birth (years) 2010 1/	64		
		Sectoral distribution of GDP 2010 1/	
Total labour force (million) 2010 1/	10.37	% agriculture	30
Female labour force as % of total 2010 1/	48	% industry	19
		% manufacturing	7
		% services	51
		Consumption 2010 1/	
		General government final consumption expenditure (as % of GDP)	9
		Household final consumption expenditure, etc. (as % of GDP)	76
		Gross domestic savings (as % of GDP)	15
		Balance of Payments (USD million)	
		Merchandise exports 2010 1/	i
		Merchandise imports 2010 1/	703
		Balance of merchandise trade	
		Current account balances (USD million)	
		before official transfers 2010 1/	2
		after official transfers 2010 1/	700
			2
		Foreign direct investment, net 2010 1/	527
		Government Finance	
		Cash surplus/deficit (as % of GDP) 2010 1/	n/a
		Total expense (% of GDP) a/ 2010 1/	n/a
		Present value of external debt (as % of GNI) 2010 1/	18
		Total debt service (% of GNI) 2010 1/	1
		Lending interest rate (%) 2010 1/	n/a
		Deposit interest rate (%) 2010 1/	n/a

a/ Indicator replaces "Total expenditure" used previously.

1/ World Bank, *World Development Indicators* database CD ROM 2012-2013

Appendix 2: Poverty, Targeting and Gender

A. Poverty and Food Insecurity

1. Ghana's total population based on the 2010 population census stands at 24.2 million, representing a 28% increase over the 2000 population level. The country's annual population growth rate has declined from 2.7% in 2000 to 2.4% in 2010 (GSS, 2011) and live expectancy at birth is estimated at 64 years. About 48% of the population live in rural areas, with urbanisation increasing from 32% in 1984 to 52%²⁴ in 2011. The country succeeded in halving extreme poverty from 36.5% to 18.2% between 1991 and 2006, and almost halved the proportion of people living below upper poverty line from 51.7% to 28.5% over the same period. Even with these gains, poverty still remains the topmost challenge to national development. Rural poverty is particularly disturbing and the three northern regions (especially the Upper West) continue to have the highest incidence of poverty. The incidence of poverty remains very high and far above the national average at 52% in the Northern, 70% in Upper East and 88% in the Upper West regions.²⁵ Ghana is reasonably food secure at national level, but household food insecurity is a concern in particular in the Northern, Upper East and Upper West Regions, where respectively 20%, 38% and 24% of households are food insecure²⁶.

B. Target Group of GASIP

2. The agricultural sector employs over 60% of the population and provides food and nutrition as well as ensuring food security and income, especially at the household level. According to the Medium-Term National Development Policy Framework: Ghana Shared Growth and development Agenda (GSGDA), 2010-2013, almost 80% of Ghana's economy is made up of micro, small and medium-scale enterprises (MSMEs). Their efficiency and competitiveness is crucial to the country's growth, employment generation and poverty reduction.

3. The potential clients of GASIP are typically rural small holder farmers and small-scale entrepreneurs (MSEs) that undertake labour intensive self-employment activities, make use of traditional technologies and unskilled labour, and have little access to financial services. They include district level farmer-based organisations and their members of the selected value-chain crops, traders, transporters, ancillary service providers, and agro-processors.

C. Gender Analysis

4. **Gender is an important dimension of poverty** in Ghana where over 51% of the population is women with a gender inequality index value of 0.598 as at 2011²⁷. In particular, women are considered to be more vulnerable than men. According to a technical paper on Achieving the MDGs with Equity in Ghana²⁸, although, it is difficult to analyze poverty by gender (except on the basis of the sex of household head), studies have shown that, women are more likely to be poor compared with their male counterparts. Using asset poverty, the total and mean value of gross wealth of women is lower than those of men for all asset categories. In addition, wealth by gender in Ghana is biased in favor of men. Access to and control of assets such as land and credit tends to be limited for women, particularly in the rural savannah. The GLSS-5 data indicate that the proportion of persons having savings is higher among males (59%), with the highest proportion in rural forest areas (64%).

5. In terms of distribution of wealth by quintiles, women are overrepresented in the poorest quintiles and underrepresented in the richest. It is estimated that average hourly earnings of women in Ghana is 57% of that of men and that regardless of the type of employment, education, age etc., women earn lower than men. Moreover, while formal sector employment where poverty is low is

²⁴ UNDP Human Development Report, 2011

²⁵ NDPC/UN Ghana, 2012

²⁶ WFP, MOFA & GSS. Comprehensive Food Security & Vulnerability Analysis 2012,

²⁷ UNDP HDI Report, 2011

²⁸ NDPC/UN in Ghana, 2012

highly dominated by men, women far outnumber men in non-farm self-employment and private informal employment where earnings are relatively low. About 38% of women in Ghana are engaged in agricultural activities with those in rural Ghana being predominantly food crop farmers who also tend to be the poorest. In effect, gender dimension of poverty is likely to be biased against women.

6. **Gender and value chain development.** The experiences of NRGP and RTIMP with regard to gender and women's participation in their interventions are analyzed²⁹. In the case of NRGP 62% of the group members benefiting from the Programme between 2009 and 2012 are women.

Notwithstanding the progress so far made with regard to gender, there is still room for an enhancement in the future particularly at the household and community levels. RTIMP has between 20-40% female farmers, but up to 80-95% women in processing. A number of gender-based issues need to be considered in the implementation of any value chain intervention, particularly in the rural areas. These include but not limited to the following: (i) low level of human capita; (ii) low level of resources and capabilities; (iii) traditional roles of men and women in smallholder farming, food processing and marketing; (iv) conflicting resource use for women; and (v) assumption a priori homogeneity of interests within or between households.

D. Gender Action Plan

7. The inclusion of the most vulnerable groups, particularly women as well as young people who consider agri-based businesses as offering them opportunities in life will be assessed for each new commodity chain, which will remain key criteria for selection as it has been for the commodity chains of the ongoing projects - NRGP and RTIMP. The gender strategy of GASIP will involve the following:

- (a) Priority to value chains that are important for women and youth: (i) priority will be given to value chains that are important for women and young people; (ii) empowering women in FBOs and VCCs and providing leadership training; (iii) sensitizing District Assemblies and Regional House of Chiefs; (iv) establishing regional gender teams;
- (b) Scaling up of the NRGP gender approach, which is based on systematic mainstreaming of gender issues at District and Regional levels (see: box);
- (c) Programme Management level: At the level of the PCU/ZPO, the Gender Specialist of NRGP will be the responsible for ensuring gender, youth and social inclusion and mainstreaming in the programme. In the day to day work, all staff should keep targeting in mind and always do reporting gender and age segregated.
- (d) Gender sensitive analysis of the value chain will be undertaken to provide information about extra-market factors such as power relations, division of labour, and control over resources and vulnerability to climate shocks. This will help establish the differential

Box 2: NRGP's Gender Approach

NRGP has had significant success in focusing on gender empowerment in its implementation so far. As recognition of this, NRGP won the 2013 IFAD Gender Award for the West and Central Africa region. On the one hand, NRGP has targeted women crops to reach out to a high number of women directly (particularly shea nut). On the other hand, the programme has strengthened the inclusion of women into other traditionally male dominated commodity chains such as maize, soybean and sorghum and also in related agribusiness activities such as input services and processing. As a result of this two-pronged strategy, 17,044 of the farmers are female representing 57% out of the total of 29,799, greatly exceeding the appraisal target of 30%.

Key gender mainstreaming activities have been: 1) engaging with the District Assemblies and traditional leaders on gender issues; 2) Creating regional 'gender teams' consisting of key government and non-government stakeholders; 3) carrying out leadership skills training of women; and 4) using the Value Chain Committees facilitated by the programme to spur on-going inclusion and empowerment of women in economic activities in the communities.

²⁹ Details and gender checklist in Working Paper 1.

contributions and potentials of women and men in any selected commodity, thereby providing the basis for developing strategies and actions for promoting equitable benefits from the production process. Such analysis will further provide information on the roles of women and men in the production, processing, and marketing processes of the selected commodities to inform the development of programmes for enhancing the skills and upgrading the knowledge of both women and men to increase efficiency in the production process and improve the quality of the product, and, hence, to extract more benefits.

- (e) Mainstreaming of gender in value chain development: This requires that attention is paid to the gender perspective at every step, from production to the sharing of benefits, and not only in relation to commodities in which women are dominant. It is quite easy to overlook the key role women often play in the production or processing of a commodity because their work is unpaid. Efforts to mainstream gender in value chain development in GASIP must recognise lapses such as men marketing the products and often being seen as the key players, even when their involvement in production is limited. Also, men are often the main recipients of capacity building initiatives and financial support, while the main producers – the women – have limited access to such resources. Integrating a gender approach into value chain development should contribute to identifying the proper support to offer to the different people involved in the process. Some considerations for integrating the gender perspective into value chain development include: selecting products and services in which women are involved; ensuring appropriate representation of women and men in formal and informal institutions of value chain development; promoting technologies for value addition that are appropriate for women; and building the capacity of support organisations to address gender issues in value chain development: (B. Bhattarai & B. Leduc, 2009).
- (f) Use of the Gender Action Learning System (GALS) Methodology: This is a community-led and participatory empowerment methodology which aims to give women and men more control over their lives and in the process catalyse and support a sustainable movement for gender justice. Through the use of the GALS methodology, both women and men supported by GASIP will develop their visions for change, with achievable targets and road maps to move towards their visions, based on their current situation, past achievements and opportunities/strengths and challenges. A key focus in using GALS is breaking through gender-based barriers at the individual level and changing gender inequalities within the family as challenges which prevent both women and men from achieving their visions.

E. Rural Youth and Entrepreneurship

8. According to a study on promotion of youth employment in agriculture commissioned by AfDB/REP II in 2012, the various definitions of youth suggest that they include different people with a wide range of interests. In the official African Union and Government of Ghana definition, the youth include persons (male and female) who are economically active and are between the ages of 15-34 years. Such persons may have received formal education or not at all, and may have employable skills or not at all. The educated youth are categorised into three: those who have received some primary, secondary or tertiary education. The official UN definition of youth is 15-24 years.

9. It is estimated that 19% of the total population is in the 15-24 age bracket and 15% are between 25-34, while they make up respectively 32% and 27% of the working-age population (15-64 years). For the Programme, the focus will be on creating opportunities particularly for the youth (15-24 years) but also for young adults (25-34 years). In general, the term “youth” and “young people” will be used inter-changeably in the chapter without any strict linkage to the age-definition.

10. Youth unemployment is an increasing problem, with the formal sector able to engage less than 5,000 of 250,000 young people entering the labour market annually (2%), leaving about 98% to survive in the informal sector or out rightly unemployed. The challenge of addressing youth

unemployment and not least youth underemployment in Ghana is to create decent job opportunities for them or to engage them in some form of skills training to improve their chances of profitably employment³⁰. The youth unemployment is largely concentrated in the urban areas. However, the lower youth unemployment figures in rural areas are likely to mask a significant amount of underemployment in low productivity smallholder agriculture and in other low-income employment. The apparent higher youth unemployment levels in the urban areas reflect the rural-urban drift by the youth in search of non-existent jobs. Young adults, particularly between 25-29 years, constitute the largest proportion of migrants. This phenomenon is reported to be widespread in the Upper West Region where most of the able-bodied young people migrate to the Brong Ahafo Region to escape the hardships of the long idleness of the dry season to engage in low paid farm labour to buy food or other basic needs for their families.

11. Young people are of great **opportunity** to the agricultural sector. They are generally more literate and skilled than their parents, they are at the height of their physical capability, and they are open to change and new technology. Furthermore, if you support a young person it will have more long-term effects as he will still be active during the next 30-40 years, and will be more able to spur societal change. However, several **challenges** exist for youth to enter into agribusiness. Access to land and start-up capital is an issue as well of the integration and acceptance of youth among other value chain actors (banks, dealers, farmers). Furthermore, agricultural extension services are not tailored to address the challenges of young farmers. Finally, traditional agriculture is not attractive to youth as it entails hard manual labour with small returns. Agriculture is not culturally attractive among the youth, as it is too a large extent perceived as a sector only for poor people, and rural communities has less activities to offer for youth.

12. The on-going programmes NRGF and RTIMP have not been very successful in attracting youth and young people to their programmes. On the one hand because of the challenges mentioned above, on the other because of a lack of focus on youth in the programme design and implementation.

13. The data shows that focus should be mostly on younger cohorts, which are the ones having the most difficulties starting up agricultural businesses. However, the 30-34 age group can work as an asset for the Programme being used as peer educators, role models, facilitators of youth networks etc. The Programme would have a flexible approach in its inclusion of youth and young adults, not only looking at age but on the life situation of each individual, although maintaining a maximum age of 34 for young adults. Gender perspectives on youth and young adults should be taking into account as young girls and boys in several cases face different challenges. Finally, the specific geographical context (including migration patterns) should be taken into account when looking at the interventions in each area of Ghana.

14. Any effort to include the youth in agriculture has to recognise the range of their different interests with regard to possible opportunities and interventions. The Programme would recognise that youth and young adults defined as 15-34 years is a very heterogeneous group with possibly differentiated needs which calls for more tailor-made and demand-driven actions. Some young people need more guidance and capacity building, while others are more ready to take a lead on their own development. The critical question is what it will take for the young individual to venture into and/or stay in agribusiness enterprises. Appropriate interventions to reduce the drudgery in agriculture, increase the current low returns to agricultural investments compared to commerce and the other sectors and developing the road and other basic infrastructure in the poor rural areas may provide some answers. But the starting point will be a needs assessment that clearly analyzes the interests of the young people.

³⁰IJEDICT, 2006

F. Youth Action Plan

15. The focus of GASIP will be to bring the numbers more in balance by reducing the underrepresentation of youth and young adults at least among programme clients. GASIP will develop strategic demand-driven interventions and approaches to attract the youth to value chain opportunities, in order to face challenges of unemployment and underemployment of youth. GASIP will scale up the focus on bringing rural youth into employment or self-employment.

16. GASIP will take a flexible approach to youth and young adults. It is important to (a) listen to what the youth wants to ensure a demand driven approach, (b) to facilitate for them linkages to profitable value chains; (c) to stay flexible, since young people require a tailor-made approach. The table below presents a range of mechanisms and implementation arrangement that will support a target of having at least 20% youth (15-24), and 30% young adults (25-34) as direct clients. M&E will specifically monitor outputs and outcomes for the two age groups. Experience from on-going programmes shows us that the biggest challenge will be the 15-24 year olds, which is why particular support to this group in form of a start-up kit could be envisaged. Specifically for the 15-17 age group, efforts should be made on avoiding and eliminating child labour in the form of either forced labour for little pay, dangerous tasks, or duties preventing them from finishing their formal education. The proposed actions stem from a youth design clinic, where young resource persons participated with an active voice. It is important to continue consultation of young stakeholders during Programme implementation.

17. Before starting up youth activities a youth sensitive market linkages diagnostic should be carried out in tandem with the value chain studies. Such a study would identify or confirm the youth constraints (and opportunities) that are negatively impacting (or could positively impact) the efficient implementation of specific activities/components. Experiences from FAO pilot project on bringing youth into horticulture value chains in West Gonja district should be taken into account.

18. Coordination of youth efforts with other on-going agricultural sector programmes should be sought. GASIP should work with REP to ensure that linkages between the District Agricultural Units and the BACs are made. MOFA has an on-going Youth into Agriculture Programme (YIAP), which is focused on block-farming initiatives and not very strict in targeting youth or young adults. However, it will still be valuable for GASIP to coordinate interventions. It will also be relevant to coordinate with the National Youth Employment Programme (NYEP) under the Ministry for Youth and Sports. Further to REP, YIAP and NYEP, the Senior Policy and Evaluation Specialist as well as the Zonal Coordinators will coordinate efforts with other relevant projects or programmes and work in the framework of the Ghana National Youth Policy.

Table 1: Youth Action Plan

Proposed Mechanisms	Rationale	Target Group
Facilitation of “young FBOs” and extension groups (target of 20%)	By, to building on existing dynamics among youth in the communities, supporting the organisation of the young people to empower them	15-34, skilled and unskilled
Peer education	Peer-educators can better convey agri-business information to young FBOs and act as role models	15-34, skilled and unskilled
Facilitation of integration of 15-34 year in FBOs (target of 20%)	To ensure inclusion of young people and inter-generation learning and dialogue	15-34, skilled and unskilled
Encourage value chain actors to allow a higher degree of participation of young people	The facilitating agents will work with value chain committees and other stakeholders to spur a higher inclusion of young people in value chains	15-34, skilled and unskilled
Facilitation of young people in agribusiness network via social media, SMS-networks, rural radio	Support the interconnectivity of young FBOs and young people in agribusiness	15-34, skilled and unskilled
Focus on “youth crops”	Support the development of value chains that require little investment or	15-34, skilled and unskilled

	less land but skilled labour	
Youth start-up kit	Start-up kits for youth 15-24 to counter the problem of start-up resources should be linked to skills training.	15-24, skilled and unskilled
Classes on agribusiness offered at JHS and SHS, if possible linked to school gardening, and information campaigns using role models	To inform young people on possibilities in agri-business	15-24, unskilled
Implementation arrangements		
Senior Policy and Evaluation Specialist to ensure mainstreaming of the Youth Action Plan among programme specialists	Work through ZPO executive staff to ensure youth, gender and social inclusion, and to forward youth and gender issues in policy dialogue	N/A
Establishment of a GASIP youth council attached to ZPOs, and an annual youth stakeholder forum	To ensure dynamism and flexibility in the youth approach of GASIP	15-34, skilled and unskilled
Creating linkages to REP, Youth Into Agriculture Programme and other relevant programmes	To ensure opportunities of young people along the value chain. Collaboration with REP should be made regarding processing and service delivery to the agricultural sector	15-34, skilled and unskilled
The Senior Policy Specialist will promote the opportunities of youth in policy dialogue with Government partners.	To ensure a coherent government approach to bringing youth into profitable agribusiness opportunities	N/A

Appendix 3: Country Performance and Lessons Learned

A. Country Performance

1. IFAD has been operating in Ghana well over 30 years, and has provided financing for 16 projects/programmes for a total IFAD financing of US\$ 225 million through loans on highly concessional terms, leveraging counterpart resources and co-financing of US\$452.4 million for a total investment portfolio of US\$677.3 million, thus making Ghana one of the largest recipient of IFAD loans and grants in West and Central Africa. Four programmes/projects are operational for a total amount of US\$ 87.73 million. Since 2000, the IFAD country programme has shifted from geographically-targeted interventions to countrywide programmes, focusing on one sector only. This transition allowed IFAD to devote more attention to institutional development and policy dialogue, with significant results in the area of rural enterprise development and rural finance. An evaluation of the country portfolio in 2011 revealed an improved performance according to most criteria.

B. Lessons Learned

Lessons Learned from NRGP Inter-cycle Review

2. Key issues highlighted by the Interphase Review Mission (IRM) of NRGP are the following: (a) proposals for reorientation towards and mainstreaming of successful activities of the first years that require scaling up, in particular the District Value Chain Committee (DVCC), agribusiness linkages between aggregators and smallholders, cashless credit scheme, the locally-based commodity chain approach, outgrower schemes; (b) mechanisms to increase the supply of medium-term credit have not been developed; (c) the Commodity Development Fund was underutilized because procedures were not clarified.

Lessons Learned on Efficiency of Implementation of Value Chain Interventions

3. Following lessons were derived from ongoing value chain interventions: (i) project management is a challenge, as technical experts in PCU are usually not able to plan and implement according to plan; also structuring by components with component heads is challenging, as they rarely work as a team, resulting in an isolated, and supply-driven delivery of outputs; (ii) inadequate attention is given to actual learning and outcomes; M&E has to focus on outcomes and lessons, and accompany strategy with analyses – so the right profile is required (a social/economic scientist, rather than just statistics officers) at the higher level; (iii) quality of VCFs is critical – need to have very good TOR and assessment criteria; (iv) surveys never happen on time and always have quality issues – need for partnership with an international TA; (v) manuals, like PIM/Manuals/AWPB, that are not finalized at appraisal stage leads to significant implementation delays.

Lessons Learned on Rural Financial Services

4. With respect to facilitating PFIs to inclusively finance value chains to be supported by the programme, two particular issues stood out as critical. These were: liquidity risk management and proper formulation of opportunities for Universal Banks.

i. Many RCBs are engaging in a standardized structured trade financing product referred to as *cashless credit*. Producers join an FBO; the FBO prepares a proforma crop budget; the RCB finances the inputs and services; the producers deliver to a contractual buyer; the buyer pays the RCB and the RCB rebates the balance of the payment from the buyer to the producer after deducting principal and interest. This is a strong model when executed properly with the payments flowing as prescribed and the contractual buyer both being willing and able to settle the payment on time. In practice, this works well for only 38% of the RCBs as they properly evaluate the risks, properly structure the payments and make sure of the enforceability of the

buyers contract. For 62% of the RCBs using this strategy it is functioning poorly and in most cases due to weakness in the structure of the payments (the buyer pays the producer

- ii. instead of the bank) or most commonly in failure to evaluate the enforceability of the contract between buyer and producer. The more significant issue is not default (nonpayment) but rather arrears (late payment). If RCBs could better evaluate the risk of late payment they could better plan for and enforce means to ensure that buyers would be adequately liquid to meet their obligations to producers on time. The resulting unmanaged liquidity risk causes places great stress on these RCBs as they fund their loans from short term deposits. This requires capacity building.

- iii. Multiple DP programmes have approached Ghana's Universal Banks with lines of credit, guarantees, introductions to potential borrowers, etc., to *kick start* their engaging the sector with little actual effect. In discussions with these bankers, the issue isn't guarantees, funds or introductions; these are either unnecessary or treated with suspicion. Bankers are risk managers and seek to understand that an opportunity is safe, profitable and scalable. The design team met with multiple Universal Banks that simply want the opportunities, the size of the opportunity and the tools for managing the risk to be clearly stated. All were very eager to engage in structured trade financing for opportunities that were based on enforceable contracts and which were large or numerous enough to merit dedicating finance, systems and human resources.

