

Georgia

Design report

Final project design report

Main report and appendices

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Currency equivalents

Georgian Lari (GEL)	=	US\$ 0.573
US\$1.0	=	GEL 1.746

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

APMA	Agriculture Projects Management Agency
AMP	Agriculture Mechanization Project (USAID)
ASP	Agriculture Support Project (IFAD supported)
CSA	Climate Smart Agriculture - defined by the UN FAO as " agriculture that sustainably increases productivity, resilience (adaptation), reduces/removes greenhouse gasses (mitigation), and enhances achievement of national food security and development goals
CSV	Climate smart value chain - for the purposes of this report is taken to mean an agricultural value chain that sources its primary produce from climate smart agriculture
DER	Department of External Relations, Ministry of Agriculture
EIT	Efficient irrigation technology
EOI	Expression of interest
EPI	Economic Prosperity Initiative (USAID project)
ERASIG	Enhancing Resilience Of Agriculture Sector In Georgia (GEF grant project)
EU	European Union
EUR	Euro
FAO	Food and Agriculture Organization of the United Nation
GAP	Good agricultural practices
GDP	Gross Domestic Product
GEF	Global Environment Fund
GILMD	Georgia Irrigation and Land Market Development (WB financed)
GoG	Government of Georgia
IFAD	International Fund for Agriculture Development
LR	Landscape Restoration
PIM	Project implementation manual
PY	Project Year
MCC	Millennium Challenge Corporation
MFI	Micro finance institution
MoA	Ministry of Agriculture
MESD	Ministry of Economy and Sustainable Development
MoF	Ministry of Finance
MSP	Multi-stakeholder process
NEO	New Economic Opportunities (USAID Project)
NGO	Non-governmental organization
NPARD	Neighbourhood Partnership for Agriculture and Rural Development (EU Supported)
PY	Project Year

REAP	Restoring Efficiency for Agricultural Production (USAID project)
ROI	Return on Investment
ToT	Training of trainers
UASCG	United Amelioration Systems Company of Georgia.
USAID	United States Agency for International Development
USD	United States Dollar
VC	Value Chain
WA	Withdrawal application
WB	World Bank

Map of the project area

Georgia

Agriculture Modernisation, Market Access and Resilience

Design report



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

Map compiled by IFAD | 12-06-2014

Executive Summary¹

The **Agriculture Modernization, Market Access and Resilience (AMMAR)** project of the Government of Georgia, with IFAD funding, aims to raise incomes of smallholder farmers and increase climate resilience through public and private investments in upgrading climate-proof productive infrastructure, enterprises and smallholder farmer production systems and technologies in support of inclusive growth of climate smart agricultural value chains². AMMAR is part of the Ministry of Agriculture (MOA's) substantial ongoing investments to modernize agriculture in Georgia and is fully aligned to the Strategy for Agriculture Development (2014-2020) and supporting action plan. The MOA will be the lead executing agency through the Rural and Agriculture Development Fund (RADF) as the project implementing agency. The RADF is a semi-autonomous non-profit (non-entrepreneurial) legal entity chaired by the Prime Minister with the Minister of Agriculture serving as the Deputy Chairman.

AMMAR investment will total USD 30.8 million (GEL 53.8million) including physical and price contingencies and including, USD 9.8 million of beneficiary co-investment.

The sources of financing are from an IFAD loan (USD 13.3 million), an IFAD grant (USD 0.5 million), a GEF Grant³ (USD 5.3 million), Government of Georgia will contribute USD 1.8 million in the form of taxes and duties exemption, and expects to generate a further private co-investment from farmers (USD 3.9 million) and agribusinesses (USD 5.9 million).

Project impacts and success will be measured against delivering more than:

1. 20% increase in real net household farm incomes for more than 10,000 households in target value chains,
2. 20% increase in total value of surplus agricultural production of targeted products sold by participating producers, traders and agribusinesses (relative to reference market prices),
3. 50% of trained smallholder producers adopting one or more Climate Smart GAPs or technologies promoted by the project, such as efficient irrigation technologies.

Based on conservative analysis, the internal economic rate of return is estimated at 25.7

Major outputs will include: 4750 ha. served by rehabilitated secondary⁴, tertiary and in-field irrigation systems; up to 3000 farmers trained in climate smart agriculture (CSA) technology options; 1000 small matching grants to farmers for investment in CSA technologies for water and soil management; 40 matching grants to agribusinesses (incl. cooperatives and associations) to upgrade their operations in priority value chains as buyers, processors, exporters or input and service suppliers; partnership with banks/MFIs making complementary loans to smallholders and agribusinesses for investment in CSA technologies and upgrading priority value chains; up to 10 local service providers and 10 MOA local technical teams in various aspects of CSA value chain investment and upgrading; up to 6 joint action plans being implemented with local VC participants in up to 6 climate smart agricultural value chains.

Project duration will be 4 years and project activities will be organized into two mutually supportive components to accelerate the development of up to six priority climate smart agricultural value chains,

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² Climate smart value chain - for the purposes of this report is taken to mean an agricultural value chain that sources its primary produce from climate smart agriculture

³ Grant concept has been approved by GEF Council and under submission to GEF Management for signature

⁴ Limited rehabilitation works on critical secondary irrigation canals (up to USD 200 per hectare) aim to ensure reliable water management and to enhance UASCG operation and maintenance capacity

initiated in two batches over the first two years of the project. Project activities will be coordinated under the Project Management Component.

Component 1: Irrigation and Agricultural Value Chain Investment. This Component shall support investment in secondary/tertiary irrigation and value chain infrastructure (Sub-component 1.1). Moreover, the Component shall stimulate private investment by smallholder farmers and agribusinesses in climate smart production methods and value chain activities through a partial matching grant scheme (Sub-component 1.2). To help increase the availability and use of mainstream finance by smallholders and agribusinesses, the Project can develop partnerships and collaborations with established financial service providers for credit and financial services.

Investments under this Component shall primarily be driven by a participatory approach with smallholder farmers and agribusinesses. The component gathers together the "hard" investments of the project. Priorities for investments under Component 1 will be driven by demand from smallholder farmers and agribusinesses identified through participatory processes of value chain facilitation under Component 2 and other mechanisms to be identified during implementation. Irrigation infrastructure rehabilitation will be conditional to adequacy and accessibility of water supply and to a functioning state of the main/primary and major secondary canals.

Component 2: Climate smart agricultural and value chain development will guide the priorities and coordination of all activities within the project and guide the direction of all other activities. Through a *multi-stakeholder process (MSP)* of systematic value chain facilitation, involving producers, agribusinesses, input/service providers and other VC stakeholders, the approach will be to identify critical constraints along each of the value chains and to address them jointly with the value chain stakeholders. Such constraints are expected to include, for example: marketing, processing, storage, post-harvest, aggregation or primary production as well as intra-chain linkages and the provision of key services to producers and agri-businesses. Main activity areas under the Component will include: an initial value chain screening and prioritization process; an ongoing multi-stakeholder process of value chain facilitation in each value chain and associated production cluster areas, and; climate smart good agricultural practices and technology transfer, training and promotion including practical field training at small scale technology plots. Specific "hard" investments by the project to address the identified constraints in each value chain will be primarily financed through the instruments under Component 1.

The agriculture sector in Georgia is highly vulnerable to climate change and variability, leading to serious problems of production loss and threats to food security under a business as usual scenario. Recent extreme weather events - floods, windstorms, and drought - evidenced a shifting aridification trend that is poised to heavily affect the already semi-arid Eastern portions of Georgia by the end of the century.

AMMAR will mainstream a climate smart approach throughout its activities, with support of the **GEF grant**, once signed. This will include: screening and prioritization of product value chains that are expected to have sustainable comparative advantages under future climate change scenarios, especially at the primary production level; promoting investment in efficient irrigation technologies, conservation agriculture systems and targeted landscape restoration and soil erosion control measures alongside sensitive farmland areas and the rehabilitated irrigation schemes to create sustainable improvements in water-efficient irrigated production, and; promoting the widespread adoption of climate smart GAPs and technologies at the farm level.

While driven by farmer demand, the climate smart agricultural technologies expected to be most relevant will likely be for improved water, soil and nutrition management. At the village level, the approach to technology transfer and promotion will be through a combination of practical CSA technology plots, promotion events, short and longer duration practical field training (for example through a series of half day practical field training session at critical points in the production cycle) and systematic follow-up with farmers by the local service providers delivering the training. CSA technology plots will act as sites for farmers to directly access know-how, training and networks of services and credit providers to facilitate easier adoption of the promoted technologies. They will also

create the opportunity for interested farmers to get an objective farmer-to-farmer perspective on the technologies from the progressive farmers on whose land the CSA technology plots are established.

In addition, an **IFAD Capacity Building Grant**, will provide focused support to the development of individual/ institutional capacity of smallholder farmers to: (i) increase the understanding of smallholders on modern water and land conservation approaches; (ii) develop the capacity of farmers and farmer organisations on commercial productive and market oriented farming practices; (iii) improve the relevance and the quality of the services provided by extension units; and (iv) build the smallholders resilience to overcome economic and climate shocks.

Targeting will be nationwide, with the actual geographical focus determined by its climate change vulnerability and the supported value chains. Priority will be given to the poor rural populations in areas where there is agricultural and irrigation development potential. The primary target groups are smallholder farmers, including active poor farmers⁵, in targeted value chains, while secondary target groups are other value chain actors (agribusinesses, cooperatives, service providers). Targeting of direct beneficiaries' households, agribusinesses and other value chain participants will be on the basis of their active involvement in the prioritized value chains and their interest in participating in the project activities. In addition, to ensure the adequate distribution of benefits and more inclusive growth, the production technologies promoted will focus on those most relevant to the scale and resources of smallholder farmers, including active poor farmers. The multi-stakeholder processes in each value chain will also be organized at the local level to enable the full participation of smallholders and active poor farmers alongside agribusinesses and other value chain participants and stakeholders.