Box 3: NRGPs Rural Finance Approach

With the objective of increasing access to credit for smallholder farmers, a Structure Trade Financing Scheme ('Cashless Credit') has been introduced by NRGPs. This approach is aimed at establishing sustainable business linkages amongst the value chain actors of a particular commodity in such a way that the banks, input dealers, service providers, marketing companies and farmer groups are comfortable in doing profitable businesses with each other. By this system, credit is delivered in kind and buyers pay for produce through the bank accounts of the FBOs. In this way, the sponsoring banks recover their loans automatically from the account.

Lessons Learned on Decentralization and Implications for GASIP

5. Ghana has operationalized decentralisation with passage of Act 462 in 1993 which established the Metropolitan, Municipal and District Assemblies (MMDAs) as planning authorities with the responsibility for development. In the past decade a number of poverty reduction oriented programmes that seek to put the District Assemblies (DA) in the driving seat have been initiated and implemented by the DA. There are however some factors that should serve as a guide in the implementation of projects through the District Assembly. The high demand on the Assemblies vis-à-vis the number of projects often leads to delays and therefore serious implications on disbursement and late completion of works. Key among these are: (a) wholesale instead of incremental transfer of functions and responsibilities to invariably unprepared District Assemblies does not allow for the achievement of the expected outcomes. Not all the district Assemblies are of the same capacity; (b) virtually same focal persons are also responsible for implementation of activities of numerous development agencies. Their time is therefore, shared between the development partners; (c) no proper coordination of activities of Development Partners. Different modalities for implementation of different development partner interventions; (d) late request for replenishment of funds from Districts and late reimbursement by projects. District Assemblies are unable to attract skilled manpower because of poor conditions of service. Where capacities are built, the trained staff often leaves for more attractive institutions. District Assemblies appear to have a fatigue for "soft ware" capacity building interventions. They often see development only in terms of physical infrastructure "brick and mortar". They are often impatient with capacity building measures.

Lessons Learned on Gender Empowerment from NRG

6. NRG has had significant success in focusing on gender empowerment in its implementation so far. As recognition of this, NRG won the 2013 IFAD Gender Award for the West and Central Africa region. On the one hand, NRG has targeted “women crops” to reach out to a high number of women directly (particularly Shea nut). On the other hand, the programme advocated proactively for enhancing the inclusion and acceptance of women in other, more traditionally male dominated commodity chains such as maize, soybean and sorghum as well as in related agribusiness activities, including input supply, services and processing. As a result of this two-pronged strategy, the share of women participating in the programme increased from 1/4 in 2009 to 2/3 in 2013, greatly exceeding the appraisal target of 30%. In the implementation of GASIP, particularly related to the acceptance and equal treatment of women at the community level, main lessons learned from NRG to be continued and scaled up include the need to: 1) engage with the District Assemblies and traditional leaders on gender issues; 2) Create regional ‘gender teams’ consisting of key government and non-government stakeholders; 3) Carry out leadership skills training of women; and 4) Use the Value Chain Committees facilitated by the programme to spur on-going inclusion and empowerment of women in economic activities in the communities.

Appendix 4: Detailed Programme Description

A. Component 1: Value Chain Development

Subcomponent 1.1: Agribusiness Linkages Development

1. The aim of this Subcomponent is to formalize commercial linkages to factor and output markets. Other participants would be public and private service providers, FBOs, Participating Financial Institutions (PFIs) and input suppliers. Continued support for FBOs and VCCs will in particular include the development of enforceable contractual arrangements and means for enforcement.

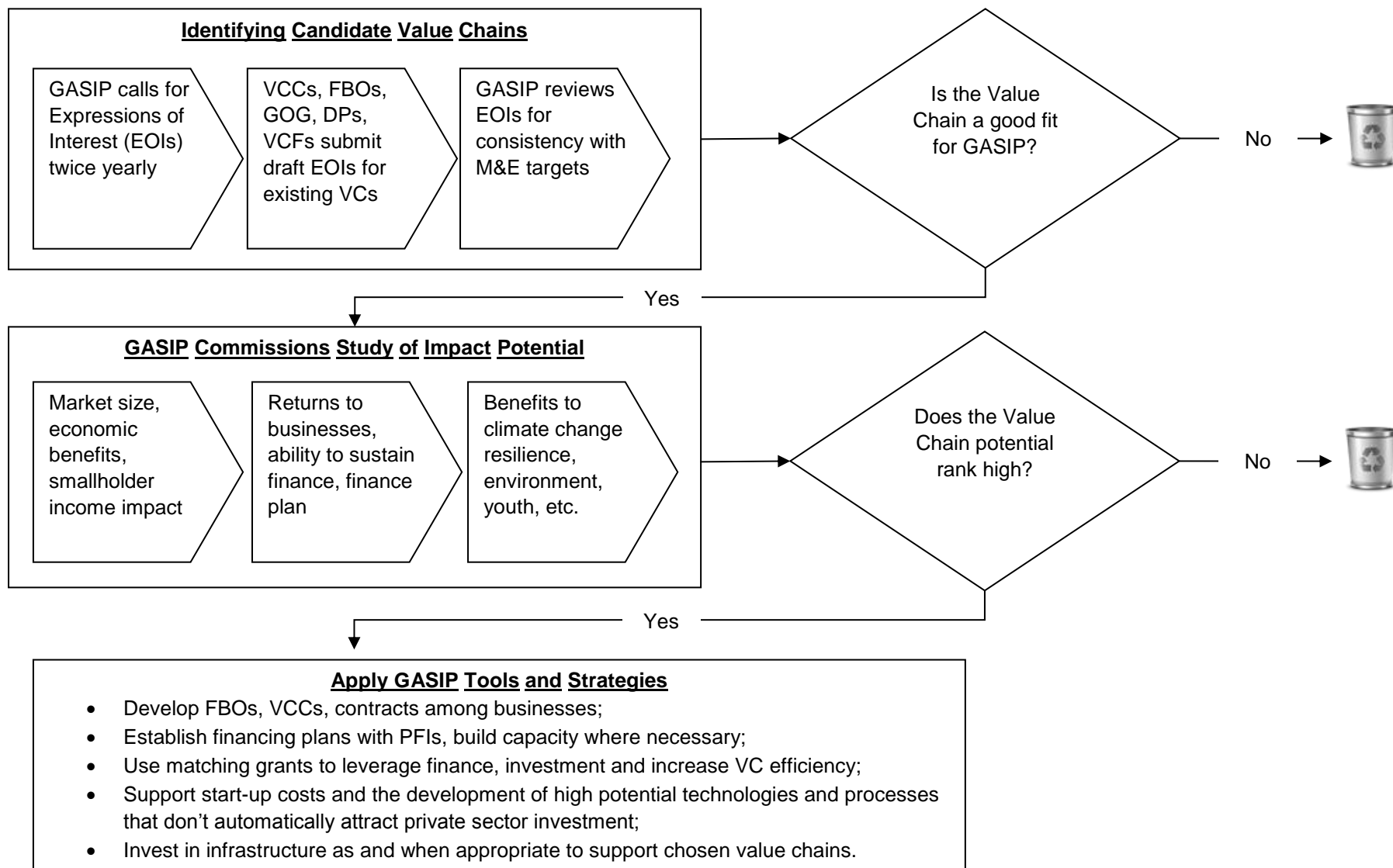
2. **Methodology for selecting additional value chains.** The Subcomponent will support the selection process of value chains, as well as detailed analysis to select opportunities and collect the required quantitative and qualitative information. The scheme below illustrates how GASIP will choose new value chains for support, following a two step process. The first step is identifying candidate value chains. On a regular basis, GASIP will invite Expressions of Interest (EOIs) which any party can submit to explain an opportunity to further develop an existing agricultural value chain. Those EOIs which are consistent with GASIP's goal and objective will be considered for support, those that are not, will be returned to their authors with an explanation. For EOIs that merit further review, GASIP will commission a study of impact potential. The study will focus on understanding the buyer-seller relationships along the chain. The study will clarify which value chain segments can be expanded or made more efficient to bring the greatest impact to smallholders. The estimated cumulative impact for each value chain studied will be compared using Benefit-Cost (B/C) analysis to prioritize which value chains GASIP will support. Once a value chain is chosen for support, the same study will be used to develop the technical approach to supporting the expansion of that value chain. GASIP will then apply its full suite of support to a chosen value chain.

3. **Recruitment of Value Chain Facilitators.** Once a value chain is selected, smallholders' participation in the agribusiness linkages will be assisted by Value Chain Facilitators (VCFs), who will be recruited for each value chain. The VCF will be either specialized NGOs or Private Companies with appropriate skills and experience. The VCF will work in close collaboration with the VCC and MOFA staff to facilitate the negotiation of agreements between all parties involved and to provide the implementation support. They will ensure the equitable participation of women and young people. The Subcomponent will be flexible and make allowance for specialized facilitation services, so that further needs for support can be identified, funded and implemented as opportunities arise in each chain.

4. As part of its regular supervisory function, IFAD will review the evidence that adequate facilitation and TA capacities as well as sound business plans are in place to give the Fund's no objection to disburse loan funds for the support of any given value chain.

5. **Establishing and strengthening Value Chain Committees.** Value Chain Committees (VCCs) will be established³¹ in order to enable FBOs, PFIs, Farm Service Providers, Inputs Suppliers, Produce Off-takers and Government to effectively cooperate within a locality for the efficient production and marketing of profitable farm commodities. They will participate in planning longer-term public investments as well as in organizing their constituents for seasonal production and marketing in all targeted districts. The GASIP will support the emergence and development of VCCs at any level where there is sufficient interest and potential activity. It is likely that this would mean that several VCCs would be formed in a district, and that some of them would provide services in more than one value chain. At least 160 VCCs should be functional in PY3 and 180 VCCs in PY6.

³¹ They will build on the successful process supported under the NRGPs whereby 43 District Value Chain Committees (DVCCs) have been formed, which are currently at different levels of effectiveness from new to practically sustainable. While the original NRGPs concept was for a single district-wide DVCCs, this appears to be too restrictive, with not sufficient capacity for all potential FBOs and other value chain entities to be represented within a single district-wide VCC



6. The VCCs have the following functions: (a) to participate in the selection of partner FBOs for participation in the major cropping and value chain activities; (b) to function as a communication platform between district-level value chain actors; (c) to facilitate the establishment of linkages between FBOs, aggregators, investors and PFIs; (d) as credit application reviewers for farmers making applications to banks for seasonal credit; (e) to scout for new market opportunities for members; and (f) to identify required enabling public infrastructure and facilities to enable improved and more profitable operation of their value chain (to be financed under Component 2).

7. The capacity building and mentoring support for VCCs will include: (a) facilitate the establishment and strengthening of VCCs; (b) ensure mentorship towards the day-to-day operations; (c) provide training in credit management, advocacy and negotiation skills, value chain approach, business development and risk assessments/mitigation (including climate-related risks); (d) support the elaboration of agribusiness agreements that were identified by the VCC and selected by the Programme; (e) establish systems of governance, management and internal controls for FBOs in sync with international good practices to ensure their sustainability, a sense of farmer ownership, and reduce the threat of elite capture.

8. From Cycle 2 onwards, the Programme should work towards the establishment of regional Value Chain Committees. The initiative for these apex structures should come however from the VCCs. The work on these Apex VCCs would be based on initiatives in this respect being undertaken by MOFA with GiZ support and the existing Apex organizations.

9. **Strengthening Farmers-Based Organizations.** Most FBOs and their members in Ghana lack the technical, business and organizational skills needed for them to participate in commercially oriented production and associated activities. In response to this institutional and technical capacity gap, a standard pack of training and support modules combined with mentoring will be developed and provided to build the institutional capacities of the FBOs in a comprehensive and systematic way. These modules will also include technical disciplines such as conservation agriculture and irrigation management, financial training such as crop and enterprise budgeting, rights and obligations within contract farming and rights and obligations concerning credit. Experiences of MOFA, NRGF, GIZ, RTIMP, CIDA and FAO will be used.

10. Capacity building and mentoring activities will include: (a) identification and selection of FBOs to join the VCC, with support from the DADU and Value Chain Facilitator (VCF); (b) mentoring and institutional capacity building of FBOs by VCF and DADU; (c) financial audit and registration, provided by Department of Co-operatives (DOC); (d) training in institutional capacity building and other topics; (e) facilitation of linkages to Participating Financial Institutions (PFIs) by the VCF and the VCCs; (f) capacity building and sensitization on core values, including gender, nutrition, environmental and social impact awareness. The district-based Business Advisory Centres (BACs), which are also members of the VCC, will play a key role in the institutional strengthening of FBOs and other grassroots stakeholders of the Programme. During the first cycle, the Programme will facilitate the establishment of commodity-based apex structures at district level. The target is to work with 2,400 FBOs in PY3 and 5,900 FBOs in PY6. At least 75% of these FBOs should be registered in PY6.

11. In order to disseminate new technologies, the following activities will be organized for FBOs and their members that are involved in the targeted value chains: (a) training on technical topics (good agricultural practices, soil and water conservation, farm management, post-harvest management), (b) economic analysis and business planning for informed decision making; (c) exchange visits to inspect successful ventures by other FBOs; (d) conduct of Farmer field fora (FFF) and demonstrations. The DADU will be supported to provide extension services.

12. **Support to innovations in value chain development** will be provided in a pragmatic and flexible way. Eligible investments may include: (a) FBO-based trials and demonstrations of emerging business opportunities along the value chain being promoted predominantly by the private sector; (b) specialized technical assistance; (c) seed money for innovative value chain adaptation and

upgrading proposals, including certification, traceability, food safety, etc.; (d) fabrication of prototype equipment and small scale processing plants; (e) business opportunities studies; and (f) climate change resilience technologies along selected value chains. The private actors should contribute some cost-sharing, preferably at least half, but can be in-kind (for example their own staff). A sustainable mechanism will be put in place from the second cycle onwards.

13. GASIP would seek to introduce voluntary sustainability certification (Fairtrade, Organic, Rainforest Alliance etc.) to relevant value chains (i.e. fresh fruit – pineapple, papaya, mango, as well as Shea, sesame, and as of yet under developed products such as baobab, gum Arabic etc.) as a tool for increasing market access for poor rural smallholders, increasing the sustainability of production and mitigating climate change. The approach would be applied to the development of certification-based supply chain partnerships following the approach developed by the SAMCERT grant³².

14. **Investments in public goods and services** required to enhance value chain development and support stakeholders will be financed. This window will be used to build capacity of public stakeholders involved in Programme implementation and finance their interventions. The activity group brings together all the extension, certification, research and technology generation and dissemination work envisaged for MOFA, BACs, GIDA, EPA, Ghana Standards Authority (GSA) and other public agencies that is required for implementation of the agribusiness linkages.

Subcomponent 1.2: Rural Financial Services

15. The outcome of this Subcomponent is increased and systematic access to and use of short- and long-term financing for value chain actors. As the availability of sustainable financial services is a key success factor in the GASIP concept, the aim is to cover all intervention districts in specific tandem with improvements of overall value chain function rendered by Subcomponent 1.1.

16. **Identifying financing opportunities.** Throughout the Programme, new value chain development opportunities will be triaged by Subcomponent 1.1. In all cases, value chains chosen for promotion must first demonstrate a clear business case and a clear benefit to smallholders. Driven by the opportunities identified by Subcomponent 1.1, Subcomponent 1.2 will research financing needs and opportunities for these value chains. Outputs of these exercises will include strictly and statistically formulated analysis of the size and scope of financing opportunities, for equity investors, universal banks and RCBs with the strategies and products clearly defined. This analysis will define specific products and strategies that will be the basis of the programme's support to PFIs³³.

17. **Guiding principles.** Underpinning this Subcomponent are several guiding principles based on lessons learned by Ghana's value chain finance initiatives and from international best practices in rural finance. These include: (i) risk mitigation embedded in the PFI financing strategy; (ii) specific liquidity risk management embedded in the PFI financing strategy, (iii) financing against appropriate contracts that bind buyers and sellers as well as having clear and enforceable penalties for non-performance; (iv) client saving for reinvestment, self-insurance and household opportunities; (v) anchoring finance to the strongest market makers with links to established and reliable retail or export markets; and (vi) scaling up proven strategies.

18. **Expected Outputs.** While adhering to these guiding principles, GASIP will (i) in collaboration with Subcomponent 1.1, research in value chain financing opportunities based on candidate value chains; (ii) continue support provided by projects such as NRGF and GIZ/MOAP capacity building RCBs to improve performance in liquidity management, delinquency management, structured trade finance and savings mobilization; (iii) support Universal Banks in strategic and operational development for structured trade finance including forward contract finance, invoice discounting and warehouse receipts; (iv) promote equity style investments in value chain enterprises including finance

³² The SAMCERT programme is a 3-year grant from IFAD the goal of which is to assist rural producers in utilizing sustainable certification programmes.

³³ One such study has undertaken by RAFIP in 2013 and collaboration with RAFIP will continually be used to improve GASIP performance in this task.

leasing and venture capital; (v) promote equity development in RCBs through direct investment and linkage with larger banks; and (vi) through grant mechanisms match high potential, weakly capitalized value chain actors' equity to leverage finance.

19. **Financial instruments, strategies and products.** The phrase *value chain financing* itself is a matter of semantics but generally refers to what is generically called structured trade finance. Structured trade finance covers multiple strategies for lending and recovery but generally involves either using inventory or using contractual obligations with well-established buyers to perfect loan security. Three well understood structured financing strategies are envisaged for promotion under GASIP for supporting both Universal Banks and RCBs. These are: (i) forward contract finance, (ii) invoice discounting, and (iii) warehouse receipts. These instruments are presented in Appendix 14:

20. Development and rollout of other financial products, beyond structured trade finance strategies, will also be supported by GASIP. These will include both traditional banking and equity type products. Traditional banking products include: term loans, fixed deposits, loans and current deposits. Term loans refer to loans for over one year and generally are used for fixed asset investments. Fixed deposits are longer term savings deposits that attract higher interest in return for the depositor's agreement not to withdraw the monies for predetermined tenure. Fixed deposits enable lenders to make longer term loans. Loans and current deposits are self-explanatory. GASIP will promote equity type products including: (i) equity, (ii) mezzanine debt, and (iii) finance leases³⁴.

21. **RCB capacity building.** RCBs have begun financing outgrowers, members of FBOs affiliated to VCCs, and SME processors in project areas supported by GIZ/MOAP, NRG, RTIMP and USAID/ADVANCE. Much of the financing is delivered through structured trade financing mechanisms (called *cashless credit* by some projects). This arrangement effectively enables the RCB to control default risk by basing recovery on the strength of an organized, well capitalized buyer rather than lending to widely dispersed, financially unsophisticated, small borrowers in cash and recovering in cash³⁵. Hence, their limited abilities to manage risk, in a market where others are managing risk well, causes interest rates to be very high and unattractive to would-be borrowers. Notionally, these poorly performing RCBs, and those that don't lend to agriculture under any circumstances, know that they must perfect their security and manage their liquidity but they lack the fundamental skills to do that. Because without financing for producers, producers cannot increase output, support to these RCBs that service the production end of the value chain is critical for GASIP.

22. The support to RCBs will include: (i) training for bankers to understand the value proposition of financing production, (ii) training for bankers to understand the construction of risk matrices to identify and strategize effective means to perfect loan security; (iii) technical assistance from contract specialists to develop and use enforceable means to cement terms between value chain buyers and sellers and to cement terms between the same buyers and sellers and RCBs; (iv) coordination between financiers engaged in a particular value chain to collaborate so that all segments of the chain—large and small—have adequate liquidity to underpin timely payments to eliminate loan arrears; and (v) development of short term and fixed deposit savings products to lower liquidity risk to the RCB, provide security to smallholder households and lower costs of lending.

23. **Engaging Universal Banks.** Universal banks have expressed qualified interest in structured trade finance for value chains with a clear, reliable and organized export or retail market. Currently, universal banks are not meaningfully engaged in structured trade financing apart from cocoa and non-agricultural products and this is mostly the preserve of very large banks. Conceptually, to assist universal banks to move safely into structured trade financing, these banks will be assisted in developing and rolling out policies and procedures for application, appraisal, approval, disbursement and recovery against contractual buyer and seller documents.

³⁴ Detailed description in Appendix 14

³⁵ From NRG's experience, 38% of their affiliated RCBs have managed repayment rates of 98% and above using this system effectively. Unfortunately, the remaining 62% of participating RCBs have only managed average repayment rates of 77%. Thus 23% of the money they lend is not recovered and this effectively causes lending interest rates to be 23% higher for these RCBs if they are to stay in business.

24. **Approaches to developing equity.** Leasing as a low risk option for lender term financing and/or as an equity development strategy has been a very effective tool for developing agribusiness throughout the world. Leasing can be used to support small, medium and large agribusinesses and can be offered both by RCBs and universal banks. Effective leasing relies on qualified asset vendors, clear strategies for asset maintenance and development of secondary markets for used assets. The programme will support lenders/investors to put in place clear policies and procedures for issues including: treasury management, asset ownership, tax treatment, asset insurance, depreciation and amortization.

25. The persistent problem of undercapitalization of RCBs encumbers these institutions from increasing finance to the lower end of the value chain. RAFIP has undertaken, with ARB Apex Bank and Danida/SPSD-II, to study and, hopefully address this issue. GASIP will collaborate with this initiative and support equity development to RCBs through equity investments and mezzanine debt.

26. There are a growing number of private equity funds interested in investing in agricultural value chains, some with support from the government's Venture Capital Fund, which the Programme will engage with respect to larger investments higher up the value chains being supported. The Venture Capital Fund's affiliated fund managers offer both equity and mezzanine debt investments. GASIP will identify investment opportunities for such investments and offer investors prospectuses to both equity fund managers and universal banks to broaden competition and awareness of financing opportunities.

27. **Matching Grants and Credit.** Programme clients, whether, individuals, groups, members of groups, or enterprises (including PFIs) will be eligible for Matching Grants (MGs) to leverage their equity contribution in order to obtain a medium-to-long-term loan of at least 12 months for investment in machinery, equipment and/or buildings in accordance with the programme's eligibility criteria. MGs will be contingent upon the programme client raising 10% of the total investment cost in cash. The MG as a share of the total investment cost, to be reviewed periodically in light of performance, shall be up to 30% of the total investment cost of the equipment. The MG offer will be approved for clients and equipment conforming to the GASIP eligibility criteria. The MG will only be disbursed if and only if a PFI agrees to offer the client a loan for the 60% balance of the investment cost as well as the initial operating cost as necessary. Details are presented in the table below. It is assumed that 30% of all clients FBOs would receive a MG (720 FBOs would each receive an average MG of US\$ 750) by PY3. In addition, 10,000 agribusinesses (most of them organized in FBOs or groups would receive a MG of US\$ 300 on average) would benefit from a MG.