It is worth mentioning that the VC infrastructure does not necessarily need to be within the same locations or even with the identified VC cluster areas themselves. For example, a wholesale market with rentable cold storage may be located in a regional hub/ city but serving several VC production clusters but does not need to be within the VC cluster or same location as the irrigation works.

Implementation arrangements will be led by the RADF. The RADF is expected to consist of distinct technical units, one for IFAD and another of which will manage the forthcoming WB-financed Georgia Irrigation and Land Market Development (GILMD) project.

The RADF shall select and appoint technical staff or contract local service providers, as required, to:

- (i) provide expertise on climate smart agriculture promotion and landscape restoration;
- (ii) facilitate local multi-stakeholder processes in each value chain;
- (iii) provide monitoring and technical back-stopping for farmers' training and technology plots;
- (iv) advise farmers on farm plans;
- (v) conduct follow-up meetings with farmers who are recipients of grants made available under the Project;
- (vi) act, or designate the Agriculture Project Management Agency (APMA) and/or any other entity(ies) acceptable to IFAD to act, as small grants administrator and manage the small grants scheme for smallholders under Window 1 (Climate Smart Primary Production) of Sub-component 1.2 of the Project;
- (vii) act, or designate APMA and/or any other entity(ies) acceptable to IFAD to act, as large grants administrator and manage the large grants scheme for agribusinesses and cooperatives under Window 2 (Value Chain Development) of Sub-component 1.2 of the Project; and

⁵ Discerned in distinct sub-groups as *commercially active* – oriented towards gaining ground in commercial agriculture or consolidating existing investments and have above average technical capacity in agribusiness, medium to high level of education with access to information and/ or a credit history; or *economically active* - typically farming their lands and selling surplus in local markets with some education and receive additional income mainly from remittances and may have a credit history.

- (viii) enter into a subsidiary agreement, as appropriate, with APMA and/or any of the entities referred to in sub-paragraphs (vi) and (vii) above setting forth the terms of the implementation of the activities in respect of the Window under Sub-component 1.2 respectively assigned thereto.
- 4. The recently re-vitalized regional MOA district offices, typically with 4-6 technical staff, will be engaged to:
 - Support RADF in the facilitation of the local multi-stakeholder processes in each value chains,
 - providing monitoring and technical back stopping of the farmer training and technology plots, and
 - support RADF to follow up with farmers investing using grants.

Local service delivery to farmers, including delivery of farmer consultancy, training and management of CSA technology plots, could be subcontracted to local service providers operating in each of the target locations (e.g. scientific center, service centres, mechanization centres, farmer associations, private service providers, cooperatives, NGOs). The local service providers will be identified through the initial intensive phase of the value chain multi-stakeholder process in each value chain. This is intended to reinforce ongoing investments by MOA and development partners, especially USAID and EU, in the development of agricultural service providers and co-operatives.

Overall technical supervision and coaching of the local service providers on all aspects of GAP, climate smart farm practices, landscape restoration and farmer consultancy and training will be the responsibility of RADF.

Lessons Learnt and Synergy with Complementary Projects. As outlined in *Appendix 3*, the project design has drawn on the lessons learnt from past IFAD interventions and from experience of other donors. There are several ongoing efforts underway in Georgia which would have a direct relevance to the AMMAR. Given the potential for complementarity with ongoing programmes, particularly with the EU, USAID and WB, coherent agreements are foreseen through the donor coordination system to ensure effective interventions on the ground.

Sustainability is central to AMMAR and will be achieved in multiple ways:

1. environmentally - by improved climate resilience in production through improved irrigation and soil and nutrition management at the farm level,
2. market and commercial sustainability- through targeting of value chains with comparative advantage and credible market opportunities, with immediate opportunities to increase income and profits necessary to attract further investments,
3. institutionally - through the use of existing and emerging service providers operating at the local level to delivery project services (banks, MFI, service centres, private service provider businesses, cooperative, associations etc.) and investments to strengthen their capacity,
4. economically - through the selective use of limited partial matching grants intended to trigger "first mover" investments and innovations in the value chains closely linked to partnerships with mainstream banks and MFI to create access to mainstream financing for investments by producers, agribusinesses and service providers to further growth,
5. technically - through investment in landscape restoration where needed around supported infrastructure and irrigation schemes as well as support to establish credible O&M arrangements before any construction work begins.

In conclusion, AMMAR is a progressive investment in the modernization of agriculture in Georgia closely aligned to MOA's strategy and action plans. It places demand-driven climate smart investments at the centre of its value chain approach and builds on the best practices in implementation from within the Georgian experience. It rightly places a priority in financial terms on hard investments to upgrade the neglected public and private productive assets and infrastructure. In addition, to achieve greater impacts and sustainability, these hard investments are supplemented by

international best practices in inclusive value chain development selected from IFAD and others' experiences. Together this combination of investments provide a coherent, implementable investment project that should deliver sustainable benefits to more than 10,000 smallholder farmers.

Logical Framework

Narrative Summary	Key Performance Indicators (All household/farmer level indicators to be disaggregated by gender and age)	Means of Verification	Assumptions (A) / Risks (R)
Goal:			
Sustainably increase incomes and reduce poverty for women and men in rural Georgia	<ul style="list-style-type: none"> 10,000 supported households increase their asset index by at least 10% 	<ul style="list-style-type: none"> Baseline survey & Impact Assessment Project completion 	<ul style="list-style-type: none"> Continued political stability (A) Marco-economic conditions remain stable or improve to promote investment(A) Global prices for agricultural commodities and food do not decline significantly (R)
Project Development Objective:			
Stimulate private investment in climate smart agricultural value chains to increase incomes and strengthen resilience of smallholder farmers in selected project areas.	<ul style="list-style-type: none"> Increase of more than 20% of real net household farm income for at least 80% of the 10,000 supported households More than 20% increase in total value (relative to reference market prices) of surplus agricultural production of targeted products sold by participating producers, traders and agribusinesses Climate smart agricultural production practices are adopted by 50% of trained smallholder farmers. 	<ul style="list-style-type: none"> Baseline & Impact Surveys Government data Value chain interviews/focus groups RIMS surveys M&E reports 	<ul style="list-style-type: none"> Policies and programmes for agricultural development and rural finance allow to operate efficiently (A) Sufficient numbers of farmers are willing to be involved in value chain development activities (A)
Outcome 1: Rural population agricultural livelihoods improved and their resilience to climate-change enhanced	<ul style="list-style-type: none"> At least 4750 farmers have improved soil conditions and/or on farm water availability Diversification of farming systems is increased by at least 3000 farmers, with 20% increase over baseline in farmers practicing appropriate crop rotation, inter-cropping or similar soil/nutrition enhancement systems 	<ul style="list-style-type: none"> Baseline & Impact survey Interviews/focus groups Studies and surveys RIMS surveys M&E reports Government Data (GEOSTAT) 	<ul style="list-style-type: none"> Smallholders are willing to engage in value chain development activities (A) Farmers are willing to engage in efficient water/ land management techniques (A) Aging farming population (R) Climatic changes are in line with current predictions (A)
Outputs: 1.1 Productive infrastructure rehabilitated/constructed 1.2.Management and operation arrangements for the rehabilitated infrastructure set-up	<ul style="list-style-type: none"> At least 4750 ha receiving reliable irrigation water supply from properly maintained and rehabilitated irrigation schemes. Up to 10 VC related infrastructure constructed. Up to 150 landscape restoration plans implemented on irrigation scheme Up to 1000 small grants made to farmers and 	<ul style="list-style-type: none"> Infrastructure completion/ status survey reports Interviews/focus groups RADF/supervision mission reports Training reports Studies and reports Financial institutions reports 	<ul style="list-style-type: none"> Lack of funding to operate and maintain productive public rural infrastructure (R) Agricultural products are competitive (A)

Narrative Summary	Key Performance Indicators (All household/farmer level indicators to be disaggregated by gender and age)	Means of Verification	Assumptions (A) / Risks (R)
<p>1.3. Landscape restoration (LR) plans developed and implemented where needed for rehabilitated irrigation schemes.</p> <p>1.4. Training programmes on CSA designed and delivered to farmers and farmer groups.</p> <p>1.5. On-farm demonstration sites set-up where efficient irrigation and CSA production systems are validated and promoted.</p>	<p>at least 30 grants made to agribusinesses and processors in target value chains</p>	<ul style="list-style-type: none"> ▪ Studies and survey ▪ RIMS surveys ▪ M&E reports 	<ul style="list-style-type: none"> ▪ Willingness of farmers to participate/ contribute to matching grants scheme (A) ▪ Difficulties in implementing the restoration plans (R).
<p>Outcome 2</p> <p>Inclusive climate smart VC are expanded providing improved market opportunities for smallholders</p>	<ul style="list-style-type: none"> ▪ Private investment in inclusive VC reaches USD 9 million for farmers, agribusinesses and service providers ▪ The volume of services and inputs from private service providers and used by farmers in target VC clusters increases by 20% over current levels 	<ul style="list-style-type: none"> ▪ Interviews/focus groups ▪ Lending reports from partner FIs ▪ Grant monitoring reports ▪ Value chain interviews/focus groups 	<ul style="list-style-type: none"> ▪ Market options foster profitable partnership between farmers and contractors (A).
<p>Outputs</p> <p>2.1. Climate smart value chain screening and prioritization conducted</p> <p>2.2. Strengthen commercial linkages facilitated between smallholders and agribusinesses.</p>	<ul style="list-style-type: none"> ▪ 25 VC facilitation events held with a total of over 1000 farmers, agribusinesses and input/service providers participating ▪ Up to 3000 smallholder farmers trained in CSA technology options and practices ▪ 50 staff of local service providers and regional MOA officers receive ToT/refreshers training on CSA for target VC production 	<ul style="list-style-type: none"> ▪ Project progress and activity reports ▪ Grant monitoring reports M&E reports ▪ RIMS surveys 	<ul style="list-style-type: none"> ▪ Lack of qualified service provide to act as intermediaries for the project (R). ▪ The quality of agriculture practices and output meet minimum GAP standards (A).

I. Strategic context and rationale

A. Country and rural development context

Facts and figures today

1. The Republic of Georgia, with a total area of 69,700 km², is situated in the South Caucasus. The country is surrounded to the east by the Black Sea, to the north by Russia, to the west by Azerbaijan and to the south by Armenia and Turkey. Its complex orography, geology and climate determine the variety of Georgia's landscapes: humid subtropical coastline, lowlands and wetlands, plains, semi-deserts, highlands, and mountains covered by forests and glaciers. Mountains cover a significant part of the country, with 54% of the territory at an altitude over 1,000 m above sea level. The country has two quite distinct climate zones: (i) on the West coast, along the Black Sea, the climate is humid and subtropical, with average annual temperature of 14°C to 15° C and extremes from -15°C to 45°C; and (ii) in the East is mixed with plains in eastern Georgia having a dry subtropical climate, while mountain areas have an alpine climate. The average annual temperature is 11°C to 13°C in the plains, and 2°C to 7°C in the mountains, with a minimum of -25°C and -36°C, respectively. Annual precipitation is 400 to 600 mm in the plains, and 800 to 1,200 mm in the mountains.
2. Georgia is rich in freshwater systems - rivers, lakes and springs. The rivers Rioni, Enguri, Tskhenistskali, Natanebi, and Supsa flow into the Black Sea. The Alazani, Iori and Mtkvari/Kura (the largest river in the country, with tributaries in Turkey and Armenia) flow into Azerbaijan before entering the Caspian Sea.
3. Georgia is currently a lower middle income country (US\$ 3 290 GNI per capita, 2012) with a population of about 4.5 million, of which 2.1 million live in rural area (46.2%). There are around 550,000 rural households with an average of 3.75 people per household. (*GeoStat, 2014*)
4. At the national level, poverty rates were an estimated 35.6% against a \$2 a day (PPP) poverty line in 2010. At the same time, against the national poverty line, the national poverty headcount was 20.9% in 2010 and had declined to 14.8% in 2012. Poverty rates are 80% higher in rural areas than urban areas - 18.8% vs 10.5% respectively in 2012 against the national poverty line. (*World Bank, 2014*)
5. Agricultural accounts for 45 percent of rural household income⁶, a further 28 percent coming from social payments and pensions and only 27 percent from salaried work. The structure of the rural economy and demographics suggest that farming is likely to remain the dominant source of employment and income for the majority of rural citizens in the medium term.

Poverty in Georgia

6. Years of crisis and civil war caused the impoverishment of a large section of the Georgian population. Poverty reduction with respect to economic growth is highly elastic. Since 2010, greater social and political stability, along with the resumption of economic growth, have brought about a significant reduction in poverty. However, not nearly enough. In the Georgia context, poverty is mostly linked to employment status, ownership of productive assets and labor markets. Those who are unable to work (the inactive, elderly or disabled) or do not have work (the unemployed) are much more likely to be *chronically* poor. With a Gini Co-efficient of 42 (*World Bank, 2012*), inequality in Georgia is highest among the former Soviet countries.
7. **Rural Poverty.** The inadequacy or lack of basic and productive infrastructure, particularly irrigation, limited off-farm opportunities, critical gaps in value chains, reduced human and social capital, and rural-urban migration especially of youth, hindered the development of the agricultural sector. The situation exacerbated by the land privatization reform that resulted in smallholdings

⁶ This includes 35% in-kind and 10% sales.

(approximately 75% of households ended up with less than 1ha of land). Land fragmentation at the background of organizational deficit contributed to the development of subsistence farming and overall decline in agriculture as a profitable business. The decline of agrarian production went hand in hand with the growing incidence of **rural poverty**. More and more households had been falling in poverty in rural, rather than urban areas⁷ (*UNICEF 2012*). Since 2003, the agricultural economy of Georgia was overshadowed by public investments in other sectors of the economy. Despite that overall poverty somehow reduced because of social programs, such as increasing pensions, however, rural areas remained significantly poorer compared with urban ones. With the remarkable shift in agrarian policies coupled with rural investment, in particular in agriculture and irrigation development, and with increased efficiency of land use and productivity enhancement through secured land rights would contribute to poverty reduction in rural areas.

8. **Unemployment.** According to the data of the National Statistics Office of Georgia, the overall unemployment rate as of 2013 stands at 15% and among youth aged between 15-24 years is 35.5%. There is a considerable difference between the rural and urban data. Particularly, the unemployment rate in the rural areas is less than 8%, while in the city it reaches 28%. This could be explained by the fact that most earning income from agriculture, do not perceive themselves as employed. However, high (self-) employment in mainly subsistence agriculture in rural areas does not safeguard from poverty which is also reflected by higher poverty rates in rural areas. Youth unemployment can be explained by low motivation to practice farming and prefer to have salaried jobs which are mainly offered in larger cities.

9. **External Migration.** Some researchers (*CRRC, 2007*) have classified Georgia's external migration as occurring in three waves: (i) Collapse and conflict – corresponding to period of 1990-1995; (ii) Economic struggle – 1996 to 2004; and (iii) Hope and economic rebuilding – after 2004. More than one million people born in Georgia or 25% of its recent population (*World Bank, 2011*) live outside of the country. Migration from Georgia since the mid-1990s became primarily economically-driven. Some gender-related preferences for migration have been noted and which explains the prevalence of women in migration flows to Greece and Germany (*Lundkvist-Houndoumadi, 2010; Melashvili, 2008*), and higher concentration of Georgian men among migrants to Russia and other countries of CIS-territory (*Badurashvili, 2004; National Statistics Office of Georgia, 2006*). The majority of Georgian migrants are between 20 and 40 years with the share of migrants aged below 30 years who immigrate abroad (40% according to the latest available data (*Badurashvili, 2011*)). Villages where high external migration takes place, will be significantly less able to produce common goods and to engage in agricultural production.

10. **Internal Migration.** Almost 30% of the total Georgian population do not live at their place of birth. The majority of the migrants (92.3%) changed their place of residence inside the country: every fourth person has moved from one settlement to another within the territory of Georgia. The share of internal migrants is higher in the urban population: 32.2% compared to 17.9% in the rural population of country. There were also some flows directed to rural areas in the 1990s, both from urban and other rural settlements, characterized by the large-scale forced migration of native population from the territories of Abkhazia and former Soviet Ossetia due to military conflicts representing 35% of total migrants (*2002 Census*).

The road from independence

11. Georgia declared independence in 1991. Many people returned to the rural areas and engaged in agriculture as a survival strategy. This 'flight to the rural areas' was gradually consolidated through a land privatisation programme. Since then Georgian agriculture, once famous in the Soviet era for quality and volume, became structurally characterised by low-input/low output, subsistence-oriented farming. A recent UNDP study of agriculture in the South Caucasus (*Weldon, et al., 2013*) provides the following analysis of the reasons that led to such a profound collapse and slow recovery in Georgian agriculture. It suggests three elements were key:

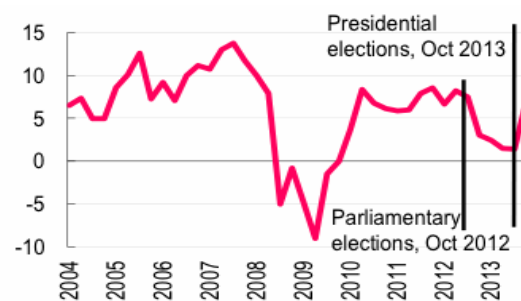
⁷ While 15 per cent of households rose out of relative poverty between 2009 and 2011, 13 per cent became newly poor who are more likely to live in rural areas. Newly poor households are likely to experience new deprivation of other dimensions.

12. *"..First, Georgia produced considerably more than the other countries and so had far further to fall. According to the World Bank, in 1990 Georgia was producing roughly twice as much agricultural produce as Azerbaijan and five times as much as Armenia.. [Georgia] was approximately twice as productive as either of these countries. Second, the level of state collapse and lawlessness seems to have been greater, and to have lasted longer, in Georgia than in other places in the region, and was undoubtedly worse than in Armenia and Azerbaijan. This may seem a strange claim given the horrors of the Nagorno-Karabakh crisis but there are reasons to think that Georgia's fragmentation was more profound than in the other cases. A third factor is that, for numerous reasons, it seems that conditions were ripe in Georgia for a high level of 'asset stripping' and a collapse in infrastructure that was not experienced elsewhere. The dismantling of existing infrastructure for scrap has been a particularly long-term and debilitating problem in Georgia and seems to have resulted in a far greater collapse in the irrigation system, electricity supply and availability of farm machinery than happened in the other two countries. In some sectors - in particular in irrigation – this practice has remained stubbornly problematic.."*

13. As a consequence, between 1990 and 2011 the total area planted declined by 43 percent and average production per hectare diminished proportionately as an increasing share of agricultural land was left unused. At its peak under the Soviet Union, the irrigated area reached 386,000ha (1988) which declined to approximately 62,000ha by 2013 (MOA).