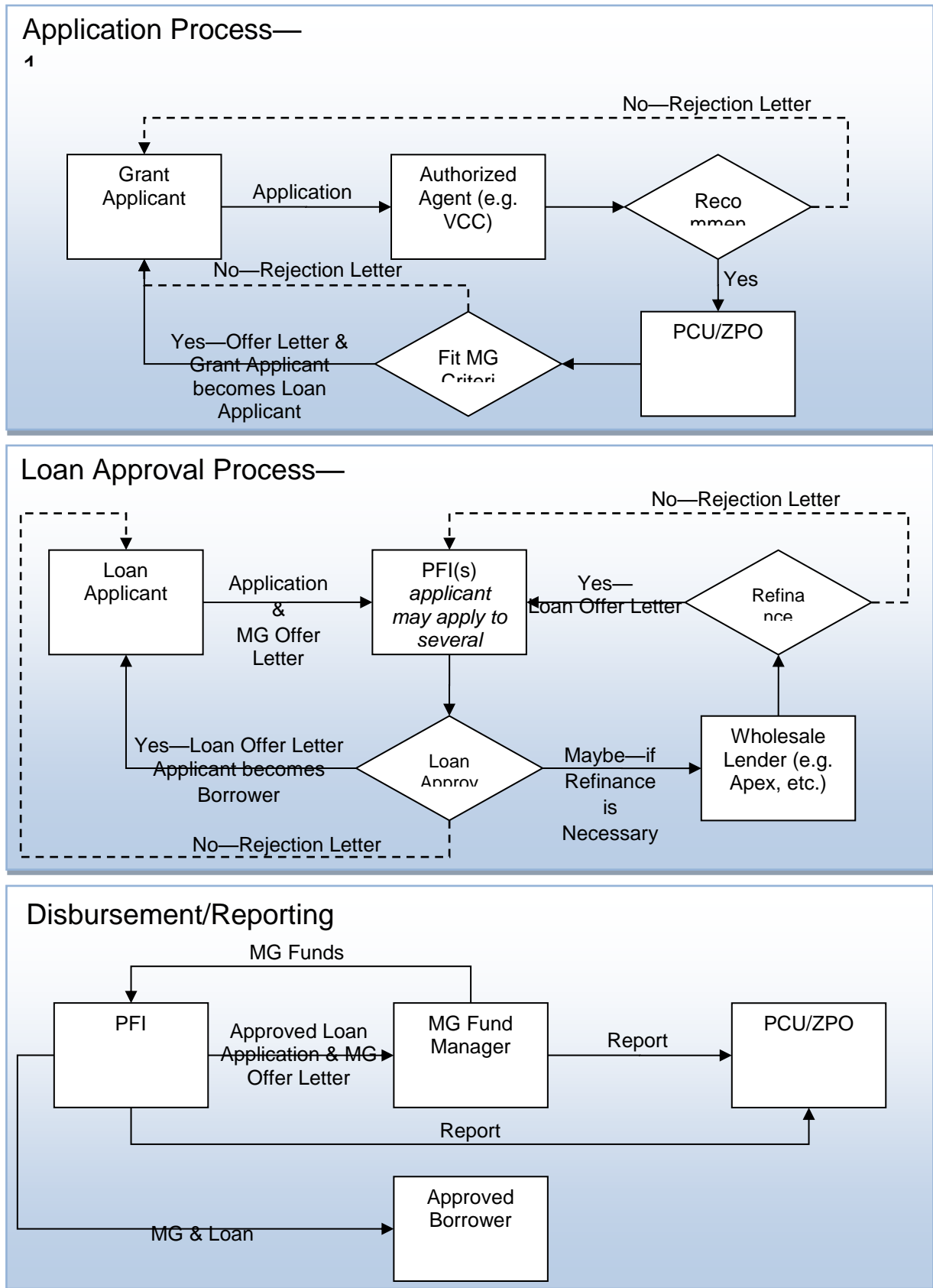
Table 1: Matching Grants

Problem	Weak capitalization among value chain businesses is a persistent and pernicious problem particularly at the production end of the value chain. Producers and other SMEs frequently have very profitable businesses in terms of returns but lack tangible-value productive assets. Because they lack such assets they have low amounts of equity (tangible assets minus liabilities) and thus cannot use equity as collateral for borrowing. Furthermore, and equally as important, they lack precisely the assets which will multiply their throughput and raise the profits to their business. Thus, businesses are profitable, can afford to service the debt on productivity enhancing assets, but lack the equity to acquire these assets.
Purpose	The MG Facility is an instrument to assist agribusinesses (small, medium and large) to both invest in transformative, productive assets and to overcome low levels of equity in order to better qualify as eligible borrowers for PFIs. While functioning as a subsidy, the level of subsidy is strictly limited in order to encourage risk taking by the grantee and actual risk sharing by the lender. In essence, a MG is meant to overcome a short term equity deficiency on the part of the grantee by making a grantee just creditworthy enough to attract and secure a loan from a PFI and to create a long term sustainable relationship between the PFI and the grantee.
Eligibility	Grantees must: 1) be either an agribusiness or a member of an FBO participating in a GASIP supported value chain; 2) complete the proper application to request assistance to procure an asset that will support increased production or productivity; 3) offer at least 10% of the asset value as a down payment; and 4) identify a lender who is willing and able to finance the balance of the asset value (the balance remaining equal to the value of the asset minus the 30% MG minus the 10% or higher down payment). GASIP may stipulate actual or indicative

	assets acceptable for matching grant applications.
Grantee Contribution	In all cases, grant applicants must contribute at least 10% of the value of the asset being sought, in cash. GASIP may stipulate that grantees that do not require a PFI loan to cater for the balance of the cost of the asset may be required to make larger cash contributions, or otherwise be ineligible.
Grant Amounts	Matching grants can cover up to 30% of the value of the asset requested by the grantee. The total value of a single grant must not exceed US\$ 30,000 . Grantees in a group such as an FBO, receive a grant worth a maximum of US\$ 1,000 per applicant, again with the total value of the grant not to exceed US\$ 30,000 (total investment of US\$100,000).
Participation of PFIs	The driving concept of the MG is to provide a “smart subsidy”. That is, the grant is meant to be short term and following its expiration it should leave in place a sustainable commercial relationship. Given this driving concept, grant plus grantee contribution will normally equal 40% of the value of the asset. The remaining 60% must be borrowed from a PFI. This ensures that the PFI will make a careful assessment of the value of the asset to the grantee and make a careful assessment of the risk of lending to the grantee. Furthermore, this will in many cases establish a relationship between the grantee and the PFI that will remain intact after the MG has expired. Hence, rather than returning to GASIP or a similar programme for a grant, the grantee should, for all intents and purposes, have a relationship with a lender and no longer require the smart subsidy provided by the MG.
Approval Procedure	GASIP sets the eligibility criteria for the MG. Applicants submit their applications. If the application conforms to the eligibility criteria (amount, purpose, cash contribution, etc.), the Programme will write and furnish the applicant with an Offer Letter. The applicant can present this offer letter to any PFI, negotiate their best deal in terms of payment schedule, tenure, interest payable, etc. Upon receiving written notification of pending loan approval from a PFI, GASIP will release the MG to the PFI. The PFI will consider the MG as part of the borrower’s down payment (plus the borrower’s 10% or larger cash contribution). This system helps to ensure that the MG undergoes lender due diligence (which is likely to be objective) and frees GASIP from being lobbied for MGs by applicants as the final financing decision effectively rests with a PFI.

28. **Credit lines.** To the extent that there may be some demand for lines of credit by some RCBs, at present there appears to be sufficient funds already available, managed either by ARB Apex Bank or BOG. This includes about US\$ 18 million of funds from the SPEED Finance Facility plus new funds from DANIDA’s second Support to Private Sector Development project (SPSD-II), which are unrestricted as to use by RCBs and others meeting the eligibility and performance criteria. About US\$ 2 million in revolving funds from previous IFAD projects (CBRDP, LACOSREP, UWADEP) is in principle available for agriculture, if the requisite official permission can be granted to continue recycling these funds. In addition, nearly US\$ 5 million will be available for micro and small enterprises (MSEs), including processors in agricultural VCs, from REP. Universal banks are perfectly liquid and don’t require additional or concessional funds. Thus, the design team concluded that additional liquidity in the form of credit lines is unnecessary for the foreseeable future.

Figure 1: MG Process Flow



Subcomponent 1.3: Climate Change Resilience

29. The aim of Subcomponent 1.3 is to mainstream climate change adaptation and resilience of smallholders across the selected value chains.

30. **Conservation agriculture for Rain-fed Farming Systems.** Commercially valid adaptive trials and demonstrations of modern conservation agriculture techniques under rain-fed conditions will be undertaken from PY1 onwards. The first demonstrations would focus on a rotation based on maize-sorghum-cowpea/soybean. These interventions will be hosted by leading nucleus farmers and specialist farm services providers, in line with the value chain approach of the Programme. They will provide location specific adaptation of technology for conservation agriculture which is already a mature technique in other countries. Such technology would include zero-tillage cropping, soil moisture conservation, crop residue retention, appropriate crop rotations and proper crop nutrition. As means to overcome the normal farmer practise of using crop residues for livestock feeding, forage/fodder crops suited to the environment would be included in the rotation. The trials and demonstrations will specifically demonstrate a technically viable approach which provides enhanced yields, yield security, profitability and thus enhanced climate change resilience. A total of about 25 sites will be established, with one in each of the more vulnerable northern Districts (75 sites in total of which 45 sites in cycle 1 and 30 in cycle 2). The trials and demonstrations will seek to provide practical information for farmers, contractors, buyers, financial institutions for improved productivity within a more erratic climatic regime. The activity will adapt already mature technology which has been developed in other countries to the local climatic, soil and environmental conditions in each district. The result will be that a model relevant for rapid application and uptake in each locality will become available.

31. The trials and demonstrations would be closely monitored. Some of the pertinent indicators would be: (a) yield per hectare; (b) yield per millimetre of rainfall; (c) B/C ratio; (d) net revenue per hectare; (e) return to family labour; (f) yield variability over successive seasons.

32. It will generally take about three seasons for the full impact of the new system to become evident in each locality. This is because it takes time for the nuances of each locality to be correctly diagnosed and treated, for soil characteristics to be positively changed, and for associated organic systems to become mature. However, there will be immediate benefits from the first season if the technology is properly applied. It is expected that widespread application of such a system would result in higher yields and farm incomes, lower yield variability, lower run-off and much higher levels of soil carbon.

33. The support to the hosts of the trials will include: (i) cost of incremental capital equipment for a "unit" of equipment; (ii) cash operating costs; (iii) specialised supporting technical assistance; (iv) specialized services such as soil nutrient analysis and moisture holding capacity. It is expected that such support would be initially limited to three years for each participant, after which time the operator would be encouraged to continue fully commercial operations. The average size of each unit of operation would be about 390 hectares of cropping at maturity. Individual smallholders will be allocated three hectares within this, but over time, such areas will be subject to change to properly reflect the capacity of individuals.

34. Farmers, service providers and nucleus estate operators will be encouraged to invest in the technology in commercial operations as the demonstrations provide viable results. Programme support would be provided through matching grant funds (Subcomponent 1.2) as well as extension and mentoring support.

35. **Improved Water-Use Efficiency in Irrigation.** Although investment in irrigation systems has often been proposed as a means of providing resilience to climate change, these same investments often fail to deliver in terms of reliability of water supply, good yields and most importantly value for money in terms of water-availability per unit of investment cost. A central reason for this is that

existing irrigation systems rely on wasteful and inefficient water delivery and application methods. Typically, semi-controlled flood irrigation systems have water-use efficiency of less than 40%, which means that more than 60% of available water is wasted.

36. The Programme would therefore support trials and demonstrations of improved water-use efficiency techniques within existing irrigation systems and from available water sources. These would include: (a) application of drip and micro-jet systems; (b) other water-efficient means of delivery; (c) soil moisture monitoring as a means of advanced irrigation scheduling and management; (d) better drainage, and use of water “recycling” from drainage as a means of enhancing efficiency.

37. These demonstrations will be provided within existing irrigation systems and/or from existing water sources. They will be commercial in nature. It is proposed that some 20 such demonstrations be established (3 per annum), each with a commercially valid command area (at least 5 hectares). Programme support for these demonstrations would include: (a) the capital cost of equipment provided; (b) the incremental operating costs; (c) specialist technical assistance and training.

38. The indicators that would be monitored would include: (a) water-use efficiency, that is, the amount of plant available water available as a percentage of the volume of water applied; (b) water-use per hectare per crop; (c) value of produce per MT of water applied; (d) cost of application per MT of water applied.

39. The application of such technology will provide greater crop and income security for smallholders by improving the capacity of their crops to withstand water stress. These improved and low cost water harvesting and management technologies will be promoted extensively. Farmers, especially FBOs linked through VCCs, would be encouraged to make investments in these systems. They could be supported both through the matching grant system (Subcomponent 1.2) and through provision of irrigation infrastructure support (Subcomponent 2.1).

40. **Capacity Building and Awareness in the field of Climate Change Resilience.** The Programme will provide support for capacity building and enhanced public awareness in the field of climate change resilience. Specific capacity building will also include support to DADUs, FBOs, Water User Associations (WUA) and other members of the VCCs. The activities which will be supported include:

- i. Development and dissemination of climate change adaptation toolkits in conjunction with training courses focused on resilience of key rain-fed production systems in the northern regions. A total of 770 toolkits will be disseminated. These will provide farmers with technical training regarding practical activities that promote climate resilient production systems. The toolkits will focus on the resilience of rain-fed production systems in the northern regions and will include simplified and easy information in local language. The toolkits will describe: (a) the project effects of climate change and climate-related hazards in Ghana, with specific reference to the impact on agriculture; and (b) adaptation interventions that will build resilience to these impacts, including – but not limited to – interventions described in this ASAP project such as agro-forestry, conservation agriculture, weather-index based insurance.
- ii. Awareness raising on climate change to sensitise farmers and their organizations on the process of climate change and the effects of climate-related risks³⁶; general awareness on climate change and climate-related risks will be presented at 180 sensitisation sessions. More specific information relating to climate will be presented at 254 Farmer Field Days, while VCCs will receive training courses on climate change and climate resilient production systems. In addition, 110 climate change adaptation courses will provide technical training on adapted agricultural calendars, better collection and use of weather data, improved productions techniques (incorporating agro-forestry, diversification, conservation agriculture etc.) and other adaptation strategies

³⁶ A conditionality on the use of ASAP funding for this awareness raising and training will be the strong and active participation of women and youth

- iii. International and national exchange visits. Farmers will be taken on visits to neighbouring countries (i.e. Nigeria, Togo, Burkina Faso and Senegal³⁷) and other districts/regions within Ghana (target: 280 participants) where they will be able to observe first-hand appropriate climate change adaptation techniques. This will enable them to implement these techniques in their own agricultural production, serving as “adaptation champions” to other members of their communities. These farmers will be supported to implement the know-how gained on these exchange visits through ASAP activities.
 - iv. Production of technical briefs and notes, dissemination of good practices and training on the use of weather information and the adjustment of cropping systems and calendars, and other appropriate interventions that increase climate resilience.
 - v. Technical assistance for feasibility and design studies and planning including the development of environmental and climate change management plans for these interventions.
41. **Institutional Support for Climate Change Resilience.** EPA and the Environmental Unit of MOFA will receive institutional support, mainly in the form of equipment, training and support to organized workshops and events.

B. Component 2: Rural Value Chain Infrastructure

Subcomponent 2.1: Productive Infrastructure and Facilities

42. The aim of Subcomponent 2.1 is to encourage investments in commercial infrastructure and facilities for the selected value chains.
43. Subcomponent 2.1 will have 2 windows, namely: (a) commercial infrastructure and facilities, co-financed by District Assemblies (DA) and leased to FBO or agribusinesses (in this case, the Programme provides a 90% subsidy combined with 10% contribution of DA); (b) commercial infrastructure and facilities, co-financed by FBOs and value chain drivers; in this case, the Programme will provide up to 70% of the cost of these facilities, matching a financial commitment from the proposed operators and/or beneficiaries of at least 30% of the value of the facilities. The infrastructure and facilities will be operated by a private sector entity for the benefit of the entity and for all other value chain participants. All will have to show a viable management and business plan and an observable benefit for smallholders. The owner of the infrastructure will be: (a) the DA that makes the infrastructure or facility available to private value chain stakeholders on the basis of a commercial agreement; in this case, the ownership could be gradually transferred to private sector stakeholders; (b) a registered FBO or cooperative that is partner in an agribusiness agreement.
44. Targeting of these facilities will be governed by an Objective Ranking System³⁸ that quantifies magnitude of both local community and private sector benefit. The Programme will prioritize Districts that will benefit from storage and processing facilities (including Good Practice Centers (GPCs) as learning centers for environmentally and economically state-of-the-art processing and packaging facilities) in consideration of requirements for agribusiness linkages.
45. The Programme will procure consultancy for the design and supervision of works, the environmental assessment and the bidding document, and contribute to the works. The DA could provide the land and contribute to investments, organize procurement and implementation (see details in Appendix 5).

Subcomponent 2.2: Enabling Public Infrastructure

46. The aim of Subcomponent 2.2 is to finance enabling public infrastructure for the growth and viability of selected value chains. These are facilities completely operated and maintained by the

³⁷ Examples of such activities include the *Projet d'Appui à la Sécurité Alimentaire et au Développement dans la région de Maradi* in Niger (focussing on food security and rural development) and the use of conservation farming techniques such as *zai*, *tassa* and half-moons in Burkina Faso.

³⁸ See: Programme Implementation Manual

public sector. The Programme will select public infrastructure on the basis of agreed criteria, which will be made available by GASIP.

47. **Rural roads and farm tracks, rural electrification.** This will include the construction or rehabilitation of rural roads and farm tracks (900 km) to facilitate the movement of goods from farmers involved in agribusiness agreements to markets. The Programme will also support rural electrification (450 km) in order to make processing and pump irrigation facilities more competitive. For the enabling public infrastructure, GASIP will support the identification, design and supervision, preparation of bidding documents, construction and/or rehabilitation of the infrastructure. The Programme will provide 100% financing, but the public entity responsible for operation must provide evidence that it will provide necessary operation and maintenance. The DA/Department of Feeder Roads (DFR) will include the roads in their maintenance plans.

48. **Water harvesting and management infrastructure.** The Programme will support public water harvesting and management infrastructure (target: 5 schemes) through ASAP funding. The additional costs that are required to convert culverts (target: 20 culverts) being constructed on the culvert-supported flood roads and feeder roads into livestock watering points will be funded. As water availability and reliability is set to decrease as a result of climate change, livestock become increasingly vulnerable to droughts. The addition of livestock watering points to these culverts represents an innovative opportunity for ASAP funding to leverage additional climate resilience for smallholders from these construction activities by increasing the availability of scarce water resources to livestock.

49. For water harvesting and management facilities, GASIP will finance feasibility studies, consultancy services for design, construction and supervision works, an environmental management plan, training of a Water Users Association (WUA). The DA will mobilize the community and organize the selection process of intervention sites, undertake reconnaissance studies and all procedures to acquire the land area via Lease (survey and production of cadastral plans and issuance of lease from the Lands Commission), sign agreements with WUA to define mutual responsibilities.

50. To ensure environmental and social safeguards compliance, **Environmental and Social Management Plans (ESMPs)** will be developed by the ZPO, EPA, the Environmental Unit of MOFA and Ghana Health Service (GHS). In order to develop national institutional capacity, GASIP will: (a) provide technical and capacity building support to GIDA and EPA; (b) procure major supplies and consumables for GHS that will monitor the health situation around the water management facilities.

C. Component 3: Knowledge Management, Policy Support and Coordination

Subcomponent 3.1: Knowledge Management, Harmonization and Policy Support

51. Subcomponent 3.1 aims at creating an enabling environment for smallholders to participate in profitable and climate change resilient agricultural value chains. Principal among these will be policies that optimize Government's support to agribusiness and will specifically address climate change resilience, trade policy, land tenure, and creating a positive environment for women, youth and young peoples' businesses.

52. Specific areas where GASIP is expected to add value include: (a) contributing to the operationalization of METASIP; (b) monitoring progress achieved in building and broadening individual value chains, and drawing out lessons of experience; (c) conducting, or working with partners to conduct, analysis on relevant policy and institutional issues; (d) supporting knowledge sharing and learning through fora that allow GOG, national stakeholders and development practitioners to come together to review experiences and lessons learnt; (e) building partnerships with other major agricultural policy initiatives to support a coherent approach to policy support; (f) bringing operational experience and policy analysis and options to the Agricultural Sector Working Group (ASWG), and promoting discussions on specific and relevant policy issues; (g) supporting MOFA to manage and mainstream processes for policy prioritisation, analysis, development and advocacy; (h) promoting stronger national and regional FBO apex bodies that will be able to do policy advocacy

on behalf of their members; and (i) promoting coordination and collaboration between different projects in support of agricultural value chains. Budgeted activities will include institutional support, technical assistance, in-depth analyses, workshops and learning events.

53. Knowledge management and innovation mainstreaming play a central role in the GASIP concept, both to facilitate internal learning and to provide empiric evidence for policy development. Support will be made available to document progress, share and disseminate information. In addition, Value Chain Forums will be organized at national and zonal level. Earmarked ASAP funding will target policy issues related to climate change adaptation and natural resource management. GASIP will engage with partners to: (i) develop a geo-referenced environmental and climate information system for the mapping and management of water and other natural resources, as well as climate risks;³⁹ (ii) collection and processing of relevant data for the programme in the Savannah Regions; (iii) capacity building of MOFA regional environmental and EPA desks on climate change; and (iv) knowledge products (CDs, case studies, vulnerability maps, policy papers and other publications) for knowledge dissemination.