14. In stark contrast to the problems in agriculture, following independence the government implemented wide ranging and successful reforms to tackle corruption and improve the business environment and invested heavily in public infrastructure (but not irrigation). This resulted in strong growth averaging 9.3% p.a. during 2004–07. The 2008 conflict with Russia and economic crisis resulted in a sharp downturn and the economy shrank by 3.8% in 2009. The trade embargo by Russia had a major impact on agriculture as it had previously been the main export market. The government responded with a fiscal stimulus package. Economic growth rebounded strongly, and GDP growth averaged 6.4% from 2010-12, accompanied by an expansion of bank lending, recovery of exports (including wine and nuts) and high public spending. GDP growth slowed in 2013 to an estimated 3.2% because of the decline of public investment as a result of audits of ongoing projects, and the reduction of private investment because of political uncertainty, given the Presidential election. Notwithstanding, estimates for 2013 indicate 9.3% real growth in the agricultural sector, based on the first three quarters, partly driven by a programme of subsidies to smallholder farmers to procure inputs and the easing of trade relations with Russia.

Figure 1: Georgian real GDP growth, % YoY



Source: NSOG, CEIC, Renaissance Capital estimates

Green shoots of a recovery in agriculture

15. Since 2010, agriculture has begun to reverse its long term decline after 15 consecutive years of neglect (as % of GDP and in GEL output). By 2013 the agriculture sector's output had grown by 40.3% over 2010 levels in nominal terms to reach GEL 3363 million. In 2013 agricultural output grew 12.2%, above the 2.5% nominal GDP growth rate. (World Bank, 2014; GeoStat, 2014)

16. Agricultural exports increased 51% year on year in 2013 to USD 774 million (equivalent to 27% of total exports), benefiting from the partial re-opening of the Russian market. Year on year in 2013, the total sown area for annual crops increased 19.7% to 310,700 ha and output of maize increased by 33% to 355,000 tonnes. In addition, since 2011 a modest but real increase in high value products can be noted including vegetable and selected animal products such as eggs, poultry, milk, cheese and pigs. The area cultivated under perennial crops (grape, fruit trees) is still limited, yet it is in this field

that Georgia has a competitive advantage and the largest potential to generate export revenues. (Bank of Georgia Research, 2014) (GeoStat, 2014)

17. The state budget for agriculture increased by over 350% since 2010 and was 3.8% of the state budget in 2014, up from 1.3% in 2010. (MOF, 2014) Increased allocations to agriculture began under the previous government, suggesting a growing consensus across the political spectrum of the need for renovation of Georgian agriculture.

Changing markets

18. An important ongoing development is the strengthening of Georgia-EU relations, with the signing in June 2013 of the Association Agreement including the Deep and Comprehensive Free Trade Agreement (DCFTA) which is expected to come into force no later than 2015. This creates new market opportunities in many higher value markets - yet Georgian producers and exporters will have to make significant progress on quality and productivity to compete.

19. Georgia also has a Free Trade Agreement with Turkey and preferential trade terms with 11 former CIS countries which remain the dominant agricultural export markets. Yet trade embargo with Russia has highlighted the risk of reliance on these traditional, relatively low quality/low value, markets.

20. However, Georgia's strategic location and varied climate give it potential competitive advantages in accessing other important non-traditional agricultural markets in the Middle East. These markets are large importers of agricultural produce, including fruits and vegetables. They have strong year round demand for a full range of qualities - from price sensitive markets serving immigrant workers to high end markets serving an affluent elite. Yet they typically have less demanding phyto and phyto-sanitary requirements than, say, EU. They therefore represent a potentially important transitional market for Georgian exporters.

Financial sector and rural finance is growing

21. As in other countries, commercial banks are by far the most important pillar of the financial sector. Commercial banks accounted for 94% of combined loans outstanding of commercial banks and MFIs (2012). The share of loans to SMEs has remained relatively constant over the past year, in a corridor of 20-23%. In 2012, SME lending grew at nearly the same rate as the overall bank portfolio (12% against 13%). Loans to the agricultural sector (primary production) accounted for 3.5% of total loans outstanding at the end of 2012, up from 2.0% one year before. Interest rates for agricultural loans have been at times higher, at times lower than the average rate. More recently, agricultural loans have benefitted from interest rate subsidies offered by the Government of Georgia (GoG) through its Concessional Loan Programme (see below).

22. While there are several MFIs only providing urban consumption credit to wage earners, others have a much wider horizon and serve both urban and rural areas, and a wide range of MSMEs. For example CREDO, the largest MFI, had 30 branches across the country (as at end 2012).

23. Several banks and most MFIs operating in rural areas claim not to impose severe collateral requirements, which would impede smallholders or start-ups from borrowing. To the contrary, some of the dynamic banks keen to expand their SME lending do not require hard collateral for small loans up to USD 10,000/20,000, and the same applies to dynamic MFIs, albeit at lower levels (up to USD 5,000 equivalent). Interestingly, these FIs also excel in terms of repayment and have portfolios at risk much below industry averages.

24. Yet many farmers and SME's, especially early adopters, met during the design process who have obtained loans report high interest rates and punitive collateral requirements. So there still appear to be constraints to private investment, which may include:

- (a) Perceived mismatch between risk and returns among some potential investors (farmers, businesses) in early adopter investments, such as in new production technologies (for farmers) or business models, which may have been successful elsewhere but are not yet proven in their local value chains. The natural uncertainty of prospective investors about new investments is aggravated by conservative lending policies which reduce potential

returns while increasing the risk of failure (though high cost of finance) as well as increasing the consequences of failure (due to high collateral requirements)

- (b) Affordable finance for "early adopter" investments in agriculture, is still not yet the norm in rural Georgia. While finance from mainstream banks and MFI is increasingly widely offered in rural areas, conservative lending policies for agriculture (demonstrated through high collateral requirements and interest rates) limit the real availability of finance for progressive investments that would help upgrade the target value chains.

Agriculture institutions in transition

25. While there are (relatively recent) positive developments happening, the overall context of rural institutions and service providers in agriculture remains in transition.

26. In the last 5 years an almost nationwide network has emerged of 54 private farm service centres (31) and mechanization service centres (23) as well as 15 large government-owned mechanization service centres. The private service centres are now organized under a national association (ASA). These networks are the result of sustained efforts by GoG and development partners, with financial and technical support from donors, especially USA - initially through MCC and then by USAID through several projects and continuing into their most recent project "REAP". GoG is currently detailing plans for the privatisation of its 15 large mechanization centres (Meqanizatori LLC currently owned though APMA).

27. There are also a small but growing number of quality input suppliers already operating - ranging from good quality commercial fruit tree nurseries to multi-service seed and inputs suppliers. There also continues to be an active NGO sector delivering a range of rural development and agriculture related initiatives, such as ELKANA, Association of Business Consulting Organizations (ABCO) Georgia, GIPA, Caucasus Genetics, ACA etc.

28. Since March 2013, MOA has revitalized its network of 59 district offices and hired 270 new agricultural staff to provide farmers with advisory and extension services. In 2011, MoA trained 100 agronomists from all parts of Georgia, within the framework of its state program and with the support from DVV International⁸. The trained agronomists were to take up positions as deputies of *Gamgebelis* (heads of the MOA District Offices - who AMMAR will work with) in their respective municipalities (MoA / FAO, 2011).

29. At the producer/farmer level, apart from around 100 small co-operatives and associations, created by foreign-assisted projects, most small farmers, 95%, are not organized in any form, thus diminishing the ability of farmers to properly manage irrigation, advocate for common priorities or organize to engage better with emerging market and value chain opportunities (EU / FAO, 2012).

30. In response the EU, via European Neighbourhood Programme for Agriculture and Rural Development (ENPARD), is supporting efforts to develop and strengthen farmer co-operatives, with a new cooperative law having already been passed (addressing some financial and tax disincentives for collective action) and a specialist cooperatives agency established under MOA with teams in many districts, and four consortium of INGOs and LNGOs contracted.

New agriculture development strategy and action plans in place

31. Agriculture was not a policy priority until 2012. In addition to the Strategy for Agriculture Development in Georgia (2014-2020) and corresponding Action Plan, the draft Socioeconomic Development Strategy 2020, recognise the poor condition of agriculture and focusses strongly on rebuilding services for small farmers, cooperative development and restoring infrastructure.

32. The GoG's agricultural policy has four main directions:

- (a) Increase the competitiveness of agricultural production;

⁸ DVV International is the Institute for International Cooperation of the German Adult Education Association a leading professional organisation in Adult Education.

- (b) Ensure equitable increases in rural incomes to enable sustainable livelihoods and food security for all income groups;
- (c) Maintain the safety of food supplies to protect the public and to improve access to domestic and international markets;
- (d) Promote environmental sustainability to protect natural resources for the future.

33. **Synergy with Complementary Projects.** Major investment programmes are now underway that would have direct relevance to the AMMAR. In particular: (i) formation of Cooperatives under the EU (Euros 15 million grant) ENPARD; (ii) the USAID New Economic Opportunities (NEO) Initiatives, a four-year program designed to improve rural incomes, reduce poverty levels, improve food security, address critical, small-scale economic infrastructure constraints in targeted communities through technical assistance and matching grants, and the Restoring Efficiency to Agriculture Production (REAP) for USD 19.5million for 5 years to support Small and Medium Enterprise development and to provide Technical Assistance; and (iii) plans to rehabilitate irrigation systems, with the GoG aiming to achieve an x8 increase in irrigated land in the coming years to 200,000ha. GoG own investments in irrigation increased to GEL 63 million (USD38 million) in 2013 and has been a priority for new development partner investments, including from the World Bank GILMD project (USD50 million) and the Dutch (Euros 15.5 million) as well as IFAD investments under ASP (USD 11 million) and planned under AMMAR (USD 9 million).