Subcomponent 3.2: Coordination, Monitoring and Evaluation

54. Subcomponent 3.2 will cover costs for coordination, management, and monitoring and evaluation (M&E). The Programme will finance investments and operational costs related to Zonal Programme Offices (ZPO) in Tamale and Kumasi, as well as a national Programme Coordination Unit (PCU) in Accra. Further details are presented in Appendices 5 and 6.

³⁹ This activity will build on the data available at the ICRAF Geoscience Lab.

Appendix 5: Institutional Aspects and Implementation Arrangements

A. Organization of GASIP

Overall Responsibility and Orientation

1. The Ministry of Food and Agriculture (MOFA), in its capacity as Lead Programme Agency, will have the oversight responsibility for the implementation of GASIP. It will also ensure linkages to other related Ministries, Departments and Agencies (MDAs).
2. The Lead Programme Agency will establish a National Programme Steering Committee (NPSC) that will orient Programme implementation strategy, oversee planning, review progress and impact, and ensure linkages with related projects, government services and relevant value chain stakeholders. Meetings of the NPSC will be held twice yearly and will be chaired by the Minister of MOFA and the National Programme Director will act as secretary.

Programme Coordination and Management

3. The Programme Coordination Unit (PCU) will be based in Accra. The responsibilities of the PCU shall include the overall coordination of the activities implemented under the Programme; direct implementation of subcomponent 3.1 (Knowledge Management, Harmonization and Policy Support); and subcomponent 3.2 (Coordination, Monitoring and Evaluation). The PCU shall have overall fiduciary responsibility for Programme implementation, including consolidation of Programme accounts, preparation of annual financial statements, disbursements, consolidation of Annual Work Programme and Budget (AWPB) and procurement plans; quarterly financial reports; consolidation of progress reports; organization of annual audits in line with IFAD's guidelines; assistance for supervisions, support mission and other missions including inter-cycle; promotion of transversal themes such as gender and youth; and preparation and updating of Programme Implementation and other required Manuals.
4. The PCU shall be composed of a National Programme Coordinator, a Senior Policy and M&E Manager, a Financial Manager, a Procurement and Contract Manager, a Climate Change Adaptation Manager, an Infrastructure Manager, a Value Chain and Agri-Business Manager and other professional and support staff identified in the design phase of the Programme required for the implementation of the Programme. The PCU staff hired through competitive procedures under the Small Grant Agreement for the Implementation Readiness of GASIP, shall serve under the hired capacity for the implementation of this Programme, subject to satisfactory performance. The Lead Programme Agency shall ensure that procedures for the incorporation of such staff to the Programme are readily in place.
5. The Lead Programme Agency, in consultation with the Ministry of Finance, shall ensure that the recruitment of the Programme professional personnel is done through a competitive process and in accordance with criteria and procedures to be developed in agreement with the Fund. The appointment of such personnel shall have IFAD's prior no objection.

Zonal Programme Offices

6. MOFA shall establish three Zonal Programme Offices (ZPO), to provide day to day coordination of Programme activities. The ZPO shall work in close collaboration with the Regional Agriculture Development Units (RADUs).
7. The existing Programme Management Unit of the IFAD co-financed Northern Rural Growth Programme (NRGP) located in Tamale shall be strengthened to coordinate the activities of the Programme in Northern Ghana until the completion of the NRGP. At that time it shall become the

Northern ZPO (ZPON) of the Programme. A ZPO Central (ZPOC) shall be established in Kumasi, and a ZPO South (ZPOS) shall be established in Dodowa.

8. Under the general coordination of the PCU, the responsibilities of each ZPO in their respective area of intervention shall include the preparation of the zonal AWPB and submission to the PCU for consolidation; the coordination of implementation of activities under the respective zonal AWPB; monitoring of Programme activities and elaboration of progress and financial reports; and provision of technical support to RADUs and other decentralized Programme Parties to strengthen coordination and M&E capacities. Additionally, the ZPON will have a key role in the implementation of activities financed by the ASAP Grant.

9. Each ZPO shall be composed of a Zonal Programme Coordinator, a Zonal M&E Officer, a Zonal Value Chain and Agribusiness Officer, a Zonal Accountant, and the professional and support staff required for the implementation of the Programme. Additionally the ZPON shall also have a Climate Change Adaptation Officer. The responsibilities of each position shall be detailed in the Programme Implementation Manual.

10. At the end of each cycle, the effectiveness of the implementation arrangements, including the composition of the PCU & ZPO teams will be assessed and adapted to the needs of the Programme, and determine the detailed arrangements for the intended gradual mainstreaming of programme management in the existing/evolving decentralized institutional structure.

Role of Regions and District Assemblies

11. See: main text

12. The VCF will work in close collaboration with the District Departments of Agriculture (DDA) that will be supported to provide extension services to the FBOs. The Department of Co-operatives (DOC) will provide guidance to FBOs, ensure audits and register FBOs that meet the criteria for registration as legal entities. The Programme will sign MoUs with the involved DOC and DADUs that stipulate key responsibilities and deliverables by all parties in the district.

13. A MoU with the RADUs will stipulate responsibilities in monitoring and supervision of activities as well as specialized backstopping. If required, performance-based contracts with specialized consultants, trainers and service providers will be signed.

B. Implementation of Components

Agribusiness Linkages Development (Subcomponent 1.1)

14. The **Value Chain Facilitators (VCF)** will be recruited on the basis of a performance-based contract, renewed on an annual basis, by the ZPO with a clear mandate and targets to develop a well-defined value chain from production to end-user or export market. The VCF will identify and work in collaboration with a broad platform of private sector end-users, entrepreneurs, suppliers of raw material. In addition, other required services providers will be identified and recruited if/when needed to solve specific bottlenecks or deliver specific services. Progress will be assessed on a regular basis by the ZPO and the required corrective measures will be taken. Given the critical role of quality facilitation, the programme will build on the capacity and experience already embedded in the VCF of NRGF by mobilizing them to partner with GASIP and support a transfer of concepts and skills to NGOs/private sector, MOFA staff and consultants to the extent possible in the initial phase of the programme.

15. The ZPO will enter into a framework MoU with the VCF, detailing the framework and shared vision and complementarities between the VCF and GASIP. In addition, annual performance-based contract will be signed with the competitively selected VCF based on a proposed Annual Work Plan and Budget (AWPB), pre-approved by GASIP and incorporated in the overall GASIP AWPB. Contracts with the VCF will signed at the beginning of the year and funds disbursed for carrying out their activities. The engagement of these VCFs will assist in achieving Programme targets both

qualitatively and quantitatively. Core performance indicators for VCFs will be but not limited to the following: (a) implementation of AWPB; (b) quality of financial management; (c) quality of value chain facilitation and services.

16. Requests to support the establishment of a **Value Chain Committee** will come from the agribusiness and FBO community and DA and addressed to the ZPO. The VCC will: (a) participate in the identification and selection of farmers or FBOs; (b) facilitate the signing of MoUs between all stakeholders so as to create more formalized agribusiness linkages; (c) facilitate linkages with PFIs; and (d) coordinate district-level planning with support from the DADU, VCF and BAC.

17. The ZPO and PCU, each in line with its AWPB, will prepare annual work plans for technical support and expenditures by **public agencies**. The purpose is to bring flexibility to resource allocation and planning to the work of the PCU and MOFA and to allow them to make finely tuned responses to changes in circumstances and needs. The PCU/ZPO will (a) identify the needs and integrate them in an AWPB; (b) undertake the procurement process for the public goods and services; (c) negotiate and sign performance-based MoU with the involved public stakeholders at district, regional or national level, as required.

Rural Financial Services (Subcomponent 1.2)

18. Subcomponent 1.2 will be administered by the Zonal Agricultural Economists under the overall supervision of the Zonal Programme Coordinators. The majority of the activities will be managed by consultants on contractual basis. Technical assistance will include, inter alia: (i) training, mentoring and product development for RCBs; (ii) clearly documenting value chain finance opportunities and equity investment opportunities; (iii) developing industry standard documentation for buyer-seller contracts, assignable invoices, inventory receipts, finance leases; (iv) strategic consulting with universal banks for structured trade financing; and (v) training FBOs in saving up.

19. Consultants will include both local and international engagements depending on the degree to which the appropriate skills are available in the local market. It is recommended by the design team that GASIP adopt an Indefinite Quantity Contract (IQC) mechanism to engage consultants whereby the programme signs agreements with a limited number of reputable firms for three years at a time and the firms compete to provide the appropriate consultants within 30 days of receiving ToR from the programme. GASIP should maintain the right to ask for any consultant to be replaced with 10 days' notice and with failure to replace any given consultant, the right to go to another IQC holder for the replacement. This arrangement will help to provide performance incentives to IQC holders to recruit the best talent and will ensure consultants are performing at their highest possible level.

20. The Zonal Agricultural Economists will develop the ToR for each consultancy, will supervise the consultants during execution of their tasks and will ensure deadlines are respected. At times the programme may need specialist help to develop ToR, but in all cases, the ultimate responsibility for this task will rest with the Zonal Agricultural Economists.

21. **Matching Grants.** In sync with the manuals of NRGF and REP, MGs are essentially a challenge mechanism. The grant is governed by strict criteria and only for pre-determined physical assets (or types of assets). The grantee avail at least 10% in cash toward the asset and then apply to the programme through the Zonal Agricultural Economists. The Economist has no decision power other than verifying the cash is in place and the asset conforms to the pre-set criteria. If that is the case, the Economist requests the Zonal Programme Coordinator writes the applicant a *letter of support*. The letter states that if within 12 months the applicant can find a lender to lend 60% of the value of the asset to the grantee, then the programme will offer a down payment of 30% to complement the cash down payment of 10% (or more). This forces the lender to take risk on the grantee and to do a thorough due diligence of the grantee as a borrower. Only if the lender is satisfied will the lender agree to lend 60% of the asset value. Only if a lender agrees does the programme release the other 30% as grant.

Climate Change Resilience (Subcomponent 1.3)

22. Implementation of activities related to climate change adaptation will be coordinated by the Climate Change Adaptation Manager in the ZPON in Tamale. The selection of demonstration sites for conservation agriculture, as well as other soil and water conservation techniques will be done using criteria to be provided by the GASIP. Each demonstration will include smallholders, either as out growers for nucleus estates or as FBO members within a VCC arrangement using a contract.
23. The ZPO will also procure consultancy services for the preparation of awareness raising and training materials on climate change adaptation for the various target groups including the VCCs, FBOs, line Ministry staff etc. The development of awareness and training materials for FBOs and VCCs will be carried out in collaboration with EPA, in view of their experienced in the collation and dissemination of knowledge relating to climate change.

Productive Infrastructure and Facilities (Subcomponent 2.1)

24. Identification of potential investments will be the responsibility of the VCC in close collaboration with the DA. The DA and VCC apply eligibility criteria on potential investments that are part of an agribusiness arrangement and propose the investments to the Programme. The ZPO validates the selection to ensure compliance with the selection criteria and the Programme approach. The selection proposed by the DA and validated by the ZPO should be included in the DA Consolidated Plan and Budget.

Enabling Public Infrastructure (Subcomponent 2.2)

25. For feeder roads, rural electrification and water management schemes, the DA will apply eligibility criteria of GASIP. Selection criteria must include but not limited to the following: (i) investments that are required to develop Programme intervention sites; (ii) environmental impacts that can be mitigated at an affordable cost. The selection proposed by the DA and validated by the ZPO will be included in the DA Consolidated Plan and Budget, as well as in the GASIP AWPB. The ZPO will procure consultancy services for the design and supervision of works, and a contractor for works. The DA will include the investments in their annual maintenance plan.
26. Identification of potential sites for water management schemes will be the responsibility of the VCC in close collaboration with the DA. The DA and RADU apply the eligibility criteria in the pre-selection of the proposed sites. The ZPO validates the selected schemes to ensure compliance with the criteria. The DAs will undertake the reconnaissance studies, while GIDA will conduct site feasibility studies (physical characteristics). The final selection and ranking will be done by the ZPO. The DA undertakes all procedures to acquire the land area via Lease (survey and production of cadastral plans and issuance of lease from the Lands Commission). The ZPO will procure consultancy services for design and supervision of the water management schemes and a contractor for works. After recruitment, training of contractors will be ensured by ZPO and its implementing partners (GIDA, etc..). The environmental management plan will be produced by the ZPO, EPA and GHS.

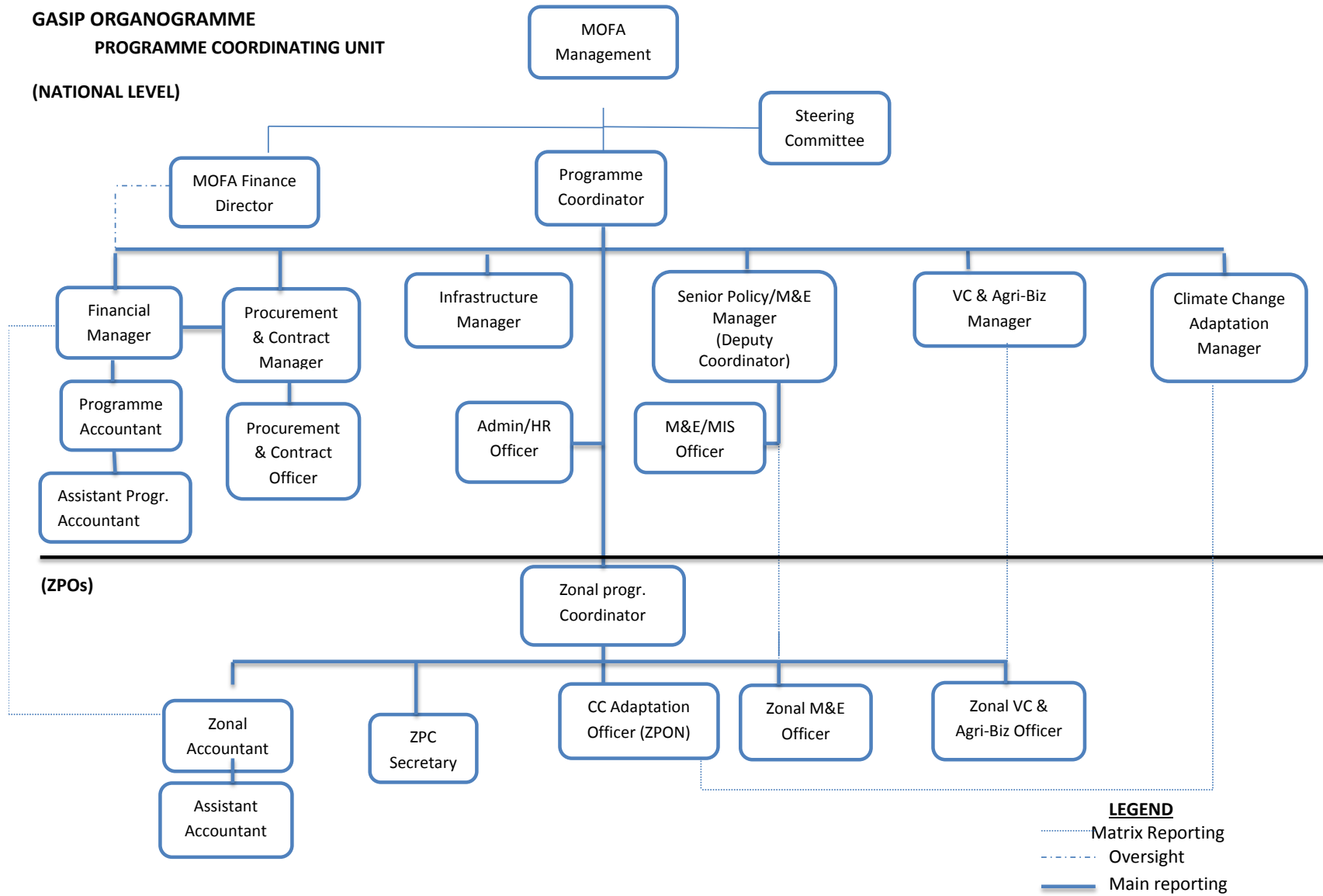
Knowledge Management and Policy Support (Subcomponent 3.1)

27. Knowledge management (KM) activities will be included in the AWPB and implemented by the Senior Policy and Evaluation Specialist in the PCU. Annual planning and implementation will be undertaken in close collaboration with MOFA. The environmental/climate change information system will be implemented in collaboration with key stakeholders, such as CERSGIS, MOFA, EPA, GMet.

C. Environmental and Social Safeguards Measures

28. The implementation of the ESSM will involve the following stakeholders: (i) EPA for overall environmental compliance monitoring, guided by an MoU with the ZPO; (ii) GHS for health surveys and monitoring, guided by a MoU; (iii) at national and regional level, MOFA and its agencies in conjunction with the ZPO, for the implementation of the ESMP, including capacity building and monitoring of implementation; (iv) at district level, MOFA in conjunction with the ZPO, for the

implementation of the ESMP; MOFA has environment desk officers at regional and district level, which will be the contact persons; (v) consultants will be recruited to look at specific tasks.



Appendix 6: Planning, M&E and Learning and Knowledge Management

A. A Programmatic Approach to Planning, Monitoring and Evaluation

1. GASIP has a nation-wide programmatic approach. In contrast to a classic project approach with a fixed activity range for a shorter period, GASIP will take a flexible longer term approach working in three-year cycles. The programmatic approach implies very high demands to planning, monitoring and evaluation in order to provide evidence-based scaling up, and realistic and timely AWPB, that is based on information coming from quarterly and annual reports, status reports and the Inter-cycle review.

B. Planning and Consolidation of Annual Work Plan and Budget

2. Before entering into a new cycle, an activity plan and a draft budget will be prepared for each year of the cycle. This cycle plan will help the programme in linking its activities and outputs to the outcomes and objectives of the programme as described in the logical framework and therefore make planning more goal-oriented. The cycle plan should be prepared based on the inter-cycle review and in a participatory process ensuring stakeholder involvement at all levels.

3. Within each cycle, GASIP will be implemented on the basis of a rolling two-year AWPB that follows the planning outlined in the overall cycle plan. The advantage of working with a two-year AWPB is that implementation can continue during the first months of the coming year instead of waiting for the approval of the new AWPB. Each AWPB shall include, among other things, a detailed description of planned Programme activities, a procurement plan and a financing plan. If required, the PCU may propose adjustments in the AWPB during the relevant Programme year, which shall become effective after approval by IFAD.

4. Each year, a participatory preparation process at district level will take place to provide inputs to the AWPB. This bottom-up approach will inform the programme on the realities of the field, ensure strong stakeholder participation and ownership and, to a large extent, facilitate smooth programme implementation. Table 1 summarizes the AWPB preparation process. Planning will start from the **District level**, involving the agri-businesses, VCC, DADUs, PFIs, FBOs and all other stakeholders. The process will be facilitated by the VCFs and guided by: (i) budget ceilings for the year, provided by the ZPO, (ii) progress realized and lessons learned from previous years, and (iii) targets set for each expected outcome and output in order to reach programme objectives. A first consolidation will be done at the **regional level** by the VCF and RADU, assisted by the ZPO. By mid-September, each ZPO will forward its zonal budget to the PCU at **national level**, which will consolidate and prepare the overall AWPB of GASIP, consisting of two (2) zonal AWPB and one (1) PCU AWPB. The PCU then provides feedback to implementing partners and presents the AWPB to the NPSC for review and approval, prior to submission to the various financiers for no-objection (15 October).

Table 1: Deadlines for Preparation of AWPB

Level	Activity	Deadline
District Assembly (DA)	Preparation of proposals that are transferred to RADU and ZPO	August 15
RADU / VCF / ZPO	Consolidation of district contributions at regional level	August 31
VCFs and other Implementing Entities	Contributions of VCFs and other Implementing Entities transferred to ZPO	August 31
ZPO	Zonal AWPB consolidated and submitted to PCU	September 15
PCU	National AWPB consolidated	October 15

NPSC

Draft AWPB approved

November 5

PCU

Draft AWPB sent to external financiers

November 20

C. Internal Monitoring

5. The Logical Framework of GASIP will form the basis of measuring outputs, outcomes and impact on the basis of a list of agreed indicators. The M&E will take gender and youth targeting into account by whenever possible disaggregating data in gender, youth (15-24 years) and young adults (25-34 years). The various templates for data collection (MOFA, RIMS, GASIP, etc.) will be harmonized as far as possible.

6. **Linkages to Government M&E systems** will be assured by the Senior Policy and Evaluation Officer at the PCU. GASIP will work with MOFA on developing one mainstreamed data collection template that is filled out by the districts on a quarterly basis. GASIP will use the annual yield survey of SRID as a data source but also to the extent possible help increase the quality of the study through support at each level. Other programmes (notably CIDA budget support) will be supporting the capacities of extension services and the administration on district, regional and national level. GASIP will work in collaboration with CIDA on **capacity needs assessments** particularly for M&E and coordinate the necessary support (training and equipment) to ensure a smoother processing of the M&E system.

7. **Internal Monitoring of GASIP / responsibilities of the ZPO.** Each ZPO will mainly focus on programming and internal monitoring of progress in its intervention zone. Internal monitoring will concentrate on (i) implementation progress, (ii) effectiveness and efficiency monitoring; (iii) institutional capacity building monitoring of FBOs, VCCs, WUAs. The ZPO M&E specialist will collect and compile data and prepare progress reports that will be transmitted to the PCU. Actual progress will be reported against estimates of the AWPB and reasons for deviations will be highlighted. Its ToR will include: (a) maintenance of a client database; (b) organisation of Annual Review Workshops and their reports; (c) preparation of Annual Work Plans and Budgets (AWPBs); (d) preparation of quarterly progress reports; (e) preparation of annual progress reports; (f) preparation of status reports for supervision missions; (g) preparation of ad-hoc reports, as required. Each partner will submit quarterly and annual progress reports to the M&E section of ZPOs. A reporting sheet with guidelines for each partner / client institution will be made available.

8. **Responsibilities of the PCU.** The Senior Policy and Evaluation Officer at the PCU will (i) consolidate zonal progress reports into an overall GASIP report; (ii) ensure internal monitoring of implementation of Subcomponent 3.1; (iii) ensure overall efficiency and effectiveness monitoring of GASIP implementation; (iv) facilitate the organization of supervision missions & the Inter-cycle review missions; (v) prepare the yearly Participatory Outcome Assessment; (vi) organize the baseline and reference surveys, as well as other thematic studies and assessments; (vii) prepare the programme completion report; (viii) organize capacity building of Programme partners in M&E procedures; (ix) coordinate, in close collaboration with the ZPO M&E, the elaboration of M&E guidelines; (x) ensure linkages to MOFA M&E.

9. **External Monitoring of GASIP.** External monitoring consists of implementation support and supervision missions. These missions will be carried out by the lead Ministry (MOFA) in close collaboration with IFAD and other co-financiers. Key performance indicators will be: (i) programme outcomes; (ii) implementation of the AWPB, i.e. progress in programme outputs and activities); (iii) timing and quality of programming and M&E; and (iv) financial management and disbursement of funds. A status on these indicators will be prepared by the PCU at central level and should compare the performance of each of the three ZPOs.

10. **Involvement of clients in monitoring of outcome and impact.** The clients of the Programme will be involved in the M&E process through record keeping, such as the Enterprise Record Book (ERB). A revision of the Farmers' Business Book (FBB) and the development of the EBB will be carried out and capacity building of clients will be assured.

11. The Programme will create and maintain a **client database** based among other sources on the information from the FBB and the ERB. The database would provide panel data making outcome and impact analyses possible. The Programme should together with MOFA explore the possibility of developing a **MOFA client ID**, the ID should be made available for all individuals accessing a service from a MOFA or DP programme. The ID could be biological (fingerprints) or electronically (microchip) based in order to facilitate data collection. A legal framework for the use of the ID should be established and cleared by the relevant government authority. If an agricultural census is carried out (which is currently being discussed in MOFA) this census could help creating and disseminating a MOFA farmer ID.

12. GASIP will build on REP experiences to propose a web-based data collection system, where partners submit data using a web browser and an internet connection. The system would be able to provide GIS based data presented in different map layers for visualisation.

D. Inter-cycle Review and Evaluation

13. **Inter-cycle Review Mission (IRM).** A key event for GASIP is its Inter-cycle Review which will serve as the turning point of planning of each Programme cycle. The IRM will take place 6 to 9 months before the end of each cycle. The IRM will be a joint GoG, IFAD and co-financiers operation, duly planned for and supported by the PCU and ZPOs. Value chain analyses and ad-hoc surveys will be completed to feed into the IRM.

14. **Evaluation.** GASIP does not require the classic broad baseline surveys. Its sources of data to monitor effectiveness and outreach would be:

- Detailed and preferably quantitative analysis of value chains and farming systems;
- Client data bases;
- Enterprise Record Books and Farmers' Business Books that provide a wealth of information on the performance of the targeted agribusinesses.

E. Compliance with IFAD RIMS and MOFA METASIP.

15. The M&E system will feed the IFAD RIMS system and MOFA M&E. The M&E Coordinator will assure that RIMS and METASIP indicators are embedded into the system at all levels, output, outcome and impact, and that possible changes in RIMS/MOFA M&E will be reflected in the programme M&E as it goes a long. A list of RIMS indicators will be made available to the PCU and ZPO. As stated above the PCU will work closely with MOFA M&E responsible to ensure coherence and harmonization on M&E, further to this the PCO is encourage to take active part in the national M&E Sector Working Group.

Table 2: GASIP M&E Activities

Activity	Description	M&E Reports	Timing
Conduct value chain analyses	Comprehensive situational picture of value chains the Programme is working on as well as providing data on M&E indicators	Value chain studies	Continuously
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	PY2 and PY6

Internal Monitoring	Monitoring of activities on the basis of activity reports of partners.	Quarterly, Half-Yearly, Annual Progress Reports	Quarterly
Semi-annual and Annual Review Workshop	Stakeholder satisfaction of progress in the previous half-year and seeking views and consensus for the ensuing year	Information included in Progress Reports	Semi-Annual
Participatory Outcome Assessment	A qualitative participatory study of the outcomes of the programme from the client perspective	POA Report	Annually
Facilitation of Supervision and Support Missions	External monitoring of Programme implementation Support from IFAD, GoG.	Status reports for supervision	Twice a year
Facilitation of Inter-cycle Review ⁴⁰	Review of Programme outreach to target groups; exit strategy and adjustment of programme focus and implementation mechanisms if considered necessary	Status reports for Inter-cycle reports	PY3, 6, 9 Every 3 years
Preparation of Programme Completion or Inter-cycle Report	Use of conclusions from impact assessment studies/surveys and Programme database to record key learning.	Programme Completion or Inter-cycle Reports	Not later than six months after completion of Programme

Table 3: Deadlines for Annual M&E

Reports/Key events	Deadlines
Annual Progress Report, Annual RIMS Report	March 30
1 st quarterly report	May 1
Supervision Mission – Status report, Reference study (ev. 3 rd yr)	June
Participatory Outcome Assessment report, Half-year Progress Report	August 1
Supervision/Implementation support mission – Status Report	November

F. Learning and Knowledge Management

16. Knowledge management and innovation play a central role in IFAD's scaling up agenda. M&E systems will be strengthened to focus on outcomes and provide effective evaluation and learning mechanisms backed by rigorous data collection and scientifically accepted evidence, to fine-tune the models that are developed by the programme, and to allow "packaging" them for systematic scaling up. Knowledge management is also at the heart of IFAD's partnership efforts and policy dialogue to which it is essential as feed to a sound policy discussion.

17. Institutional learning should be assured by monthly/quarterly coordination meetings where good practices, failures and constraint can be shared within the programme and with its partners. Furthermore, the PCU will work together with the SAKSS mode of MOFA to share knowledge and improve country systems on knowledge management and learning.

18. GASIP will have a budget line allowing support of research and conduct of studies within the field of the programme, to enable programme progress and input for policy dialogue. A section in the quarterly and annual reports should highlight best practice and lessons learned. The PCU should actively seek partnerships with research institutions to evaluate parts of its programme and to access new knowledge that can improve the delivery of programme objectives.

19. The approach of the programme offers a good opportunity to capture lessons and deliver knowledge products on mainstreaming climate change adaptation in value chain programmes. ASAP will focus on this pertinent element and will generate publications, technical notes, briefs and other forms of communication material that will be disseminated in-country but also through international networks (i.e. UNFCCC, CDKN and others), ASAP is similarly targeting learning through activities that encourage cross-learning within the country and with other countries in the region. The objective is to

⁴⁰ In view of the Ghana Agricultural Sector Investment Programme.

learn and scale up good adaptation practices. In this regard, ASAP is funding study tours and encouraging exchanges between IFAD projects and a variety of stakeholders.

Appendix 7: Financial Management and Disbursement Arrangements

A. Financial management

1. Consistent with IFAD's policies with respect to the use of country systems, the FM arrangements will to the extent feasible be mainstreamed. An FM assessment was conducted on MOFA, the lead implementing agency, with the objective of ensuring that: (i) adequate FM arrangements are in place to ensure project funds will be used for purposes intended with due consideration to efficiency and economy; (ii) the project's financial reports will be prepared in an accurate, reliable and timely manner; and (iii) the programme's assets will be safeguarded. FM assessment was carried out for the Government's accounting function with MOFA. MOFA's Directorate of Finance is headed by a Financial Controller who reports to the Chief Director, the administrative head of the ministry.
2. The FM assessment also included a review of (i) the number and quality of FM staff at MOFA that will have fiduciary responsibilities under the project; (ii) FM organisation structure of the Ministry and its impact on the internal control processes to be employed under the project; and (iii) the proposed FM systems and processes to be established in support of programme implementation, at central, zonal and district level.
3. The assessment of the FM arrangements at MOFA concluded that there are adequate systems in place that satisfy IFAD's minimum requirements. The existing state of FM systems and the direction and pace of ongoing improvements (including the Ghana Integrated Financial Management Information System – GIFMIS), have fostered confidence and would enable reliance on country systems, in the areas of budgeting, budget execution (including accounting), financial reporting and external auditing. Country FM systems will be the default position for GASIP, but as full readiness is expected only upon completion of the GIFMIS project, FM arrangements will be tailored to complement country systems as required.
4. The overall financial management gross risk for the programme is rated high and the residual FM risk as mitigated is rated Medium. Main financial management risks are related to: (i) weak financial management at District level; (ii) limited experience with a decentralized (with growing role for DAs) programming, procurement and financial management system; (iii) weak internal audit systems.

B. Budgeting

5. MOFA, as a Government ministry, follows the budget preparation guidelines set in the Financial Administration Act (2003), the Financial Administration Regulation (2004) and the annual budget guidelines issued by MoFEP. The overall budget for GASIP will be decided between Government of Ghana and IFAD and outlined in the Financing Agreement, whereas the annual budgeting will be done in line with Government's existing budget framework and timetable (MTEF/ Budget calendar) as part of MOFA's regular budget submission. The budget line under which IFAD funds will be allocated will be clearly identified and reported upon as part of MOFA budget allocations under a sub-budget category, to ensure that the principle of 'aid on budget' is observed.
6. The PCU will be required to prepare and submit to IFAD for approval its Annual work plans and budget (AWPB), including the procurement plans, in line with IFAD's requirements. The PCU will provide the Financial Controller of MOFA with the approved AWPB, to enable the monitoring and budgetary control of expenditure. The FM assessment concludes that the budgeting arrangements at MOFA level are adequate.
7. However the budget preparation process is expected to pose challenges, as it will be based on a bottom-up consolidation mechanism from multiple implementing entities: ZPO and District Assembly budgets will be submitted to the PCU for consolidation with its own budget. Delays with this process

would hamper the consolidation of GASIP's budget in compliance with GoG and IFAD rules. Close support and monitoring of DA budget preparation processes by the zonal offices should mitigate this risk, thus adequate staffing at zonal level will be imperative. Budget templates for districts, showing menus of options, will be finalised as part of design to assist with the process.

8. The FM assessment concludes that the risk associated with budgeting processes is High, however the residual risk taking into consideration mitigating measures is Medium.

C. Accounting Systems, Policies and Procedures

9. The Financial Controller of MOFA will have fiduciary oversight responsibilities over the financial management of GASIP.

10. A dedicated GASIP Finance manager with the required qualifications and experience will be assigned from Controller and Accountant General's Department (CAGD), to work under the oversight of the MOFA Financial Controller. He or she will be supported by other accounts staff assigned from CAGD, as required. Accounts staff with appropriate profile will also be released by CAGD to perform accounts functions at the different zonal offices, supported by staff acting as assistant accounts for appropriate segregation of tasks. All GASIP accounts staff will report to the GASIP Finance manager.

11. The policies, guidelines and operational procedures required to support implementation will be consistent with the Government of Ghana's financial procedures (Financial Administration Act (Act 644, 2003), The Public Procurement Act (Act 663, 2003), Internal Audit Agency Act (Act 658, 2003)) and in line with IFAD policies.

12. If, due to workload, CAGD is not in a position by start-up to release staff having the required profile for PCU and zonal offices, an external recruitment process will be carried out.

13. Accounting and financial reporting for the IFAD funding will follow existing GoG accounting policies and rely on existing systems, including GoG Chart of Account, internal approval processes, payment vouchers and authorisation limits. Pending full implementation of GIFMIS, which is expected in 2 to 3 years, a combination of manual cash books and general ledger, supplemented by Excel spreadsheets is currently used by MOFA in its day to day business. It has been agreed that pending GIFMIS completion, off-the-shelf accounting software will be used by the PCU and zonal offices for GASIP. The Chart of Accounts will be synchronised with GIFMIS to facilitate future data migration. The PCU at MOFA will be responsible for consolidating the accounts of the zonal offices and the district assemblies with its own accounts.

14. Terms of Reference for the GASIP Finance Manager and other PCU and zonal accounts staff have been developed and are included in Working Paper 7.

15. At District Assembly level, GASIP accounting functions will be performed by existing District accounts staff, under the responsibility of the District Financial Controller. A fiduciary assessment will be carried out upon pre-identification of each District Assembly participating in the GASIP. Should the assessment conclude that a specific district does not have the required capacity, provision will be made for FM capacity building as required. The GASIP DA fiduciary capacity assessment checklist is included as an annex to Working Paper 7.

16. As part of implementation readiness, accounts staff at PCU, zonal and district levels in-depth will be provided with in-depth training by IFAD and the MOFA Financial Monitoring Unit at start-up on IFAD's procedures & requirements and FM best practice.

D. Funds Flow and Disbursement

17. The proceeds of the financing will be used for eligible expenditures as defined in the Financing Agreement, and in line with the disbursement allocations specified in the relevant section of the Financing Agreement

18. IFAD funds for GASIP will be disbursed to a segregated account in US\$ at Bank of Ghana, operated and maintained by the Financial Control Directorate of MOFA, and managed and operated

by the Financial Controller. The signatories to MOFA Designated Account will be the MOFA Financial Controller, the PCU Director and the GASIP Finance manager. The arrangement to use a central account is important to ensure that the Financial Control Directorate has oversight responsibilities over transfers and payments related to the implementation of GASIP activities.

19. The funds will be disbursed by IFAD into the Designated Account following the imprest/replenishment mechanism. The Authorised Allocation (initial deposit) will be based on the expenditure forecast for the first six months and may be modified during implementation of the programme if justified by treasury requirements. The ceiling for the Authorised Allocation will be specified in the Letter to the Borrower (LTB).

20. The Designated Account will be replenished on the basis of Withdrawal Applications prepared and submitted to IFAD by the PCU, signed by the authorised representatives of the Borrower, accompanied by the required supporting documentation. Detailed instructions for disbursements will be included in the LTB issued for GASIP.

21. An operational account in local currency will also be opened at PCU level, whose signatories will be the PCU Director and the GASIP Finance manager.

22. Each zonal office will hold a bank account in local currency, whose signatories will be the Zonal coordinator and the Zonal Accountant. The accounts will operate on an imprest system, managed by the PCU, with a ceiling for the imprest based on the zonal AWPBs.

23. DAs implementing GASIP activities will be required to operate a segregated GASIP bank account, whose signatories will be the District Financial Controller and District Coordinating Director. An imprest mechanism to be put in place with DAs will be outlined in the MOFA/ DA Subsidiary agreement. The imprests will be managed by the PCU in liaison with the relevant zonal office, which will have the role of validating the district's financial and progress reports and imprest replenishment requests.

24. Prior to any transfer of funds, a Fiduciary capacity assessment will be conducted of the selected DA, with the involvement of the MOFA Financial Controller and internal audit unit. Should a specific district not meet the capacity requirements, support measures will be put in place until capacity is considered adequate.

25. Details of GASIP fund flows, including bank accounts and imprest modalities will be outlined in the PIM.

E. Financial Reporting Arrangements

26. The PCU will be required to prepare and submit separate quarterly IFRs to account for activities funded, no later than 60 days after the end of each quarter. It is expected that the PCU will maintain adequate filing and archival system of all relevant supporting documentation, including returns (in original) with copies of bank statements submitted by the zonal offices and District assemblies. In line with IFAD's requirements, documentation will be reviewed by supervision missions and for audit purposes. The IFRs will be designed to provide relevant information to management, financiers and other stakeholders monitoring the programme's performance. The content and format of the quarterly IFRs will be provided in the LTB.

27. Implementing entities will be required to submit simplified quarterly financial reports to the ZPOs for validation with their replenishment requests. The ZPOs shall submit the validated reports to the PCU for consolidation and preparation of the GASIP IFRs, using a format that will be included in the LTB. Zonal office quarterly IFRs shall be submitted to PCU no later than 45 days after the end of each quarter.

28. Implementing entities, including DAs, shall submit their quarterly IFRs to the zonal offices within 30 days following the end of each quarter. It will be stipulated in the subsidiary agreements to be signed with MOFA that an implementing entity failing to submit quarterly reports within the required

timeframe will not be replenished with additional funding until full compliance has been achieved. Thus the frequency of fund transfers will depend on the timely submission of reports by each district.

29. The PCU will consolidate its accounts with those of the zonal offices and DAs and produce financial statements which, in line with IFAD's General Conditions, will be submitted to IFAD within four months of the end of the fiscal year. The financial statements will be prepared in accordance with the accounting standards used by Government of Ghana.

F. Internal Control and Internal Auditing

30. GASIP's internal controls will rely on the Government established accounting and internal control guidelines as documented in the Financial Administration Act (2003), the Financial Administration Regulation (2004) and the Internal Audit Agency Act (2003). Furthermore, the controls will follow authorisation and approval processes stipulated in the internal control guidelines issued by MOFA and will be specified in the GASIP Finance & Administration Manual (FAM), which will be prepared during programme preparation phase as a disbursement condition for the financing.

31. MOFA has a functioning internal audit unit to help ensure a sound control environment for transaction processing. However based on the assessment, due to workload it may have limited capacity available to cover GASIP activities as part of its oversight functions. Supervision missions would report on the activity of the internal audit with respect to GASIP by reviewing their reports and assessing management's responsiveness to any recommendations formulated. Should it be ascertained that the internal audit arrangements provided by the Internal Audit Unit are insufficient, a private audit firm may be contracted as a complementary measure to perform a systems audit, in order to determine risk areas and propose mitigating measures.

32. Internal controls will also be verified during the annual audit exercise and reported to IFAD in a Management letter, in line with IFAD's audit guidelines.

33. Adherence to the internal control framework will be verified during the annual internal and external audit exercises (see below) and reported to IFAD in the form of an Internal audit report and Management letter, in line with IFAD's audit guidelines. Compliance to the GASIP FAM will also be part of the fiduciary checks performed during supervision missions.

G. External Audit

34. In compliance with IFAD's General Conditions, the GASIP financial statements, prepared by the PCU, will be audited on an annual basis and the auditor's report submitted to IFAD no later than six months after the end of each fiscal year.

35. In line with its mandate as per the Ghana Audit Service Act (Act 584), the Auditor General is solely responsible for auditing funds under the Consolidated Fund and all public funds as received by Government ministries, agencies and departments. In this regard, and consistent with IFAD's policy to maximise use of country systems where feasible, the Ghana Audit Service (GAS) will conduct the audit of GASIP's financial statements and furnish copies to IFAD within six months of the end of the fiscal year.

36. The technical capacity of the GAS is considered satisfactory, but due to workload constraints and in order to ensure that there are no delays in meeting DPs' financial covenants for audit, it is common for the Auditor General to sub-contract the audit of DP-funded project to private auditors. Should this be required for GASIP, the arrangement will be followed subject to IFAD's procurement guidelines and its clearance of the ToR for the engagement of the audit firm. The appointment of the auditors should be finalized as soon as practicable but in no event later three months of the financing agreement enters into force. Should GAS not be in a position to perform the audit directly and the services of an external firm be sought to perform the annual audit of GASIP's overall accounts as described in the paragraph above, the GAS may still be requested to directly conduct a sample of audits of DA's usage of GASIP funds. Provision to support GAS with such audits will be factored into the cost of the programme. The selection of DA audits to be conducted each year would be made, in

liaison with GAS and the MOFA Financial Controller, on the basis of findings of supervision missions, internal audit reports and any issues arising from the District's annual audits.

37. In addition to the annual audit of GASIP's overall accounts as described in the paragraph above, the GAS will directly conduct a sample of audits of DA's usage of GASIP funds. Provision to support GAS with such audits will be factored into the cost of the programme. The selection of DA audits to be conducted each year will be made, in liaison with GAS and the MOFA Financial Controller, on the basis of findings of supervision missions, internal audit reports and any issues arising from the District's annual audits.

Appendix 8: Procurement

A. Review of IFAD and Ghana Procurement Handbooks

1. The IFAD Procurement Handbook was reviewed and compared with the Procurement Manual published by the Public Procurement Authority (PPA), Ghana in line with the provisions of the Public Procurement Act, 2003, (Act 663). The purpose of the review was to determine the acceptability of the country procedures with regard to IFAD procurement principles and international standards. The review confirms that the Ghana procurement procedures generally conform to the IFAD procurement principles. The national procedures could be used on IFAD projects, without risk, provided the procurement team are well trained and qualified. However, IFAD's procedures shall supersede the Borrower's procedures where there are inconsistencies between the two procedures. This position is in total harmony with Section 86 of the Public Procurement Act, 2003 (Act. 663) under International Obligations, which states that "Notwithstanding the extent of the application of this Act to procurement, procurement with international obligations arising from any grant or concessionary loan to the government shall be in accordance with the terms of the grant or loan".

B. Review of District Assembly Procurement Capacity

2. Under GASIP, it is anticipated that most of the investment in public good, e.g. irrigation equipment, warehouse, etc., shall be made with participation of the District Assemblies to enhance local ownership of the projects. For this reason, the design mission carried out an assessment of procurement practices and staff capabilities on a District Assembly and Municipal Assembly each in five out of nine programme regions namely, Ashanti, Brong-Ahafo, Northern, Upper East and Upper West. An assessment revealed that the DAs had various committees in line with the provisions of the Public Procurement Act to carrying out procurement activities. A general risk assessment was also carried out that included the procurement decision-making process and how independent are they from political interferences. Interestingly, ninety percent (90%) of interviewees admitted the influence of politicians in the procurement process. However, they insisted that bid winners had the appropriate documentation to warrant winning an award of contract.

C. General principles

3. Procurement under GASIP is to be carried out in accordance with the loan agreement and any duly agreed amendments thereto. The Borrower's (GOG) procurement methods and procedures will be applied for IFAD Loan to the extent that they are consistent with IFAD procedures. The prerequisite for carrying out procurement under GASIP shall be an Approved Procurement Plan which shall be part of the Programme's Annual Work Plan and Budget (AWPB). To the extent possible, the Programme shall bulk into sizeable bid packages in such a manner as to permit the optimal use of competitive bidding.

4. Overall procurement responsibility will rest with the PCU and the ZPOs (North and South). Procurement will be in accordance with IFAD Guidelines for items financed by the IFAD loan. The Procurement Officers of the ZPOs will generate annual procurement schedules by quarter from the consolidated AWPBs and be responsible for all procurement activities at their levels. The financial units of the implementing partners will be responsible for their operational expenditures and the funds managed by them, as well as for receiving and recording all goods procured by the PCU. The PCU will provide all IPs with guidelines for Programme accounting and inventory controls in the form of the Implementation Manual to be produced at Programme start-up on the basis of the REP-Implementation Manual.