34. Other major GoG programmes (all administered by APMA) include:

- (a) Concessional Loan Programme - involves 11 partner banks and provides subsidized loans for farmers and agribusinesses. As of Feb 2014 GEL 264 million (USD 150 million) of loans had been advanced by participating banks under the scheme.
- (b) Small farmers support project ("Spring works project") - a three year government initiative to provide subsidized inputs and services to farmers with <1.25 ha of land. In 2013, 710,000 farmers participated in the scheme at a total cost of GEL 190 million (USD109 million). The planned budget for 2014 support is GEL 90 million (USD51 million).
- (c) Co-investing with Agribusinesses in 40 most disadvantaged districts: a complimentary matching grant scheme for the Concessional Loan Programme. The objective is to co-invest with 50 private firms in disadvantaged districts. The total grant budget is USD12 million with average grants expected to be USD240,000. As of May 2014, 30 proposals had been accepted at concept stage, of which 15 full proposals had been submitted to the grants committee for review and approval/rejection.
- (d) Program "Produce in Georgia" is initiated by the Government of Georgia in June, 2014. Key goal of the program is to support the development of production oriented industries. One of the key program directions is agricultural production and processing with a GEL 30 million budget. Financial assistance, infrastructural support and technical assistance are the key components of the program. Program directions are: 1) High-tech greenhouses (vegetables, berries and greens) 2) Intensive cattle farming (dairy and meat) 3) Cattle, poultry, fish feed factory 4) High-tech, intensive poultry factory (meat, thatching) 5) Fruit, berries, vegetable, citrus processing 6) Nuts processing 7) Wool, leather processing 8) Laurel, tea, tobacco processing. Under this program, loan amounts from GEL 600 000 to 2 000 000 with 11-12% interest rate, from which 10% will be subsidized by the Government of Georgia.

35. A summary of the MoA strategic action plan showing AMMAR's strong fit with these priority action areas is presented in Appendix 1.

B. Rationale

36. Agriculture in Georgia is functioning below its historical potential. Once renowned for quality, diversity and volume it was a supplier of choice for many in the former Soviet bloc. But since Georgia's independence until the last 3 years, it has lain forgotten and neglected while other parts of the Georgian society and economy have advanced rapidly. Georgia's laissez-faire approach to agriculture and open trade policies over the last two decades has also meant that Georgian agriculture has in practice been competing in world markets for many years, both at home and abroad, albeit with mixed result.

37. Yet after years of neglect, Georgian agriculture faces many challenges before it can regain its former status as a preferred supplier of quality produce in major markets (domestic and foreign).

38. Production and upstream constraints include:

- (a) Lack of competitiveness in terms of price and/or quality in primary production due to a combination of:
 - poor soil/nutrition management
 - poor water management / irrigation practices
 - poor technical production know-how and practices
 - low yielding/inappropriate varieties
 - old tree stock (for tree crops) and low quality seeds (for some annual crops)
- (b) Dilapidated rural and irrigation infrastructure and weak O&M systems - and consequently limited access to reliable irrigation (it must be recalled that irrigation is indispensable for agriculture, at least in the central and east parts of Georgia).
- (c) Fragmented production and little organisation among actors at the base of the value chains (production level).
- (d) Products do not match market demands and requirements, for example with some common traditional fruit varieties not in demand in priority market segments.

39. Market and downstream value chain constraints include:

- (a) inconsistent quality management along the value chains - in primary production, harvesting and post-harvest handling/packaging/storage/treatment of products
- (b) agri-businesses, with a few notable exceptions, are mostly simple traders and relatively unsophisticated in understanding requirements and developing non-traditional market opportunities and have limited commercial infrastructure and facilities
- (c) market orientation is heavily biased to traditional "near region" markets with low quality requirements but these are small, mostly saturated and/or offer low returns due to low end markets and strong price competition from other larger supplier industries/countries.

40. For these reasons, farmers cannot sustain rural families hence, a relatively high incidence of poverty. Thus, AMMAR will support the Government of Georgia to address these multiple challenges.

41. The key development opportunity is represented by Government's radical policy shift and renewed interest in the revitalization of the agricultural sector in general, and of irrigated agriculture and value chain development, in particular. The fact that these orientations were confirmed and enhanced after the change of political majority of October 2012 supports the view that these changes are profound and robust, and not circumstantial. IFAD should therefore seize the moment and build on the positive policy momentum.

42. IFAD has the longest history of supporting agricultural development in Georgia. The urgent need to address issues of rural poverty provides the rationale for IFAD involvement in development assistance to Georgia. IFAD can capitalize from its niche player role in the Caucasus and add value to policy engagement and capacity strengthening of stakeholders, particularly on opening and maintaining dialogue between multi-level partners involving private sector, government and farmers.

Diversity of agro-ecological conditions, an open business climate and investment environment, advantageous geographical location and strengthening ties with EU are all significant advantages.

43. The Value Chain approach is a vital instrument to respond to changing markets and to support diversification, given the current context in Georgia. Provision of matching grants is expected to stimulate agricultural investments with support from the Rural Financial Sector.

44. **Rationale for supporting Climate Adaptation & Resilience.** In July 2012, some of Georgia's provinces were hit hard by heavy rains accompanied with hail and winds. This extreme and intense weather event left many areas of the country in an emergency situation. Studies on climate change predictions for Georgia show an increase by 3.5 degrees in mean annual temperature by the end of this century, accompanied with a decrease in precipitation by about 6 percent in the Western regions, while in Eastern Georgia, the air temperature is expected to rise by 4.1 degrees, and sums of precipitation could fall down to around 14percent. This will contribute to exacerbate the water deficit for crops with an increased demand for irrigation water up to 20% by 2050, while overall water availability will decline by an average of 30-40%. In addition soil and water conservation practices are still underdeveloped, and in a climate sensitive country like Georgia there is a strong need to enhance the adaptive capacity of rural people to address climate change and its potential impact on the agriculture sector. Grant funding from GEF will kick start measures to respond to climate related impact, in particular, the project will address the CC adaption priorities identified by the GoG for the agriculture section, and the adaptation options proposed by the Regional Program on Reducing Vulnerability to Climate Change in Southern Caucasus Agricultural Systems. Climate change impacts and adaptation measures:

45. The SNC⁹ recommends several priority adaption actions to overcome the expected climate change impacts on agriculture, most notably the use of modernized irrigation schemes and advanced efficient micro-irrigation methods to minimize irrigation water needs and avoid water losses, investments in drought-tolerant crops and varieties, the cultivation of less water-intensive and higher-valued crops (e.g. fruits and vegetables), measures to increase soil fertility and soil water conservation to reduce productivity losses (e.g. conservation agriculture systems and technologies), and the diversification of cropping systems. Additionally, in high mountain areas the SNC recommends measures for soil erosion control and slope protection (e.g. the restoration of pastures and the planting of hazelnut, vineyards and other fruit trees with sturdy root system in Kvemo Svaneti region). All of these measures require significant investments in agricultural research and extension services, as well as the availability of long-term and interest-low financial services for farmers to adopt climate-proof technologies and agriculture systems.

46. Additional reasons for investment include:

- (a) **Institutional Strengthening.** IFAD's experience in Georgia shows that while better irrigation systems are necessary conditions to increased productivity and a key entry point, the impact on the smallholder farmers will be limited, unless irrigation is combined with functional farmers' organization, sound water/land management practices, sufficient knowledge/skills and secure market access arrangements. As such, medium term competitiveness will increasingly rely on efficient water use and soil management due to expected climate changes and reduced rainfall combined with expanded production areas. Thus, promoting value chains and improved productive infrastructure will be an important foundation for rural transformation and its resilience.
- (b) **Government Support.** Government has requested IFAD to finance a new project to respond to its priorities in the Agricultural Sector. The relevant Government policy context for such assistance is laid out in the 2012-2022 Agricultural Strategy and corresponding Action Plan. Government partners are proactively engaged in coordinating investments in the Agriculture Sector with the Minister of Agriculture, chairing the Donor Coordination Group.

⁹ Second National Communication to the UNFCCC

- (c) **Agriculture Potential.** Georgia consists of 11 administrative regions and 22 climatic zones. The diverse soil and climatic conditions allows for a wide range of agriculture production. While the potential for agriculture production to develop commercially is clear, reliable and adequate irrigation water supply at command area and lower level blocks down to the field will be necessary to realize such potential. Irrigated agriculture can be expected to play a central role in the development of viable farm and non-farm rural employment opportunities.
- (d) **Donor Complementarity.** This project will specifically aim at lifting some of the key obstacles to agricultural productivity and income increase, namely: technological underdevelopment of the sector; poor connectivity to markets; and a generally degraded rural infrastructure. It is also conceived to complement key investments by other partners in large irrigation infrastructure and water management, land fragmentation (World Bank), extension capacity (USAID), and cooperatives' formation (EU). This project will allow us to anchor grant funds from the EU with potential parallel financing from ENPARD in addressing the formation and strengthening of cooperatives which will enable us to reach more people with better impact.
- (e) **Partnerships.** GoG with its development partners have already begun to massively increase public investment and support to agriculture - especially in irrigation, cheap finance and subsidized inputs and services. Yet despite these investments, there is still a great need for further support to reverse two decades of decline. AMMAR will therefore complement these large parallel investments. It will add to these efforts not only financially but also in seeking to demonstrate an approach for a more coherent and coordinated investment in priority value chains to trigger wider systemic improvements - bringing together hard investments (e.g. infrastructure, matching grants for private investment) with investments in farmer training as well as pro-active facilitation of the value chains (*See Appendix 1*)

II. Project description

47. The project will be financed through six sources: government own funds, IFAD loan, an IFAD grant, a GEF grant, matching private investment from beneficiaries and/or loans from the financial sector. This Project Design Report describes the integrated project arrangements covering all funding sources.

A. Project area and target group

48. The primary target groups are smallholder farmers, including active poor farmers¹⁰, while secondary target groups would include agribusinesses, cooperatives, service providers. The precise target groups would be defined by those communities/ farmers that demonstrate agricultural production potential in higher value commodities, are accessible to marketing channels, and show clear interest and commitment.