5. All procurement financed from the proceeds of the IFAD loans will be exempt from national and local duties and taxes, including expenditures made for items procured under Local Shopping arrangements. All procurement will be authorised only against the procurement schedule in approved

AWPBs, specifying items to be procured, responsibility for the procurement and the appropriate procurement methodology.

6. The Table below indicates the thresholds of award of contracts that are subject to prior review by the Fund. These amounts may however be modified from time to time as notified by the Fund to the Borrower.

IFAD Review of Procurement Decision

Description	US\$ or Equivalent
Award of any Contract for Goods	100,000 or more
Award of any Contract for Works	100,000 or more
Award of any Contract for consulting services	50,000 or more

D. Procurement of Civil Works and Goods

7. Procurement of equipment, materials and vehicles common to the Programme will be bulked together, to the extent possible, and carried out by the PCU, ZPON and ZPOS. In the event that by bulking items together contracts exceed a value of US\$ 100,000 or more, they will be subject to International Competitive Bidding (ICB). Most vehicles financed by the Programme will be procured under ICB. The importance of readily available spare parts for vehicles will necessitate that suppliers have a presence in Ghana. There are a large number of vehicles companies currently operating in Ghana so this requirement will in no way undermine the competitive process.

8. Equipment purchases bulked together that cost less than US\$ 100 000 but greater than US\$ 20 000 will follow National Competitive Bidding (NCB) procedures.

E. Procurement of Consultant Services and Training

9. The following methods will be permitted for the procurement of consulting services under GASIP: (i) Quality and Cost-Based Selection; (ii) Quality-Based Selection; (iii) Selection under a Fixed Budget; (iv) Least-Cost Selection; (v) Selection Based on Consultants' Qualification; (vi) Single-Source Selection; (vii) Selection of Individual Consultants; and (viii) Commercial Practices.

10. National Competitive Bidding. Each contract for consultant services and training estimated to cost US\$ 100 000 equivalent or more shall be awarded on the basis of competitive bidding advertised locally.

11. Local Shopping. Each contract for consultant services and training estimated to cost US\$ 5 000 equivalent but no more than US\$ 20 000 equivalent shall be awarded on the basis of evaluating and comparing bids invited from at least three suppliers, in accordance with procedures approved by the IFAD.

12. Direct Contracting. Each contract for consultant services and training estimated to cost less than US\$ 5 000 equivalent may be awarded through direct contracting with the consultant, on terms and conditions approved by IFAD.

F. Procurement by District Assemblies

13. It is recommended that DAs that would want to participate in GASIP should open dedicated accounts for GASIP operations. The DAs must also be willing to contribute 10% of project costs to be sited in their districts. Contributions by way of project management, i.e. monitoring of contractors for speedy completion of works could be computed in monetary terms and recognised as such.

14. **Proposed Phasing of implementation:** The implementation should be in cycles starting from districts in the 3 Northern Regions that have had long standing experience with their association with projects like NORPREP and CBRDP.

15. **Implementation Mechanism.** Implementation mechanism for DAs participation would include (i) District Assemblies shall establish District Implementation Committees comprising of FBO and DVCC representatives, District Agricultural Unit, District Planning officer, District Budget officer, District Engineer and Farmers representatives; (ii) Meeting of the committee with target farmers to determine their infrastructural needs, prioritize them and incorporate them in the District Annual Work and Budget (AWPB); (iii) GASIP PCU/ZPOS/ZPON analyses the respective sub projects to determine its eligibility and viability; (iv) Once the AWPB is approved by the District Assembly and the approval is given to District Assembly by the Programme a detail implementation Plan is prepared and submitted to the PCU/ZPOS/ZPON; (v) The District shall commence procurement; (vi) GASIP shall pay 60% of the cost of the approved sub projects into the District Account for the commencement of the project; (vii) close monitoring is required once the implementation is underway; (viii) District shall request for reimbursement after accounting for the expenditure of about 70% of the initial deposit.

16. **Management of the Process.** An assessment of the potential participating district should be undertaken to determine the staff capabilities. There may be the need there should be refresher training programmes on the procurement processes, and contract management. Logistics support in the form of vehicles may be required.

Appendix 9: Programme Cost and Financing

Ghana Agricultural Sector Investment Programme (GASIP)
Expenditure Accounts by Financiers
(USD '000)

	IFAD 1		IFAD 2		ASAP		Government		District Assembly		Local Banks		Beneficiaries		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs																
A. Civil Works	13.018	45,1	6.848	23,7	1.510	5,2	4.325	15,0	1.661	5,8	-	-	1.473	5,1	28.833	25,5
B. Vehicles, Goods and Equipment																
Vehicles and Motorbikes	504	75,0	-	-	-	-	168	25,0	-	-	-	-	-	-	672	0,6
Equipment	812	13,7	1.805	30,4	2.726	45,9	602	10,1	-	-	-	-	-	-	5.945	5,3
Goods	-	-	1.154	32,5	1.512	42,6	568	16,0	-	-	-	-	317	8,9	3.552	3,1
Subtotal Vehicles, Goods and Equipment	1.316	12,9	2.959	29,1	4.239	41,7	1.338	13,2	-	-	-	-	317	3,1	10.170	9,0
C. Services																
1. National Technical Assistance	795	62,5	139	10,9	234	18,4	104	8,2	-	-	-	-	-	-	1.271	1,1
2. International Technical Assistance	1.762	80,0	-	-	442	20,0	0	-	-	-	-	-	-	-	2.203	2,0
3. Training	5.871	25,2	12.915	55,4	3.380	14,5	1.084	4,6	-	-	58	0,2	-	-	23.307	20,6
4. Workshops	827	55,6	587	39,4	-	-	74	5,0	-	-	-	-	-	-	1.489	1,3
5. Consultancies	4.916	76,8	1.031	16,1	197	3,1	261	4,1	-	-	-	-	-	-	6.405	5,7
Subtotal Services	14.171	40,9	14.672	42,3	4.252	12,3	1.522	4,4	-	-	58	0,2	-	-	34.676	30,7
D. Financing Support																
Credit PFI	-	-	-	-	-	-	-0	-0,0	-	-	17.416	86,0	2.835	14,0	20.251	17,9
Grants	3.583	41,3	5.097	58,7	-	-	0	-	-	-	-	-	-	-	8.679	7,7
Subtotal Financing Support	3.583	12,4	5.097	17,6	-	-	0	-	-	-	17.416	60,2	2.835	9,8	28.930	25,6
Total Investment Costs	32.088	31,3	29.575	28,8	10.000	9,7	7.185	7,0	1.661	1,6	17.474	17,0	4.625	4,5	102.609	90,8
II. Recurrent Costs																
A. Salaries	3.141	46,1	3.676	53,9	-	-	-	-	-	-	-	-	-	-	6.817	6,0
B. Allowances	682	46,9	773	53,1	-	-	-	-	-	-	-	-	-	-	1.455	1,3
C. Operation and Maintenance	688	32,7	976	46,3	-	-	442	21,0	-	-	-	-	-	-	2.107	1,9
Total Recurrent Costs	4.512	43,5	5.425	52,3	-	-	442	4,3	-	-	-	-	-	-	10.379	9,2
Total PROJECT COSTS	36.600	32,4	35.000	31,0	10.000	8,9	7.628	6,8	1.661	1,5	17.474	15,5	4.625	4,1	112.987	100,0

Ghana Agricultural Sector Investment Programme (GASIP)
Project Components by Year -- Totals Including Contingencies

(USD '000)

	Totals Including Contingencies						
	2015	2016	2017	2018	2019	2020	Total
A. Value Chain Development							
1. Agribusiness Linkages Development	3.445	3.901	3.949	3.727	3.747	3.767	22.537
2. Value Chain Financing	1.991	6.147	6.197	6.373	6.414	6.456	33.579
3. Climate Change Resilience	1.558	3.105	3.790	2.509	1.367	35	12.364
Subtotal Value Chain Development	6.995	13.153	13.936	12.609	11.528	10.258	68.479
B. Rural Value Chain Infrastructure							
1. Productive Infrastructure and Facilities	472	1.747	2.612	1.739	1.750	1.762	10.081
2. Enabling Public Infrastructure	3.263	5.386	5.624	1.688	1.441	1.451	18.853
Subtotal Rural Value Chain Infrastructure	3.734	7.133	8.236	3.427	3.192	3.212	28.935
C. Knowledge Management, Policy Support and Coordination							
1. Knowledge Management & Policy Support	657	459	552	362	321	364	2.716
2. Coordination, Monitoring & Evaluation	2.444	1.658	2.137	2.363	2.121	2.135	12.858
Subtotal Knowledge Management, Policy Support and Coordination	3.101	2.117	2.690	2.725	2.442	2.499	15.574
Total PROJECT COSTS	13.830	22.403	24.862	18.761	17.162	15.970	112.987

Ghana Agricultural Sector Investment Programme (GASIP)
Expenditure Accounts by Components - Totals Including C
(USD '000)

	Value Chain Development			Rural Value Chain	Knowledge Management, Policy Support and Coordination			Total
	Agribusiness Linkages Development	Value Chain Financing	Climate Change Resilience	Infrastructure	Enabling Public Infrastructure	Management & Policy Support	Coordination, Monitoring & Evaluation	
				Productive Infrastructure and Facilities				
I. Investment Costs								
A. Civil Works	-	-	-	9.930	18.853	-	50	28.833
B. Vehicles, Goods and Equipment								
Vehicles and Motorbikes	-	-	-	-	-	-	672	672
Equipment	1.995	-	3.392	-	-	228	330	5.945
Goods	-	-	3.552	-	-	-	-	3.552
Subtotal Vehicles, Goods and Equipment	1.995	-	6.944	-	-	228	1.002	10.170
C. Services								
1. National Technical Assistance	-	205	234	-	-	712	121	1.271
2. International Technical Assistance	600	939	139	-	-	364	161	2.203
3. Training	13.281	3.504	4.936	-	-	533	1.053	23.307
4. Workshops	719	-	-	-	-	769	-	1.489
5. Consultancies	5.941	-	111	151	-	110	91	6.405
Subtotal Services	20.542	4.648	5.420	151	-	2.487	1.427	34.676
D. Financing Support								
Credit PFI	-	20.251	-	-	-	-	-	20.251
Grants	-	8.679	-	-	-	-	-	8.679
Subtotal Financing Support	-	28.930	-	-	-	-	-	28.930
Total Investment Costs	22.537	33.579	12.364	10.081	18.853	2.716	2.479	102.609
II. Recurrent Costs								
A. Salaries	-	-	-	-	-	-	6.817	6.817
B. Allowances	-	-	-	-	-	-	1.455	1.455
C. Operation and Maintenance	-	-	-	-	-	-	2.107	2.107
Total Recurrent Costs	-	-	-	-	-	-	10.379	10.379
Total PROJECT COSTS	22.537	33.579	12.364	10.081	18.853	2.716	12.858	112.987
Taxes	832	196	1.336	1.506	2.828	185	746	7.628
Foreign Exchange	2.264	21.154	5.156	2.490	4.675	546	1.884	38.169

Appendix 10: Economic and Financial Analysis

A. Feasibility of Value Chain Financing

1. Among the comments received during the design mission for GASIP have been indications that financing is too expensive for value chain businesses. It is true that with interest rates correlated to treasury bills that attract 22% annual interest, inflation at close to 10% and relatively low efficiencies and high write offs among rural lenders, effective interest rates approach 40% on the declining balance.
2. One axiom in rural finance is that a lender should not normally lend to an enterprise that earns a return less than double the effective rate of interest. This is because a borrower who pays more of his income to the bank than he keeps is either likely to willfully default or will repay under duress but will not remain as a bank client. This leads to the conclusion that creditworthiness is only achievable by agribusinesses that earn annualized returns on cost of 80%.
3. While this level of return may seem implausible, it is factually not that unusual owing to the low production, low productivity and low investment in Ghanaian agribusiness. For example, maize producers from a large sample in Sissala West averaged returns on cost of 69% in five months. This annualizes to 166% annually. Comparing this return to a 40% interest rate would lead any business person to conclude that borrowing at 40% annually is good business as he will remain with 126% return in annual terms. Maize processors in the area achieved similar returns.
4. Should GASIP and similar interventions prove successful, these returns will inevitably fall as higher volumes enter markets at a rate more quickly than demand is likely to increase. However, it is also reasonable to expect that interest rates will also reduce as lenders, particularly RCBs, develop skills to manage more effectively (and lose less of the money they lend) and universal banks engage in financing value chains using structured trade financing at competitive interest rates (currently around 24%).

B. Financial Analysis of GASIP

5. The aim of the financial analysis is: (i) to examine the financial viability of the interventions and technologies promoted at the individual farmer or enterprise level; (ii) to provide an analysis of the adequacy of the clients' borrowing arrangements (mainly seasonal credit through the cashless credit scheme); and (iii) to serve as a reference point for the Value Chain Facilitators (VCF), PFI and MOFA staff when advising clients.

Crop Models

6. Nine (9) models for crop production were made for frequent activities that will be promoted by GASIP⁴¹. Five models were elaborated for upland cropping systems, namely: (1) cassava (new clients), (2) cassava (former RTIMP clients), (3) maize (new clients), (4) maize (former NRGP clients), and (5) sorghum. Two models for irrigated crops, based on pump irrigation which were popular under NRGP and MOAP: (6) irrigated maize, (7) pineapple. Two models were developed for conservation agriculture models, namely (8) maize and (9) soya in crop rotation.
7. Table 1 compares a “without programme” and “with programme” situation. Income (after family labour) refers to the difference of gross revenue from selling the commodity per acre and costs of all inputs, labor, rents and services paid for the production. The incremental income is the additional revenue realized by a typical farmer as a result of adopting the technology that is promoted by GASIP. All models indicate that technologies to be promoted lead to significantly higher yields and gross margins. Overall, all crop models are profitable. Production is however more risky for sorghum and maize, in particular in northern Ghana because of the weather variability.

⁴¹ The models are based on interventions tested and proven by NRGP, RTIMP, JICA and GIZ.

8. **Upland crops.** Cassava prices were relatively high in 2012, which was at the basis of the high incremental income, but these cassava prices and market supply are quite cyclical. Every 3 to 4 years, oversupply and shortage disturb the market. Outgrower schemes (model 2) linked to processing centres (the RTIMP GPC model), brings some stability in supply. Improved maize production is interesting in years with average or good yields and market prices, but the experience of 2012/2013 cropping season shows that a market risk exists, in particular in Northern Ghana that has only one cropping season. A good harvest in Southern Ghana leads to pressure on off-season prices in Northern Ghana.

9. Sorghum yields are traditionally low and the marketing chain in Northern Ghana depends on one agro-industrial buyer (brewery Guinness) that uses sorghum to substitute imports of rye. Thus, market expansion is limited. Smallholders basically grow it as a subsistence crop and sell anything they don't eat. Sorghum gives a GHS 325/ha (improved variety) and with one planting season. Under NRG, the crop was used to integrate subsistence farmers into a market economy. Promotion of sorghum as part of an agreement with the agroindustry was quite popular among women groups in Northern Ghana in 2011-2012.

10. **Irrigated crops.** Irrigated fresh maize and pineapple are highly profitable niche and export products. These crops can only be cultivated on a larger scale if producers have a secured market and adopt a correct production technology. This requires investment and working capital, as well as established market linkages. Experiences of projects with pump irrigation are quite good, as the investment cost is only about GHS 5,400 per hectare, while the irrigation schemes are operational quite rapidly, as experience of NRG has shown (the case of butternut squash). Rural electrification would allow bringing down the operational costs of irrigation quite drastically.

11. **Conservation agriculture.** Soybean and maize are giving quite good results in a conservation agriculture rotation. Compared to classic improved upland production, conservation agriculture has lower yield risks but requires more external input/working capital, as adapted mechanization is required. Soybean has potential in Ghana as it is a raw material for the feed industry, but the crop is only profitable if a correct production technology is used.

Table 1: Programmatic impact on producers' yields and net revenues

Example	Yield before intervention (MT/ha)	Yield after intervention (MT/ha)	Net income without GASIP (GHS/ha)	Net income with GASIP GHS/ha	Incremental income GHS/ha
Improved Upland Cropping					
1. Cassava	7.00	14.0	212.5	425.0	212.5
2. Cassava (former RTIMP clients)	14.0	21.0	425.0	875.0	450.0
3. Maize mono-cropping	1.00	2.50	37.5	362.5	325.0
4. Maize (former NRG clients)	2.50	4.00	362.5	875.0	512.5
5. Sorghum mono-cropping	0.75	1.50	90.0	325.0	235.0
Irrigated Crops (pump irrigation)					
6. Fresh maize	1.87	3.75	2,400	4,562	2,162
7. Pineapple	13.5	61.25	2,250	15,252	13,012
Conservation agriculture					
8. Maize in rotation	1.00	3.00	256.0	382.0	126.0
9. Soybean in rotation	0.70	2.00	79.0	1,645.0	1,566.0

Sources: Own analysis on the basis of information from RTIMP; NRG; JICA; GIZ-MOAP

12. Table 2 summarizes information that results from the crop budgets: gross revenue, working capital, net present value (opportunity cost of capital: 10%), benefit/cost (B/C) ratio, and return to family labour. Gross revenue is the gross receipts from selling the commodity produced by a typical farmer for a hectare under production. The working capital needs includes all variable cash inputs (seed, fertilizer, bags,...), hired labor, rents and services paid for by a typical farmer.

13. Under NRGIP and GASIP, the cashless credit scheme (CCS) is promoted to finance working capital of upland crops, with the farmer receiving the inputs and services in kind and reimbursing after harvest. The B/C ratio gives an indication of the return to additional investments in inputs and labour, as well as the adequacy of the CCS. The B/C ratio is most remarkable for premium crops - pineapple and irrigated maize (2.24 and 2.55). The irrigated crops are niche products which target a specialized market and require reliable linkages with buyers. The investment barrier in terms of investment capital (irrigation equipment) and working credit is quite high, compared to upland crops. The B/C ratio is remarkably lower for staple commodities: cassava 1.44, maize 1.32 and sorghum 1.26. Model 2 and 4 (former RTIMP and NRGIP clients) invest further in inputs, which results in higher yields and a higher B/C ratio, but also high needs for working capital. For maize, as for most cereals, the B/C has a high variability, depending on yield, rainfall and market price.

Table 2: Gross revenue, cost of production, benefit/cost ratio, return to family labour

	Gross revenue (GHS/ha)	Working capital (GHS/ha)	Net present value (GHS/ha)	B/C Ratio	Return to family labour (GHS/day)
Improved Upland Cropping					
1. Cassava	1,400	600	1,306	1.44	5.67
2. Cassava (former RTIMP clients)	2,100	850	2,765	1.71	11.67
3. Maize mono-cropping	1,500	662	762	1.32	3.82
4. Maize (former NRGIP clients)	2,400	1,050	2,863	1.57	9.21
5. Sorghum mono-cropping	1,575	675	1,444	1.26	3.42
Irrigated Crops (pump irrigation)					
6. Fresh maize	7,500	2,562	12,454	2.55	60.83
7. Pineapple	27,562	11,925	74,939	2.24	203.50
Conservation agriculture					
8. Maize in rotation	1,800	1,288	773	1.27	14.70
9. Soybean in rotation	2,750	975	8,345	1.73	63.27

Sources: Own analysis on the basis of information from RTIMP; NRGIP; JICA; GIZ-MOAP

Processing of Cassava

14. Good Practice Centres (GPC) for processing of cassava into gari are promoted and used by RTIMP as learning centres, but managed and owned by women groups on a commercial basis. RTIMP intervenes only in the initial investment. An investment analysis on a sample of 10 GPCs in 2012 shows a Financial Internal Rate of Return (FIRR) that varies between 2% and 319% with a medium FIRR of 67%. The quality of daily management seems to be the key success factor of the GPC. The average investment cost in these 10 GPCs was GHS 69,000 during 2007-2012. Currently, the investment cost would be about GHS 130,000, as requirements for product quality, health and environmental impact mitigation are more stringent. In addition, the GPC concept has been fine-tuned by RTIMP. A well-managed GPC creates between 90 and 130 jobs, often for women in processing but also for young farmers in outgrower schemes, transporters, artisans and retail traders. Since the MTR of RTIMP, it was decided to link these centres upstream to outgrowers for supply of raw material and downstream to wholesale buyers, supermarkets and export markets at the demand side. In addition, RTIMP is working on certification and traceability.

15. The investment analysis in Table 3 shows that a well-managed GPC is profitable. It should be said that market prices for gari were quite lucrative in 2013. Since the MTR of RTIMP, it was decided to link these centres with outgrowers for supply of raw material and with wholesale buyers, supermarkets and export markets at the demand side.

Table 3: Profitability of RTIMP Good Practice Centres (GPC) for cassava processing into gari (2012)

Item	Unit	Good Practice Centre
Investment	GHS/annum	90,602
Gross revenue (GHS/annum)	GHS/annum	149,800
Variable Costs (GHS/annum)	GHS/annum	88,200
Depreciation	GHS/annum	9,200
Net profit	GHS/annum	52,400
Financial internal rate of return	%	67%
Benefit /cost (B/C) ratio	%	135%
Net present value	GHS	617,000

Source: RTIMP (case of Harii Farms)

C. Economic Analysis of the GASIP Programme

16. In order to calculate the Economic Rate of Return (ERR) of the Programme, the economic benefits were calculated for a 20-year period. The opportunity cost of capital is 12%. The analysis takes into consideration the phasing in of programme interventions over the six years of the first two cycles of GASIP. It is based on the 86,400 direct clients targeted by PY6, using a cash flow model that includes all investment and operational costs of the GASIP Programme, the maintenance costs of all public infrastructure purchased by the Programme (5% annually for 20 years), the incremental net revenues from the above models (see: financial analysis). Farmers will adopt the technologies on 79,200 hectares, of which 50% existing fields and 50% new fields. The economic cost of GASIP has been calculated using the COSTAB Programme. The nine models are in no way exhaustive as GASIP itself will adopt an adaptive, opportunistic approach to choose value chains in targeted geographies as they show promise. Investment and incremental recurrent costs of all programme components have been included in the analysis. Financial flows from credit or grant facilities have been deducted, so as to avoid double counting. The analysis is based on direct costs and benefits, social and indirect benefits have not been taken into account. A number of scenarios were tested to establish the economic viability of the total Programme in the event of adverse factors.