49. At least 50 percent of the allocation for irrigation infrastructure rehabilitation and value chain infrastructure will be in identified VC cluster areas. The targeting will be consistent with that of the ongoing ASP, which comprises **geographical** targeting, **self**-targeting and **direct**-targeting. Certain modifications and refinements are proposed in order to align the strategy with the specific characteristics and requirements arising from the nature of the proposed investment ensuring that all technical and economic parameters are satisfied, in particular that where irrigation schemes have

¹⁰ Discerned in distinct sub-groups as *commercially active* – oriented towards gaining ground in commercial agriculture or consolidating existing investments and have above average technical capacity in agribusiness, medium to high level of education with access to information and/ or a credit history; or *economically active* - typically farming their lands and selling surplus in local markets with some education and receive additional income mainly from remittances and may have a credit history.

been prioritized, these are aligned to the priorities identified through the participatory multi-stakeholder processes in each value chain.

50. The project will be open to operate nationwide, with the actual geographical focus determined by its climate change vulnerability and the supported value chains. Priority will be given to the poor rural populations in areas where there is agricultural and irrigation development potential. The targeting by AMMAR is provided with a private sector framework. The AMMAR is seeking to assist those parts of the rural population with a productive potential. Nevertheless, the touchstone of the AMMAR's **targeting strategy** is inclusivity. Project targeting seeks to combine a demand-driven modality with self-targeting parameters of Project benefits and pro-poor eligibility criteria. The principle of a demand-driven modality is important in at least three respects. First, self-motivation is the single most important ingredient in any development process. Secondly, when combined with comprehensive participatory project implementation measures, it assures project responsiveness. Thirdly, when combined with self-targeting parameters of project benefits and pro-poor eligibility criteria it achieves growth with poverty reduction targets while avoiding a potentially socially divisive top-down allocative methodology.

51. Gender mainstreaming would be meaningless unless Project design opened up spaces for poor rural women to express their development priorities on the one hand and, on the other, made provision for monitoring the results in terms of impact on women's income and assets. In the first instance AMMAR will seek to collaborate with and build upon the work of UNDP, SIDA, the Georgian Employers Association and USAID-supported Gender Mobilisation Groups to inform poor rural women about the AMMAR and, secondly, poor rural women will be expected to be participants in AMMAR Annual Stakeholder Review and Planning Workshops. As noted, a benchmark of 30% minimum representation of women across AMMAR activities has been set, although satisfaction of the targeting criteria described above may mean a much higher percentage of representation, given rural women's longstanding roles in vegetable and livestock production and associated processing both at home and as wage labour in agro-processing companies. AMMAR Annual Work Plans and Budgets would be expected to be gender-sensitive as would employment patterns and levels of remuneration in project-supported investments and selection of project infrastructure. Project monitoring and reporting data will be disaggregated by gender.

B. Development objective and impact indicators

52. The Project Goal is *"to sustainably increase incomes and reduce poverty for women and men in rural Georgia"*.

53. The Project Development Objective is *"to stimulate investment in climate smart agricultural value chains to increase incomes and strengthen resilience of smallholder farmers"*

54. Key performance indicators for the project will be:

- (a) Increase of more than 20% of real net household farm income for at least 10,000 supported households
- (b) 20% increase in total value (relative to reference market prices) of surplus agricultural production of targeted products sold by participating producers, traders and agribusinesses
- (c) Climate smart agricultural production practices are adopted by 50% of trained smallholder farmers (Data to be disaggregated by gender, social group, age, district and value chain)

C. Outcomes/Components

Outcomes

55. Project outcomes are cross-cutting and achieved through the contribution of activities under both Component 1 and 2 and are:

Outcome	Indicators
Outcome 1: Rural population agricultural livelihoods improved and their resilience to climate-change enhanced	<ul style="list-style-type: none"> At least 4750 farmers have improved soil conditions and/or water availability Diversification of farming systems is increased by at least 3000 farmers, with 20% increase over baseline in farmers practicing appropriate crop rotation, inter-cropping or similar soil/nutrition enhancement systems
Outcome 2 Inclusive climate smart VC are expanded providing improved market opportunities for smallholders	<ul style="list-style-type: none"> Private investment in inclusive VC exceeds additional USD 9 million for farmers, agribusinesses and service providers Increased lending volumes from partner FIs to producers and agribusinesses active in target value chains The volume of improved services and inputs from private service providers used by farmers in target VC clusters increases by 20% over current levels

Components

56. The project will be organized into two mutually supportive components coordinated by the third component, Project Management (See Appendix 4):

Component 1: Irrigation and Agricultural Value Chain Investment

57. This Component shall support investment in secondary/tertiary irrigation and value chain infrastructure (Sub-component 1.1). Moreover, the Component shall stimulate private investment by smallholder farmers and agribusinesses in climate smart production methods and value chain activities through a partial matching grant scheme (Sub-component 1.2). Investments under this Component shall primarily be driven by a participatory approach with smallholder farmers and agribusinesses.

58. The component gathers together the "hard" investments of the project. Specific investment priorities, especially under Sub-components 1.1 and 1.2, will be determined for each value chain through the multi-stakeholder process under Component 2 or other participatory mechanisms. Priorities will be and periodically updated as emerging issues and opportunities are identified through the ongoing multi-stakeholder processes in each of the value chains as they value chains develop.

59. In addition to providing direct financial support to investments, through public irrigation and market value chain infrastructure (Sub-component 1.1) or financial incentives matching grants for private investment via matching grants (Sub-component 1.2), the project may partner with mainstream financial institutions (FIs) to expand lending to agriculture for follow-on and replication investments.

Sub-component 1.1: Irrigation and value chain infrastructure

60. The project will invest in demand-driven irrigation and value chain infrastructure in selected value chain cluster¹¹ areas (AMMAR will not work in cluster areas requiring investment in drainage). Investments will also include associated landscape restoration (LR) activities linked to the supported infrastructure schemes where such restoration is beneficial in reducing the risk of erosion jeopardizing the proper functioning of the supported infrastructure schemes and the protection of agricultural land in the target VC cluster areas. At least 50% of the selection of infrastructure will be determined on the basis of the value chain choices. Investments are expected to primarily include rehabilitation of irrigation (limited secondary and tertiary) and a smaller number of value chain-related infrastructure requiring public investment (such as certified testing laboratories, rentable wholesale storage facilities, etc.).

¹¹ Value chain cluster areas, for the purpose of AMMAR, are defined as physical zones that encompass a sufficient concentration of existing or potential primary production for the agricultural commodity to sustainably attract competing buyers, agricultural service providers and input suppliers to operate in the cluster area.

61. Based on recent on-farm rehabilitation experience under ASP, the average cost per hectare ranges between USD 1000 - USD 1500.¹²

62. In particular, irrigation schemes to be rehabilitated will need to:

- (a) ensure sufficient supply of water is readily accessible and main/primary canals are in functional state and/or recently rehabilitated, as well as guarantee adequate supply of water (at least by the time the AMMAR supported rehabilitation works are completed), to meet on-farm demand or the proposed additional demand;
- (b) be technically and financially feasible to rehabilitate within the resources of AMMAR to ensure the achievement of the planned water delivery to the farmers' fields;
- (c) have an inclusive distribution of benefits among farmers, in the form of actual water supply to fields, consistent with AMMAR priorities of equitable benefits to active farmers who are poor or near poor.
- (d) be identified by smallholder farmers jointly with UASCG within a targeted VC cluster area as a priority constraint in expanding/improving their production of the targeted product and endorsed as such by the wider multi-stakeholder process (Component 2).

63. For both irrigation and value chain infrastructure, appropriate cost-sharing (in cash or kind) will be applied wherever possible; the level of cost sharing should be appropriate to the relative balance of public good vs private benefit from the investment. It is foreseen that for public goods, the contribution will be at least 5% while private investments will be at least 60%.

64. Each investment must have its own techno-feasibility studies and/ or cost-benefit analysis, as necessary. These must have clearly defined objectives, costs and timeline (i.e. an internal sub-project proposal) that can be reviewed by RADF Value Chain Project management team and also shared with value chain stakeholders. Final approval on small investments <USD20,000 will be provided by MOA based on recommendations made by a three person Small Grants Committee including the Project Manager, RADF Value Chain Coordinator and Project Accountant, and include a representative from UASCG for irrigation infrastructure. Investments of >USD20,000 will require the approval of MOA-led Large Grants Committee including MOA staff and external members (to be elaborated in the PIM).

65. Sound operation and maintenance(O&M) frameworks will be a mandatory pre-requisite before implementation of any infrastructure works begins on the ground. Under the component, the project will invest in establishment and/or strengthening of credible water user O&M arrangements as part of its irrigation investments. Initially, it is expected that the UASCG will be responsible for all aspects of the operation and maintenance of supported schemes from primary through to tertiary, to the point of delivery of water to the "field gate", as mandated by Government decree in 2012¹³. Water users willingness to pay and sign contracts with UASCG for water supply will be a key criteria in prioritizing schemes to be supported.

66. However, to respond to concerns about the longer term viability of existing approaches to O&M management, the recently approved WB financed project will support the preparation of a National Irrigation and Drainage Strategy which will primarily define the Government's long term vision for: regulation and monitoring of irrigation water delivery including environment monitoring; institutional arrangements for on-farm and off-farm irrigation and drainage services; water pricing and cost recovery; as well as rehabilitation and modernization. The GILMD has set out a structured approach to institutional strengthening both for, the UASCG and water users themselves. It will support a phased transition to improved arrangements for on-farm irrigation service delivery involving greater water user participation. The AMMAR project will build on the improved arrangements for O&M management, learning from the experience under the forthcoming GILMD project. Specifically, during

¹² The calculation is based on the figures obtained from the rehabilitation of 10 schemes under ASP, combining primary, secondary and tertiary canals. These costs are in line with the irrigation rehabilitation under a USAID funded project.