Table 4: Assumptions for GASIP's outreach

Model	Hectare per farmer	Hectares	Farmers
Cassava (model 1)	0,8	12.800	13.000
Cassava - former RTIMP clients (model 2)	0,8	10.000	10.000
Rainfed maize (model 3)	0,8	12.800	13.000
Rainfed maize (model 4)	0,8	10.000	10.000
Sorghum (model 5)	0,8	17.920	22.400
Irrigated maize (model 6)	0,1	400	4.000
Irrigated pineapple (model 7)	0,1	400	4.000
Maize – conservation agriculture (model 8)	1,0	5.000	5.000
Soya – conservation agriculture (model 9)	1,0	5.000	5.000
Total		74.320	86.400

17. On the basis of the above assumptions, the ERR of GASIP will be 18.6%; the Net Present Value (NPV) will amount to US\$ 31.3 million. The ERR is indicative only and will depend on value chain demands of smallholders.

18. The following table summarizes a sensitivity analysis of the ERR to estimate the benefit from the investments. Overall, profitability of the programme is quite robust. Key success factors at the level of the PDO are clearly (a) the outreach or number of farmers reached or total acreage cultivated; (b) the increase in income per hectare; (c) delays in achieving benefits. In case only 65,700 farmers are reached, the ERR drops to 12.1. Also delays of benefits have serious consequences for the ERR.

Table 6: Economic Rate of Return (ERR)

Assumption	Related risks	ERR	NPV (mio USD)
Base case (86,400 farmers)		18.6%	31.3
Decrease in incremental benefits per ha: -10%	Good market prices, good adoption of technologies	16.3%	19.9
Decrease in incremental benefits per ha: -20%	Low crop yield, reluctance to adopt technologies, low farm gate prices, weak bargaining power of farmers, low willingness of PFIs to give loans	13.9%	8.4
Programme Cost Rise of 10%	Low management capacity of PCU and ZPOs, not enough focus on core activities	16.5%	23.0
Programme Cost Rise of 20%		14.7%	14.7
Number of farmers -15% (73,440 farmers)	Low implementation capacity of ZPOs and VCF	15.1%	14.0
Number of farmers -27% (65,700 farmers)	Low capacity of district extension services, elite capturing	12.1%	0.4
Benefits delayed 1 year	Weak local linkages, weak capacity of ZPOs, programme structure not enough decentralised	15.2%	16.7
Benefits delayed 2 years		12.6%	3.6

Appendix 11: Draft Programme Implementation Manual

1. Programme implementation arrangements will be detailed in a Programme Implementation Manual, comprised of (i) an operational manual; (ii) an M&E manual; and (iii) a Finance and Administration Manual.
2. A draft Programme Implementation Manual (PIM) has been prepared (see: Project Life File). The GASIP manuals will be harmonized with those from NRGF.
3. The operational manual shall include inter alia membership and specific responsibilities of the NPSC; criteria for the selection process of value chains; criteria for the eligibility of matching grants and investment proposals, as well as modalities of implementation. The M&E manual shall detail the M&E system and procedures including RIMS. The finance and administration manual shall include inter alia financial control and procurement procedures, financial reporting templates, terms of reference of Programme staff and template MOUs with Programme Parties and service providers.
4. Any revisions to the Programme Implementation Manual shall be subject to the Fund's no-objection.

Appendix 12: Compliance with IFAD policies

A. Compliance with IFAD Policies

IFAD policies	Compliance
Strategic Framework (SF) 2011-2015	GASIP is highly compliant with IFADs Strategic Framework 2011-2015. GASIP has a clear focus on enabling poor rural women and men to overcome poverty. GASIP 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 GASIP are: (i) formalization of value chain linkages; (ii) technical and management skills training; (iii) investment support; (iv) knowledge management.
Rural Entreprises Policy	Compliant. IFAD's longer term vision in Ghana is to support development of formalized agribusiness linkages for better income generation. In this respect, GASIP will facilitate access to financial and non-financial services and skills training. The approach will be demand-driven.
Rural Finance Policy	Compliant. All interventions are market-conform and implemented through commercial and rural banks.
Targeting Policy	Compliant. GASIP uses (i) targeting of pro-poor value chain; (ii) self-targeting; (iii) direct targeting; (iv) enabling factors to reach rural poor and empower them. GASIP will also support institutional strengthening of those actors (FBOs, VCCs, PFIs) 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 value chains and improve their livelihoods.
IFAD gender policy	Compliant and innovative. Due cognizance will be given to women in 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 GASIP and directly responding to ASAP objectives and expected results.

B. Environmental and Social Review Note (ESRN)

5. Based on the relatively minor negative impacts of the targeted economic activities on the environment, the Programme has been classified for the purposes of environmental scrutiny as Category B.

6. To successfully achieve sustainable agricultural and rural livelihoods in the Programme catchment area, due attention must be given to environmental and social safeguards implementation. Although environmental and social (E&S) issues cut across all the components of the Programme, the main E&S impacts are concentrated around the Rural Infrastructural Development (Component 2).

7. To ensure environmental and social safeguards compliance, Environmental and Social Management Plans (ESMPs) will be developed and monitored for all road works, warehouses, pack houses and irrigation schemes. This will be done through consultations and monitoring visits by the

various stakeholders (PCU, Regional and District Directors of MOFA, Officials from District Assemblies, GHS and EPA). This will be aimed at addressing all the concerns from the stakeholders. Periodic environmental and social compliance monitoring reports must be prepared and shared with all stakeholders. Additionally, EPA will be supported by the Programme to enable them carry out their statutory environmental and social compliance monitoring of NRGP sponsored feeder roads rehabilitation and water pumping schemes. Training of farmers on basic best environmental practices in agriculture will be provided.

8. The Programme will only have positive social impacts. It will not have negative effects on indigenous population groups. Special monitoring will be done of labour conditions of smallholders, youth and female labour in the targeted value chains.

Appendix 13: Contents of the Project Life File

(i) Project-generated knowledge

Project Concept Note
Detailed Design report and working papers
Design Completion Report and working papers,
OSC documentation
Review documentation: QE and QA
CPMT Minutes
Terms of Reference

(ii) knowledge base

RB-COSOP
METASIP

(iii) lessons learned from similar projects

Ghana CPE report ;
Supervision reports of RTIMP and NRGF
MTR reports of RTIMP and NRGF
Document on SWAPs

Appendix 14: Value Chain Financing: Strategies and Examples

A. Structure Finance strategies

9. The phrase value chain financing itself is a matter of semantics but generally refers to what is generically called structured trade finance. Structured trade finance covers multiple strategies for lending and recovery but generally involves either using inventory or using contractual obligations with well-established buyers to perfect loan security. Three well understood structured financing strategies are envisaged for promotion under GASIP for supporting both Universal Banks and RCBs. These are: (i) forward contract finance, (ii) invoice discounting, and (iii) warehouse receipts. These instruments function as follows:

Instrument	Description	Discussion
Forward Contract Finance	Seller and buyer (e.g. producer and processor) agree to execute a contract in the future. Quantity, quality, time place and mechanism to determine price are documented. The financier loans in kind or in cash to the seller to produce the commodity, in return for being named in the contract as the payee. At the time of contract execution, the commodity is delivered and the buyer pays the contract payee (the financier). The financier deducts principal and interest payment and refunds the balance to the seller.	Benefits: System controls default risk by moving repayment responsibilities to a strong business. System enables lending without physical collateral. Contract and financing enhance overall market reliability, liquidity and speed. Needed inputs: Contracts enforceable outside of commercial courts must be put in place. Liquidity for large buyers is essential and may also need a separate financing strategy.
Invoice Discounting	Seller delivers commodity to buyer (e.g. processor and wholesaler), submits an invoice to the buyer and receives a <i>receipt</i> , as proof of delivery, specifying the quantity, quality, time place and price. Financier lends a percentage (normally 80%-95% depending on the reliability of the buyer) of the value of the invoice to the seller in return for being named payee on the seller's invoice. The buyer pays the invoice payee (the financier). The financier deducts principal and interest payment and refunds the balance to the seller.	Benefits: System provides instant liquidity to sellers for commodities delivered making transactions along the value chain faster and more reliable. Default risk is minimized without need of collateral or onerous borrower appraisal. Needed inputs: Development of standardized invoices which are legally negotiable.
Warehouse Receipts	Commodity owner deposits commodity into a secured, managed, properly engineered storage facility and receives a receipt for the commodity deposited. The receipt can either be negotiable (capable of being bought and sold as a paper security with any holder of the receipt being capable of redeeming the receipt for the commodity after settling any fees) or non-negotiable (only the depositor or a specific party noted on the receipt may redeem the receipt). In return for assignment of the receipt as collateral, financier lends a percentage (normally 60% to 80% of the current market value depending on historic price volatility) to the owner. When the owner sells the receipt for the commodity or pays the loan back, the financier releases the commodity to its owner. Storage of the commodity normally attracts fees for management, insurances and protection against fraud, which must be settled at time of sale.	Benefits: System controls default risk by collateralizing commodity in the warehouse. System enables lending without onerous appraisal of the borrower. System may provide instant liquidity to sellers for commodities deposited making transactions along the value chain faster and more reliable. Natural markets should develop where large stocks of properly stored commodities will be available to buyers. Needed inputs: Warehouse receipts with enough complexity to facilitate the market but with little enough complexity to make the receipt easy to understand and liquidate. Depending on complexity, legislation or rules and bodies for arbitration may be needed. In any case, education for users about price risk of the underlying commodity is essential.

10. GASIP will promote equity type products including: (i) equity, (ii) mezzanine debt and (iii) finance leases. Because these products are not as common in Ghana's market or elsewhere in developing countries, they are explained in the table below.

Product	Description	Discussion
Equity Investment	A fund or an individual (investor) buys shares in an existing agribusiness or RCB. The investor shares the profits and losses. The investor may participate on the board to review and advise on operational and financial management.	<u>Benefits:</u> Increased equity for RCBs enables increased borrowing and lending. Increased equity for agribusinesses enables increased liquidity and investment in transformative fixed assets. <u>Needed inputs:</u> For RCBs, there is a reluctance to accept external investment and boards may need sensitization to benefits. Revision to policies regulating RCBs may be necessary to facilitate investment. Well formulated investment contracts for agribusinesses will need to be developed and proliferated.
Mezzanine Debt	A fund, bank or an individual (investor) loans funds to an existing agribusiness or RCB (investee). The funds are treated as equity on the balance sheet but are otherwise treated as a loan whereby the investee must make a regular repayment of principal and interest. Failure to pay back the investor according to the agreed terms will convert the mezzanine debt to equity.	<u>Benefits:</u> Increased equity for RCBs enables increased borrowing and lending. Increased equity for agribusinesses enables increased liquidity and investment in transformative fixed assets. Mezzanine Debt is: less intimidating to the investee as there is a clear exit strategy for the investor; and interesting to the investor as it carries a guaranteed payment. <u>Needed inputs:</u> For RCBs, there is a reluctance to accept external investment and boards may need sensitization to benefits. Revision to policies regulating RCBs may be necessary to facilitate investment. Well formulated investment contracts for agribusinesses will need to be developed and proliferated.
Finance Leases	A financier (lessor) provides a fixed asset to an agribusiness (lessee). The lessor maintains ownership of the asset on its balance sheet and the lessee pays rental payments (equal to principal and interest payments) on a regular basis and treats the lease as an expense on its income statement. When the asset is 100% paid for, ownership of the asset is transferred to the lessee and is placed on the lessee's balance sheet. Effectively, this is a mezzanine debt investment in a fixed asset.	<u>Benefits:</u> Fixed assets for agribusinesses add efficiency and throughput capacity thus making the value chain function faster and more efficiently for connected businesses. Finance Leasing gives lessor ownership of the fixed asset for the term of the lease, eliminating the need for lessee's collateral compared with traditional lending. <u>Needed inputs:</u> Leasing requires strong contracts clearly defining rights and responsibilities of lessors and lessees. Reliable asset vendors need to be identified who are capable of providing adequate appropriate assets, maintenance for those assets and a reliable secondary market for second hand assets.

B. Examples of Value Chain Financing

11. The following table presents some illustrative examples of what value chain financing strategies and products GASIP will be able to offer. Based the market and review of actual agribusiness and financial institutions' data, the following should be feasible.

Value Chain	Potentially Successful Financing Strategies	Role for GASIP
Cassava	<ul style="list-style-type: none"> Outgrower finance intermediated in kind by GPCs. Credit disbursed as improved inputs and settled with delivered cassava—price is contracted forward on the basis of Kia load of cassava as is currently done. Leasing for Kia trucks, tractors, ridging equipment. Loans and/or mezzanine debt for expanding and/or establishing GPCs, higher level processors, consolidators or distributors or a 	<ul style="list-style-type: none"> Formalize conventional practice of selling cassava by the Kia load with a contract. Formalize all value chain contracts. Provide MGs for leasing down payments. Develop investors' prospectuses for higher level investments for mezzanine investors such as the Venture Capital Fund. Assist RCBs to develop fixed deposit savings products.

	<p>GPC cluster facility</p> <ul style="list-style-type: none"> • Saving up for productive investments for value chain SMEs. 	
Maize	<ul style="list-style-type: none"> • Expansion of cashless credit building on successful bank-FBO models under NRGF and USAID Advance. • Establishment of wholesaler or processor invoice discounting facilities to ensure liquidity down the chain. • Leasing for trucks, tractors, equipment. • Long term financing for building and managing warehouses against firm contractual linkages. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Improve RCB capacity to evaluate both liquidity and default risk and to better perfect security with practical contracts. • Formalize all value chain contracts. • Facilitate the introduction of existing universal bank invoice discounting to terminal market purchases and sales. • Provide MGs for leasing and/or mortgage down payments. • Assist RCBs to develop fixed deposit savings products.
Sorghum	<ul style="list-style-type: none"> • Current costs of financing are close to producers' revenue—because of low return, producers can't really borrow. • Establishment of wholesaler or processor invoice discounting facilities to ensure liquidity down the chain. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Build producer capacity to improve yield until such time as productivity enables borrowing. • Facilitate the introduction of existing universal bank invoice discounting to terminal market purchases and sales. • Assist RCBs to develop fixed deposit savings products.
Pineapple	<ul style="list-style-type: none"> • Financing against forward contracts from exporter to outgrower. • Leasing for production equipment. • Equity investments in pack houses and processing either as stand-alone businesses or as part of export clusters. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Formalize conventional practice of selling exported pineapple by the kg with a contract. • Provide MGs for leasing and/or mortgage down payments. • Develop investors' prospectuses for higher level investments for equity investors such as the Venture Capital Fund. • Assist universal banks to develop fixed deposit savings products.
Fresh Maize	<ul style="list-style-type: none"> • Equity investment in expanding and maintaining irrigated farms in proximity to urban areas. • Leasing for production equipment. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Develop investors' prospectuses for leased subdivided irrigated farms for equity investors such as the Venture Capital Fund. • Provide MGs for leasing down payments. • Assist RCBs to develop fixed deposit savings products.
Yam for export	<ul style="list-style-type: none"> • High level invoice discounting facilities between exporters and aggregators to ensure liquidity down the chain. • Conventional lending for the expansion of yam miniset seed multiplication. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Facilitate the introduction of existing universal bank invoice discounting to export market purchases and sales. • Evaluate, document and promote the lending opportunity to expand the highly profitable seed multiplication. • Assist RCBs to develop fixed deposit savings products.
Vegetables	<ul style="list-style-type: none"> • Leasing for pump irrigation, boreholes and protected environments (greenhouses). • Financing against contracts with supermarkets and other wholesalers and retailers. • Saving up for productive investments for value chain SMEs. 	<ul style="list-style-type: none"> • Provide MGs for leasing down payments. • Formalize conventional practice of selling fresh vegetables by the kg with a contract. • Assist RCBs to develop fixed deposit savings products.

Appendix 15: Climate Change Resilience

Justification

1. Responding to the priorities of the Government of Ghana (GoG) in their national adaptation strategy and the COSOP 2012, the Ghana Agricultural Sector Investment Programme (GASIP) offers an opportunity to mainstreaming climate change adaptation throughout its proposed components and activities. IFAD's current portfolio of activities in Ghana does not have an explicit and direct focus on climate change adaptation. The Country Portfolio Evaluation (CPE) of October 2011 rated the impact on environment and climate change across the portfolio as moderately unsatisfactory, and called for particular attention to climate-related risks and environmental sustainability. The Ghana COSOP 2012 has also recognised the importance of addressing environmental sustainability and climate-related risks in making smallholder producers more resilient and competitive. Mainstreaming climate change adaptation into the GASIP will contribute to the sustainability of the business models and the viability of value chains despite increasing environmental degradation and climate stress.

2. Climate change adaptation will be addressed in an incremental fashion to upscale good practices and/or to promote innovations that tackle the drivers of smallholder vulnerability and their ability to engage in viable business opportunities. This will be achieved using a fully blended approach that combines development resources with climate change finance through the Adaptation for Smallholder Agriculture Programme (ASAP) grant window. An ASAP grant of US\$ 10 million has been earmarked for climate change adaptation activities, to be mobilised within the first programme cycle. It will be fully blended in the Programme, focussing on additional activities that will target the drivers of vulnerability to climate-related risks. These activities will include: water resource management; enhanced rural infrastructure; climate-resilient production landscapes; support to smallholders through extension services promoting good practices; and policy dialogue around climate change and natural resource management issues. The activities will target the agro-ecological zones that are socially and ecologically most vulnerable to climate-related risks.

Climate Change Context

3. Within Ghana, climate change is expected to have greater effects on the regions that are characterised by a uni-modal rainfall pattern. These are the Northern, Upper West and Upper East Regions (hereafter "northern regions") of Ghana, which fall within the Guinea and Sudan Savanna Zones. The Guinea Savanna Zone covers approximately 147,900 km², while the Sudan Savanna Zone is restricted to an area of 1,900 km² in the extreme north-east of the country⁴². Both Savanna Zones are characterised by an average annual rainfall of less than 1,200 mm, falling within the single rainy season stretching from April/May to October/November⁴³. The natural vegetation consists of fire-prone grasses interspersed with scattered deciduous trees that are adapted to drought and fire⁴⁴. These fires are usually anthropogenic in origin, and restricted to the dry season. Soil fertility is generally low, with some areas experiencing severe erosion.

4. Agricultural production in the area is dominated by rain-fed agriculture with low levels of irrigation development, confined to a single growing season. Maize forms the most important crop, but there was a decline in yields of approximately 25% in the period 1996-2000. This has been ascribed primarily to a reduction in soil quality, as current agricultural practices – especially removal of vegetation for livestock feed and the burning of vegetation and crop residue – reduce soil organic matter and the availability of plant nutrients. This has led to increased reliance on chemical fertilisers, although these are rarely applied in appropriate quantities⁴⁵. The following map⁴⁶ outlines the land use

⁴² SRID, 2010.

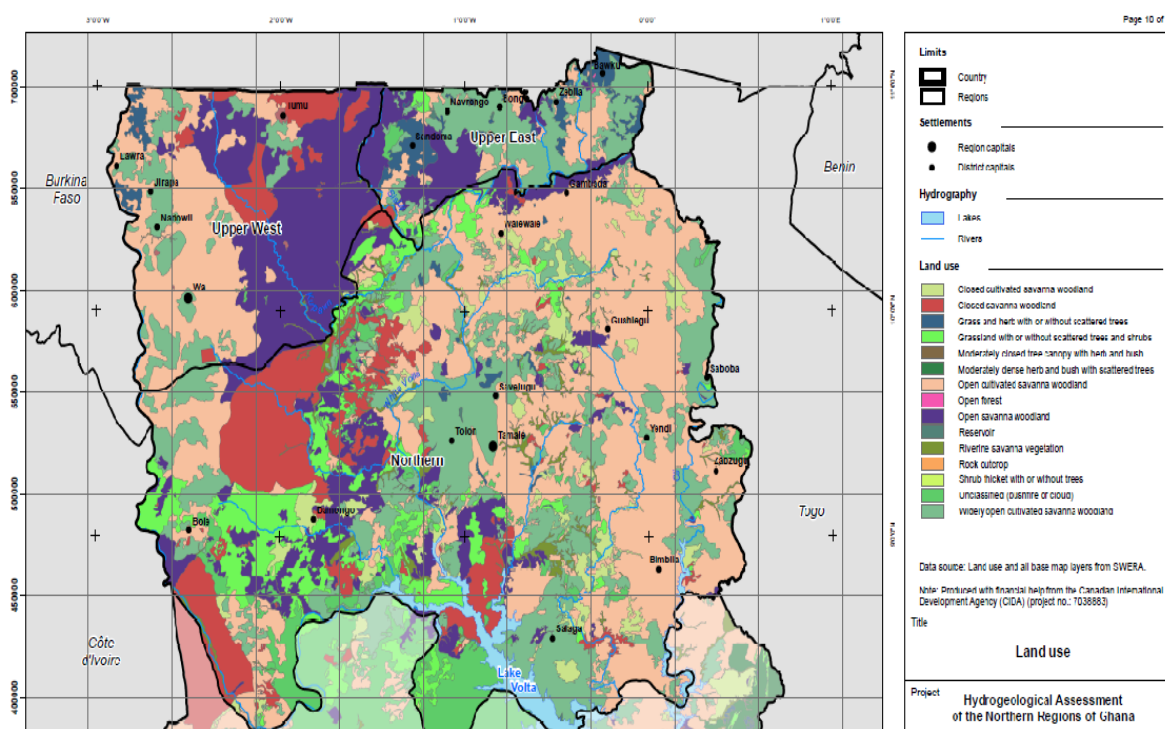
⁴³ Minia, 2008.

⁴⁴ Dickson & Benneh, 1988.

⁴⁵ Braimoh & Velk, 2006.

⁴⁶ CIDA: Hydrogeological Assessment Project of the Northern Regions of Ghana - Interim Hydrogeological Atlas July 2009

patterns in the Northern regions of the country. The landscape in the north is relatively dominated by open cultivated savannah and open savannah woodlands which are exposed to higher risks of bushfire and unsustainable land use practices leading to less resilience in the face of a decreasing rainfall and increasing land degradation problems.