¹³ The UASCG was assigned the full responsibility of irrigation and drainage operation activities (Government decree N 672, dated 12 April, 2012).

the first two years, the project will design and test improved arrangements for O&M management of the supported irrigation schemes.

Sub-component 1.2: Facilitating private investment in agricultural value chains

67. This project will stimulate private investment by smallholders and agribusinesses to upgrade priority value chains through a coordinated use of matching grants for innovative "early adopter" investments combined with partnerships with mainstream financial institutions (FIs) to expand lending to agriculture for follow-on and replication investments.

Matching Grants for Value Chain Upgrading

68. Matching grants will be used to incentivise "early adopter" private investments that tackle identified value chain constraints and/or demonstrate replicable innovations aligned to each value chain strategy and joint action plan, developed through the multi-stakeholder processes in each value chain (Comp 2).

69. Grants should not displace mainstream commercial finance but rather address the risk "gap" associated with early adopter investments in the current financial market conditions. As such, individual grants should only be of a size, sufficient to support the minimum commercially viable investment that also addresses the identified constraint or demonstrates the particular innovation.

70. Two windows will be set-up under the matching grant scheme:

- Window 1: Smallholder producer grants (for primary production related investments for Climate Smart Agriculture)
- Window 2: Agribusiness grants (for non-primary production related investments)

71. For both grant windows:

- (a) Grants will be targeted towards private investment in *innovation* and/or *early adopter* investment in targeted value chains, especially promoting climate smart production and value chain development.
- (b) The "concept stage" proposed types of investment to be prioritized for support, should be endorsed through the multi-stakeholder process where feasible, by the wider network of primary VC actors (i.e. producers, producer groups and agribusinesses) - as being a priority concept for grant-supported investment to address recognized bottlenecks and VC constraints.
- (c) Proposal will be sourced through periodic public calls for proposals and by invitation from the project or referral from project partners at any time (e.g. banks, MFIs). These will be in rounds each targeting specific value chains.
- (d) Grants must form part of a sound overall investment plan for the concerned business or farm and grant disbursement will be subject to financing being secured for the overall investment plan (not just the elements financed by the grant).
- (e) Only private entities (businesses, co-operatives, registered producer groups, individuals) are eligible to receive matching grants. State-owned companies, agencies and similar entities are not eligible for grants.

72. The initial proposed sizes and percentage share of the matching grants available and as well as the form of eligible beneficiary contribution under each Window are summarized in Appendix 4. More grant application and operational details such as number of grant rounds in a year, will be specified in the Project Implementation Manual. These may be adjusted, subject to GoG and IFAD approval, from time to time based on the growing experience of the project on what is necessary and appropriate to achieve the project objectives.

73. Mobilizing good quality applicants among smallholders and agribusinesses is vital for the success of the grant scheme. The multi-stakeholder processes of value chain facilitation will be central to this and will be initiated in advance of any grant awards. The MSP in each VC cluster area

will identify the main bottlenecks to the value chain's development as well as specific opportunities for catalytic private investment that should be prioritized for matching grant support. These priorities will then be part of the priorities adopted for the first round call for expressions of interest (EOI) from potential grantees. During the MSP, awareness among smallholder and agribusiness of investment opportunities for upgrading their farms and businesses will be facilitated through visits to more progressive farms and businesses already applying improved technologies and business models. Smallholder who then submits a simple expression of interest for a matching grant for investment in improved CSA production will be invited to attend practical field training session on the relevant CSA technologies (Component 2). Grants under Window 1 will be provided to grantees upon completion of the farmer training and indication of successful application of the grant.

74. Agribusiness, co-operative and associations that submit an expression of interest under Window 2 will be initially screened for eligibility and fit with the identified priorities from the MSPs. Those confirmed as eligible and fitting with the MSP priorities will be able to request, if they wish, advisory support from the project to strengthen and refine their main investment plans. Such advisory support will be either provided directly by the project agribusiness specialists or by externally contracted business advisory services providers paid for on a cost sharing basis between the project and investor on a ratio of 40:60.

75. To help increase the availability and use of mainstream finance by smallholders and agribusinesses, the Project can develop partnerships and collaborations with established financial service providers for credit and financial services. The partnerships can have direct benefits to the project supported farmers and agribusinesses as well as to the banks and MFIs themselves.

Component 2: Climate smart agricultural and value chain development

76. This component will set the priorities and coordination of all activities within the project and guide the direction of all other activities. Notably, the selection of infrastructure schemes to be supported and priorities for matching grants under Component 1 will be determined on the basis of the value chain upgrading strategies and joint action plans that are outputs from the multi-stakeholder process under Component 2.

77. AMMAR, will support up to six priority climate smart value chains and address critical constraints along the value chains, for example in marketing, processing, storage, post-harvest, primary production or the provision of key services to producers and agri-businesses. As identified during appraisal, there is potential and based on farmer interviews, demand, for developing at least 9 value chains, for: (i) Stone fruits (peaches, plums, cherries, sour cherries); (ii) Pip fruits (apples, pear); (iii) Berries (strawberries, blueberries); (iv) Vegetables (v) Potatoes; (vi) Honey; (vii) Herbs; (viii) Beans & pulses (chickpea, lentils - as part of CSA crop rotation); and (ix) Nuts.

78. Priority value chains will be selected and intervention initiated in two batches in order to facilitate a rapid project start-up while allowing time to build the capacity of the project implementation teams and refine the project processes. The first batch of 2-4 value chains will be identified and interventions started in Project Year 1 (PY1). The second batch identification and interventions will begin once satisfactory progress is made on the first batch, expected to begin in PY2.

79. The component objectives will be achieved through stimulating complementary private investment along the value chain (with financial investment support under Component 1) to accelerate systemic changes to upgrade each value chain that cannot be easily achieved by ad-hoc individual private investments. The tactic objective is to *increase the aggregate value* created within each value chains as the basis for increased profits for farmers and agri-businesses alike and to thereby create the incentives for wider replication and "crowding-in". The tactic objective is *not just to redistribute* existing margins among different actors.

80. The component will therefore focus on the following areas to tackle perceived risks and stimulate private investment:

- (a) Value chain screening and prioritization will be among the very first activity initiated under the project. In coordination with the target group, the process will be led by the RADF value chain staff in collaboration with MoA Policy Unit Group (responsible for MoA strategic action plan) and other key stakeholders. It will involve direct discussions with the value chain actors and technical experts as well as desk research, market and data analysis.

A key output from the screening and prioritization process will be a provisional roadmap and upgrading strategy for each of the selected value chains. This should include a tentative results chain for the overall value chain upgrading to demonstrate how the project interventions can credibly lead to systemic changes and improvements in the value chains selected as well as making explicit any critical risks or assumptions. The provision upgrading strategy and roadmap will be further refined and validated through the multi-stakeholder process in each value chain.

- (b) Multi-Stakeholder Processes of value chain facilitation for VC development of each in each VC cluster area will begin informally through the value chain screening exercise and then continue through the duration of the project, with an initial more intensive engagement process over the first 1-2 years. MSP facilitation will be one of the key responsibilities of the RADF Value Chain team. They will be supported by the MOA District Staff in each VC cluster area. International technical assistance will be provided to the RADF VC team over the first year of the project to build their capacity in VC facilitation. Local service providers in each cluster area will be encouraged to actively participate in the initial intensive stages of the MSP in each value chain, to better understand the needs of the farmers and agribusiness as well as raise awareness among farmers and agribusiness of the services and opportunities available. Through this process the project team will also identify interested local service providers to acts as potential partners in the project implementation - especially for activities on Climate Smart GAP and technology transfer (see below). Where private service providers are interested to invest to improve or expand their service delivery, they will be eligible to apply for matching grants under the standard procedures of Window 1 (Comp 1.2).
- (c) Climate Smart GAP and technology transfer and training for farmers in target value chain clusters is expected to be a critical element for sustainably raising primary productivity and, hence, the competitiveness of most of the prioritized value chains and farmers' incomes. To be effective, the training must be practical and must respond to explicit farmer's demands.

The climate smart GAPs and improved production technologies promoted will be aimed at the level of the "practical optimum" improvements for farmers to gain a rapid increase in income given their starting point in terms of knowledge and resources. The principle underpinning this is to focus on the few (e.g.3-5) key changes in the production system that will give the biggest and quickest return for a given level of investment (similar to the Pareto principle - sometimes called the 80:20 rule). This is specifically intended to increase the likelihood of farmers adopting the promoted technologies themselves. The project will avoid promotion of theoretically ideal production technologies and systems aimed at delivering the theoretical maximum but which may have less likelihood of widespread adoption.

81. It is expected that for most (but not all) targeted VC products that technologies to be promoted will focus on financially profitable and climate smart GAPs in two the main thematic areas of:

- (a) improved water management and efficient water usage,
- (b) improved soil and nutrition management including conservation agriculture techniques such as crop rotation and intercropping methods, soil fertility management, crop residue

and mulch management, zero tillage, selection of suitable varieties, and integrated pest management,

- (c) landscape restoration on the farm and nearby areas.

82. The approach to technology transfer and promotion will be through a combination of practical CSA technology plots, promotion events, short and longer duration practical field training and systematic follow-up with farmers

83. Farming as a business - the practice of farmers managing their farm as a household enterprise that invests and adapts its production to target identified market demands to increase returns - is still the exception rather than the norm in much of Georgian agricultural. Yet, it is an essential part of a vibrant agricultural sector and so the project will foster these practices among farmers in targeted value chains through the inclusion of training and advice to farmers on key skills necessary to shift from a traditional supply-driven production mindset to one of farming as a business.