5. From 1960-2003, mean annual temperatures in Ghana increased by approximately 1°C, with rates of increase higher in the northern regions⁴⁷. While the great variability in Ghana’s average rainfall makes accurate identification of historical trends problematic, analysis of various data sets from the latter half of the 20th century reveal decreases in annual rainfall of between 77-120 mm⁴⁸ in the Savanna Zones.

6. The high variability in climatic conditions in Ghana makes accurate predictions of future climate trends extremely difficult. Consideration of an ensemble of climate change scenarios for the country shows that mean temperatures in the Savanna Zones can be expected to increase by approximately 2°C by 2050. While rainfall during the rainy season is not anticipated to change much (projected decreases of 0.1-1.5%) dry season rainfall is expected to increase by 16-20%⁴⁹. The projected increase in rainfall is expected to follow a cyclic pattern, with high rainfall periods being followed by droughts more or less each decade⁵⁰. The changes in rainfall will also influence runoff, with the northern regions expected to experience overall reductions in runoff and a resultant increased risk of drought.

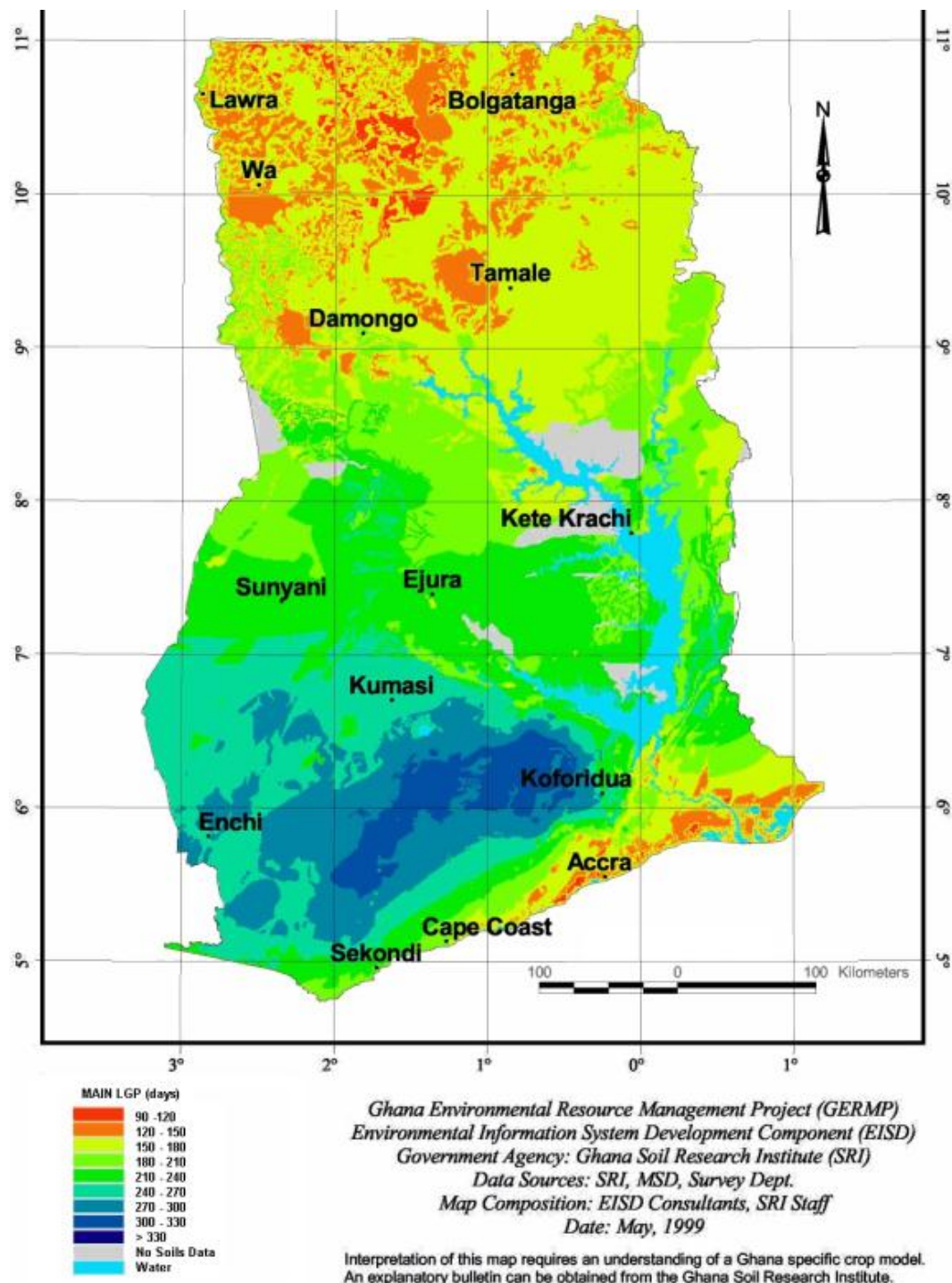
7. These predicted changes will have detrimental impacts on water availability and agricultural productivity, in turn leading to reduced human well-being and food security. In particular, the large contribution that agriculture makes to Ghana’s GDP means that climate change will have a severe impact on the country’s economy. Without appropriate adaptation to climate-related risks, economic growth by 2050 is projected to be 2-7% lower than could be expected in the absence of climate

⁴⁷ McSweeney *et al.*, [s.a].
⁴⁸ Minia, 2008; Owusu & Waylon, 2009.
⁴⁹ USAID, 2011.
⁵⁰ World Bank, 2010.

change⁵¹. This is largely a result of the projected decline in agricultural GDP of 3-8% over the same period, as agricultural losses are predicted to be as much as \$122 million annually.

8. Lower yields during drought periods and the variation in productivity are typical symptoms of crop's vulnerability to climate shocks. Crops vulnerability is driven by many factors and takes several forms varying from reduced total annual rainfall, to delays in the rainy season and water availability in a given time (either sub-optimum or too moist) at critical crop growth stages. Changes in average climate values (both temperature and rainfall) and the length of the growing period (LGP) are shifting towards the limit for growing some crops (notably rain-fed cereals in the northern regions) would lead to a significant decrease in yields or to a drastic change in the agro-ecologies on the long-term trend, i.e. potential shift towards agro-pastoral systems. The following map shows the vulnerability of the northern region, the upper east and west in terms of the LGP (largely dominated by the 90 to 150 days period) making its main rain-fed crops significantly exposed to the increasing climate shocks).

⁵¹ World Bank, 2010.



9. The impacts of climate change are multi-faceted and pose significant threats to human well-being, especially within developing countries. The ramifications of these climate-related risks play out on various levels. At the national level, countries may experience lower rates of GDP growth, reduced employment and trade opportunities, and rising prices of water and food. This may lead to deterioration in essential public services such as the provision of water, sanitation and health services. Furthermore, there will be losses of income as a result of reduced agricultural production and fewer on-farm employment opportunities. Deteriorating public services will increase health risks, while reduced food security may lead to changes in school attendance and a resultant decrease in levels of

education. These and other climate change impacts may contribute to increased political and social tension, decreased human well-being and higher levels of poverty and vulnerability⁵².

10. In Ghana, climate-related risks (especially floods and droughts) are increasingly affecting the Northern, Upper West and Upper East Regions. These northern regions are both socially and environmentally vulnerable to climate change and climate-related risks. The populations of Ghana's northern regions have high rates of poverty, illiteracy and malnutrition, as well as low levels of access to drinking water (which is generally obtained from unimproved sources) and high levels of food insecurity. They are largely rural and largely dependent on rain-fed agriculture. Changes in water availability and a higher frequency of extreme weather events such as floods and droughts will adversely affect agricultural productivity. The regions are also vulnerable to land degradation resulting from unsustainable agricultural practices, bushfire, deforestation for cropping and for charcoal, and overgrazing⁵³. Climate change impacts are expected to reduce yields of food crops, resulting in malnutrition and losses in livelihood and food security, and thus increased economic and social vulnerability.

Overall climate change policy context

11. The Environmental Protection Agency (EPA) is the leading public institution for protecting and improving the environment in Ghana. EPA is the body responsible for developing the national climate change policy in Ghana. Its role is also to integrate sectorial mitigation and adaptation priorities and to ensure technical coordination of climate change activities while also acting as the focal institution for the UNFCCC and other environmental convention's. The Ministry of Environment and Technology is assisted by the National Climate Change Committee (NCCC), which has been charged with the responsibility to develop strategies to deal with climate change challenges and to develop a comprehensive National Action Plan to adapt to climate variability and change in Ghana. The Committee looks at: (i) Establishing the institutional mechanism to implement the National Climate Change Adaptation Strategy. It liaises with the National Development Planning Commission to mainstream the Adaptation Strategy into national development planning processes and it coordinates the efforts of the other Government agencies, the private sector and civil society organizations. It ensures that the programmes/ projects under the strategy are in line with sectorial government policies and strategies while providing technical, financial and logistical support for the various actors involved in programme activities, and supervises, monitors and evaluates the implementation of the strategy.

12. The implementation of the Strategy is an integral part of the decentralized planning and implementation system in Ghana. MDAs at the national level are responsible for policy, planning, monitoring and evaluation of development programmes and projects. However, implementation is undertaken at the sub-national levels through the government agencies and the district assemblies. The strategy identifies appropriate institutions to assume implementation roles and responsibilities at all levels.

Climate change and gender/youth vulnerability

13. It is anticipated that climate change impacts will be particularly severe for poor rural households. In general, rural youth and women are among the most vulnerable groups to the impacts of climate change. Women are disproportionately vulnerable to the effects of climate variability which could aggravate existing gender disparities. Gender imbalances are an important dimension of poverty in Ghana, where women are typically less educated than men, earn less and have less access to financing and productive assets such as arable land.

14. About 38% of women in Ghana are directly or indirectly reliant on food crop farming as a livelihood. They are more exposed to climate change because they are normally poorer, they are neglected in household decision making and they have no access to productive assets. Degraded

⁵² UNDP, 2007.

⁵³ USAID, 2011.

land for example is often granted to women, they disproportionately have less access to financial services and credit and they often receive less education due to the social and cultural norms. All these factors limit the ability of women to make decisions, to access information, knowledge, finance and technical skills that make them build resilient livelihood systems. These constraints will be directly targeted through ASAP as far as the climate change and resilience aspects are concerned by promoting climate change policies and investments that take account of gender-based vulnerability.

15. The traditional participation of rural youth in agricultural activities has decreased in Ghana. This can largely be attributed to the limited livelihood choices in rural areas and the relatively poor returns from traditional agriculture, which has resulted in a rapid increase in urbanisation as rural people migrate to urban areas in search of livelihood options. ASAP interventions will target the rural youth to ensure proper representation and participation of the youth in interventions that promote climate resilience and promote improved livelihood activities in agriculture.

Barriers to climate change adaptation

16. Development in the three northern regions of Ghana is severely constrained by extreme poverty. Factors exacerbating this poverty include drought, malnutrition (14% of children under the age of five are underweight), limited education beyond the primary level, limited access to technology, and ecosystem degradation. Food security and water availability are likely to be severely compromised by rising temperatures and greater variability in rainfall. Across Ghana, agricultural producers with limited resources in fragile environments are sensitive to even small changes in temperature and rainfall patterns. The livelihoods of smallholder farmers are precarious because of *inter alia* small farm sizes, insecure land tenure (especially for the women), little access to technology, low levels of electrification, fluctuations in commodity prices, and high costs and limited availability of farm inputs (especially fertiliser). Furthermore, climate information and vulnerability assessments are severely restricted because of poor coordination and management of climate and environmental data and information.

17. Widespread poverty limits the ability of rural communities to pursue alternative livelihoods. As a result, agricultural practices and the use of agro-ecological systems as a resource base have become increasingly unsustainable through time. The ability of the agricultural sector in Ghana to cope with increases in temperature and loss in agricultural productivity is negligible given *inter alia* poor infrastructure, poor financial resources, and pervasive soil erosion. Other non-climatic drivers leading to reduced productivity in the agricultural sector include: i) counter-productive farming practices (e.g. over-grazing, ploughing of erodible soils, lighting of bushfires); ii) poor road maintenance and an inadequate rural road infrastructure, limiting access to agricultural markets; and iii) increasing rural populations with a concomitant expansion of agriculture into marginal landscapes. Without adaptation measures, the risk of famine and decreasing social welfare will increase, especially in rural communities that already live near the poverty threshold. Unless adaptation measures are put in place, climate change is likely to result in more frequent crossing of that threshold.

18. In order to reduce vulnerability to climate-related risks, an appropriate adaptation approach should promote climate resilient growth that will invest in building natural, human and other capital in an effort to maintain human well-being. This can include diversification of livelihoods for improved economic sustainability, designing instruments that reduce or share risk in vulnerable communities, and promoting the adoption of new technologies for more climate resilient agricultural productivity. The ASAP funding will focus on smallholder farmers in order to tackle the drivers of vulnerability to climate-related risks within the scope of the GASIP. Land degradation, deforestation and other climate-related risks will become limiting factors to agricultural production, hindering the establishment of viable and sustainable business models for the proposed value chains. Therefore, the ASAP funding will have a strong focus on enhancing climate change resilience in agricultural production in the three northern regions, without neglecting the rest of the country where other pockets of poverty and vulnerability can be found.

19. The problem that the ASAP funding seeks to address is that climate-related risks resulting from unpredictable rainfall is causing a reduction in agricultural productivity as a result of droughts, floods and loss of topsoil. This is increasing the vulnerability of rural Ghanaian smallholders. The problem is exacerbated by the following underlying drivers of vulnerability: i) strong dependence on rain-fed agriculture; ii) strong dependence on a single crop, (e.g. maize, cassava); iii) high poverty levels; iv) soil erosion; and v) deforestation. The preferred response to the identified problem is to build the climate resilience of agricultural production amongst rural smallholders in the most vulnerable regions of Ghana. This will be achieved by improving capacity and knowledge relating to the potential impacts of and possible adaptations to climate-related risks that will empower smallholder farmers, GoG, NGOs and other stakeholders to invest in agricultural practices that will yield multiple benefits and build climate resilience to ensure sustainability of food supplies and rural livelihoods.

Programme Scope

20. GASIP will be national in scope, but will adopt a gradual geographical scaling up approach. In the initial cycle, GASIP will focus on the 43 districts of NRG, of which 38 are in the 3 northern regions (the Northern, Upper West and Upper East Regions), and 5 in Brong-Ahafo Region. As the Programme expands, it will include more districts throughout Ghana. GASIP will use poverty mapping to guide the selection of districts and the allocation of resources. To ensure appropriate social targeting within the Programme, special attention will first be given to the poorest areas of the country and the regions' specific problems. Within these regions, agricultural value chains will be supported and enhanced through commercially viable investments, aiming at enhancing the economic and ecological sustainability of small agricultural enterprises participating in these chains.

ASAP Scope and Approach to Building Resilience

21. The ASAP funding will focus on smallholder farmers in order to tackle the drivers of vulnerability to climate-related risks within the scope of the GASIP. Climate stress and shocks (especially floods and droughts) are increasingly affecting the Northern, Upper West and Upper East Regions, where rainfall regimes are largely driven by a uni-modal rainfall pattern. These regions exhibit extreme environmental problems, which in conjunction with the high poverty rates have led to increased ecological and social vulnerability to climate change.

22. Rural poor households include mainly smallholder farmers producing predominantly for subsistence. These farmers generally have weak access to productive assets, information and skills, low levels of adoption of modernized technologies including mechanization, small farm sizes, limited access to water for agriculture and adverse climatic conditions. These factors contribute to levels of poverty and a deteriorating agro-ecological environment, especially with regard to soil degradation. Subsistence farmers are the most vulnerable to climate-related risks, which are most prevalent in the north of Ghana.

23. While climate-related risks will have severe impacts on smallholder farmers, these farmers rarely benefit from the climate funding that is currently provided from international DPs. As climate change impacts combine with poor environmental and social conditions to undermine rural livelihoods, development opportunities need to provide appropriate interventions that will address these vulnerabilities and improve climate resilient agricultural practices amongst smallholder farmers.

24. Climate change adaptation under the ASAP funding will mainly comprise bio-physical interventions in the Northern, Upper West and Upper East Regions, while also accommodating a cross-cutting window for building capacity for climate resilience, policy dialogue, knowledge management, and monitoring and evaluation. Innovative approaches to climate change adaptation will also be piloted in the transitional region i.e. Brong-Ahafo. The main focus of the funding in the northern regions will be on: (i) water resource management (especially water harvesting and efficient irrigation) to address issues of flooding and droughts respectively; (ii) enhancing rural infrastructure for increased climate resilience, which minimises the damage caused by flooding and (iii) promoting resilient production landscapes (especially conservation agriculture and integrated soil fertility management, and agro-forestry); improving the soil moisture content reduces the effects of longer

dry spells on crops, while improving soil fertility and agro-forestry contribute to reversing land degradation.

25. The ASAP financing will allow the scaling up of the multiple-benefits of adaptation resulting in increased agricultural productivity, while at the same time reducing vulnerability to climate-related risks. Most of the activities to be implemented under the GASIP will also be piloted using the climate financing allocated to the RTIMP with SCCF funds. This provides opportunities for covering a wider number of value chains and locations. Under the GASIP, a climate risks analysis will be undertaken for each selected value chain to identify the main stages where climate is already having or is expected to have the most impact. Where these analyses exist they will be used to select the appropriate and most cost effective adaptation measures. In the northern regions the value chains supported under the NRGP are maize, soyabeans and sorghum, these will be the focus for initial activities.

26. The approach to building resilience will include supply side interventions such as demonstration sites, exchange visits and responding to stimulated demand by providing access to financing for the adoption of technologies and piloting innovative adaptation measures. The conservation agriculture will be demonstrated in selected districts by farmers that are willing to adopt the technologies. Youth and women framers will be targeted in the selection of demonstration sites⁵⁴. The adoption of the conservation agriculture and other soil and water management techniques will be encouraged through awareness and sensitisation sessions as well as training for the farmers complemented with exchange visits to farmers practicing similar techniques locally and also in neighbouring countries e.g. sites in the Climate Change Adaptation Project being implemented by GIZ in eight Districts in Brong-Ahafo. Farmers can select adaptation measures based on their specific environmental and climatic contexts and capacities.

27. The efficient irrigation systems will be piloted on existing irrigation schemes. The pilots will then be scaled-up through the financing mechanisms of the GASIP. Investments to be made by the farmers to promote the adoption of technologies and scaling up will be supported through a fund using a matching grant mechanism to provide incentives and access to finance for the farmers (see Sub component 1.2). The underlying assumption is that the farmers will be interested in adopting the technology once the benefits are evident. The Programme Innovation Fund will provide full grant financing for innovative technologies to be piloted such as use of renewable energies in processing centres to address deforestation and the resulting land degradation (see Sub component 1.1). The water use efficient practices and improved dam designs will be applied to other irrigation infrastructure to be funded using the main loan and grant resources from IFAD. The more climate sensitive design of infrastructure will be financed through ASAP funds, an effective means of mainstreaming climate change. The resilience measures for infrastructure include the construction of livestock watering points at strategic points that have water collection potential along feeder roads.

28. The demonstration of good practices and techniques will require improved inputs such as seeds and equipment. These can be provided through existing channels that can be strengthen where needed i.e. partnerships with other IFAD funded projects such as REP that can supply the equipment required at a local level to adopt the improved practices. Early maturing seed varieties are already being used by farmers in the northern regions and the sourcing of these seeds could be tapped into by GASIP. The good practices will also need to address bush fires and provide livestock fodder to ensure the vegetative cover and soil fertility gains.

29. The demonstration activities will also be complemented by capacity building of the FBOs and WUAs. At institutional level, the VCCs and AEAs will also receive awareness raising and training in climate change adaptation. Capacity building of the AEAs will be critical in ensuring the adoption of practices particularly by the farmers. The sensitisation and training of VCCs will enable the reach of suppliers of inputs, facilitation agents and other actors. It is assumed that the information provided and the evident gains for farmers and other actors would provide incentives for adopting improved

⁵⁴ Farming for the Future, A guide to conservation Agriculture in Zimbabwe

practices and also providing improved inputs. To enhance sustainability of practices, Climate Change Adaptation toolkits will be provided as reference materials in local languages for farmers. At the policy level in addition to the capacity building activities, provision of improved Climate and Natural Resources Management Information will be supported through expansion of the existing Ghana Agriculture Online GIS Platform. An additional element will be to make the platform more readily accessible using a web-based application.

30. The monitoring of the resilience building activities will be integrated into the main monitoring and evaluation system of the GASIP. However, particular attention will be paid to collecting data and evidence on the multiple benefits of adaptation. These benefits are expected to accrue in an incremental manner on the productive landscape and will include water conservation, increased yields, improved soil fertility, conservation of soil moisture, reduced soil erosion, reduced production costs, increases in profit and return on labour.

Appendix 16: METASIP

1. The Government is committed to reducing rural poverty through agricultural and rural development. The Ghana Shared Growth and Development Agenda (GSGDA, 2010-13)* stresses the need for the Government to focus on agriculture, fisheries, small enterprises, sanitation and the Savannah region for poverty reduction, and it acknowledges the centrality of macroeconomic stabilization to generate the fiscal space for investing in policies, programs and projects related to the enhancement of Ghana's private sector competitiveness, accelerated agricultural development and natural resource management, improved infrastructure development, human resource development and job creation, and the consolidation of a transparent, accountable and efficient Government.
2. The GSGDA gives additional emphasis to the importance of the Food and Agriculture Sector Development Policy (FASDEP II; 2009-2015)*. This policy became the departure point for the country's CAADP process, which helped Ghana become one of the first countries to sign a CAADP Compact in October 2009. In September 2010, the Medium-Term Agriculture Sector Investment Plan (METASIP; 2011-2015) was designed as the national investment plan to implement FASDEP II. METASIP underwent a CAADP Technical Review. The METASIP is for the period 2011-2015 and comprises the following six programmes: (i) Food security and emergency preparedness; (ii) Improved growth in incomes; (iii) Increased competitiveness and enhanced integration into domestic and international markets; (iv) Sustainable management of land and environment; (v) Science and technology applied in food and agriculture development; (vi) Enhanced institutional coordination.
3. The full document can be found at: http://mofa.gov.gh/site/?page_id=2754.