84. Technology promotion will be fully integrated with the promotion of matching grants under Component 1 to enable farmers to invest in adopting the promoted technologies and improved production systems on their own farms.

Component 3: Project Management

Project management shall be the responsibility of the Ministry of Agriculture, through the Rural and Agriculture Development Fund (RADF). The RADF is expected to consist of distinct technical units, one for IFAD and another of which will manage the forthcoming WB-financed Georgia Irrigation and Land Market Development (GILMD) project.

D. Lessons learned and adherence to IFAD policies (See Appendix 3)

85. A number of lessons and implications have been derived from past IFAD's investments on which the design of AMMAR is built. The major lessons learned can be categorised into general environment and more sector specific. The core lessons are:

General

- Government ownership and leadership must be emphasised and ensured from the onset.
- Project management arrangements should be through a semi-autonomous unit of the Ministry of Agriculture, with employment conditions that attract and retain competent staff.
- Weak public institutional capacities have been a constraint to project implementation effectiveness.
- In the Georgian context, projects should be kept simple and realistic in terms of scope and implementation arrangements.
- Previous projects lacked a well-functioning M&E system, hindering the timely response to taking corrective actions and the proper documentation of impact results.

Sector Specific

- Given the years of neglect, agriculture and rural development is faced by a myriad of challenges and a single/ isolated intervention is unlikely to deliver lasting results. Strong coordination and long-term vision and commitments are required to achieve impact and sustainability.
- Future IFAD operations need to emphasize the importance of irrigation infrastructure, agricultural services, marketing and value chain development to rural poverty reduction in Georgia.
- Demand for credit needs to be addressed through sustainable credit organisations able to deliver in remote rural areas.

- Special efforts are required and clear arrangements for operations and maintenance for irrigation infrastructure should be agreed upon before the construction begins. Therefore, strong government commitment is required to provide the legal, organisational and technical arrangements.
- Great care must be taken to select appropriate management and service delivery structures particularly in the field of climate smart agriculture, marketing and value chain consultation processes. Marketing and value chain interventions need to be further developed and diversified, to also include related capacity building programmes.
- Gender inequality is less of an issue in Georgia than many countries due to the gender-egalitarian legacy of the Soviet system. However, since the collapse of the Soviet Union, economic and political upheavals, as well as the impact of civil conflict, have combined with the reassertion of patriarchal ideas regarding acceptable gender roles (as elsewhere in the former Soviet Union). In all cases, under the Georgian constitution the right to property is guaranteed on an equal basis and both spouses have equal legal rights of ownership over the couple's joint property. There are also equal opportunities for women to access credit. Thus, while it is not currently a threat, implementation-specific measures to empower women to acquire the means and ability to participate in the mainstream of economic and social development, will be put in place.

86. This design incorporates lessons learned as well as latest relevant information, including the 2003-2015 Economic Development and Poverty Reduction Programme of Georgia (EDPRP), Strategy of Agriculture Development of Georgia for 2014-2020 (SADG), the IFAD Country Strategic and Opportunities Paper (COSOP) for Georgia (December 2004) and the Project Performance Assessments conducted by IFAD's Independent Office of Evaluation (2013) for the recently closed Rural Development Project and Rural Development Project for Mountain and Highland Areas.

Adherence to IFAD Policies and Strategies

87. The ongoing IFAD-financed ASP project design updated in July 2012 and a supplementary financing approved in December 2012, necessitated the update and validation of the continued adherence to IFAD policies. The strategic objectives of the 2004 COSOP remain valid. The project approach of AMMAR and its implementation modalities are fully consistent with IFAD strategies and specific policies on rural finance, climate change, gender, targeting and private sector (*Detailed in Appendix 12*).

III. Project implementation

A. Approach

88. Inclusive market development is at the core of the project approach, working with primary and secondary actors to tackle critical constraints - from raising the competitiveness of primary production through to collection, processing and marketing.

89. The strategy will be to stimulate growing private investment (by farmers, producer groups, agribusinesses and service providers) in prioritized climate smart agricultural value chains for which there are credible market opportunities and potential for competitive and profitable participation by Georgian smallholder farmers.

90. Climate smart value chains and production systems will be prioritized that can prosper under the expected future climate patterns in each region to ensure the development of sustainable, competitive and vibrant agricultural value chains. This will be fully mainstreamed within the project - from the screening and prioritization of which value chains to be supported, to provision of training and financial incentives for farmers to adapt their production using simple but effective climate smart good agricultural practices (e.g. zero tillage, mulch, drip/sprinkler irrigation, rotational/inter-cropping) relevant to each crop and local conditions.

91. The project will work with farmers and producer groups (including cooperatives) as well as agribusiness and other key service providers (service centres, associations, private service provision businesses, banks, MFIs, etc.) to tackle critical constraints along the value chains.

92. The project will stimulate private investment by directly tackling actual and perceived risks to investment by farmers, agri-businesses and other value chain actors. Specifically, this will be achieved through: providing packages of technical support alongside partial matching grants for "first mover" private investments (farmers and agribusinesses - including cooperatives); facilitating linkages to key service providers (nurseries, banks/MFIs etc.), as well as; facilitating commercial linkages between producers, buyers, processors, marketers along value chain out to the end markets.

93. The project will also support direct investment in "public good" productive and value chain infrastructure - such as small scale secondary and tertiary irrigation, wholesale rentable storage, development of industry standards - where this is needed to unlock private investment by farmers or agri-businesses and verified as a priority for public investment by the value chain actors themselves via the VC multi-stakeholder processes.

94. At an institutional level, agriculture in Georgia is in a period of rapid transition which is likely to continue through the AMMAR implementation period, for example:

- (a) In the last 5 years an almost nationwide network has emerged of 54 private farm service centres (31) and mechanization service centres (23) as well as 15 large government-owned mechanization service centres. The private service centres are now organized under a national association (ASA). These networks are the result of sustained efforts by GoG and development partners, with financial and technical support from donors, especially USA - initially through MCC and then by USAID through several projects and continuing into their most recent project "REAP". GoG is currently detailing plans for the privatisation of its 15 large mechanization centres (Mekanizatori LLC currently owned though APMA).
- (b) Since March 2013, MOA has revitalized its network of 59 district extension/information centers and hired 270 new agricultural staff to provide farmers with advisory and extension services - typically now with 4-6 technical agricultural staff per office, equivalent to an average of 1 extension staff for every 2000 rural households.
- (c) There are a small but growing number of high quality input suppliers already operating - ranging from good quality commercial fruit tree nurseries to multi-service seed and inputs suppliers, many of whom have clear growth plans.
- (d) EU is heavily supporting efforts to develop and strengthen farmer co-operatives, via ENPARD, with a new cooperative law having already been passed, a specialist cooperatives agency established under MOA with teams in many districts, and four large consortium of INGOs and LNGOs contracted to support the development of at least 100 cooperatives in the coming years.
- (e) there continues to be an active NGO sector delivering a range of rural development and agriculture related initiatives
- (f) expanding network of rural branches and credit officers among numerous banks and MFIs covering almost all areas of the country, with several banks having major expansion plans related to the agricultural sector in particular.- for example Bank of Georgia

95. Underpinning these dramatic changes has been the transformation of GoG investment in agriculture in recent years - where the state budget for agriculture has increased by more than 350% since 2010 with major ongoing programmes being implemented, many through the Agriculture Project Management Agency, including: Spring Works Support to Small Farmers; Concessional Loan Programme, and; a pilot agribusiness matching grant scheme in the 40 most disadvantaged districts. GoG's own investments are being complemented by major investments in agriculture by development partners including WB (Rural Infrastructure, Irrigation), USAID/MCC & SDC (Value Chains, Extension

Curriculum), EU (Cooperatives, Rural Development), IFAD (Irrigation, Rural Finance, Value Chains, Climate Change Adaptation), UNDP & FAO (Institutions, Extension Support), OXFAM (Food Security), and others.

96. AMMAR's institutional approach to implementation to work with and reinforce these emerging institutions, organizations and structures to help raise sustainability (and avoid creating parallel project implementation mechanisms), including:

- (a) Scientific center and local private farm service centres may be engaged to deliver farmer training and strengthening their own profile among farmers,
- (b) MOA regional technical offices and recently recruit extension staff will fully participate and support the facilitation of the multi stakeholder processes in the local value chains in their areas,
- (c) APMA and/or any other specialised entity could be contracted to administer the AMMAR matching grant scheme for agribusinesses to share systems and learning with the recently started GoG agribusiness grant scheme which APMA is also managing,
- (d) collaborating with MOA's Policy Group in the screening and prioritization of targeted value chains,
- (e) partnering with interested banks and MFI to facilitate greater access to credit for agriculture,
- (f) through the MSP, engaging with the emerging farmers' cooperatives, where these are active in the prioritized value chains and cluster areas,
- (g) active participation in the donor coordination group under the auspices of MOA.

97. Project duration will be 4 years.

B. Organizational framework

98. **Ministry of Finance (MOF)** is the official Representative of Georgia as the Borrower/ Recipient. In this role MOF will be responsible for: (i) Providing inter-agency coordination when required; (ii) Fulfilling the government fiduciary oversight and management responsibilities; (iii) Providing sufficient counterpart contribution in a timely manner to finance the Project activities (where agreed).

99. The **Ministry of Agriculture (MOA)** will be the lead executing agency through **the Rural and Agriculture Development Fund (RADF)** as the project implementing agency. Established under Governmental Decree No. 2051 dated 24 December 2012, the RADF is a semi-autonomous non-profit (non-entrepreneurial) legal entity chaired by the Prime Minister with the Minister of Agriculture serving as the Deputy Chairman. The objective of the Fund is to support the development of agriculture in Georgia.

100. RADF will be assigned project management responsibility and will be staffed based on competitive recruitment. The RADF is expected to consist of distinct technical units, one for IFAD and another, of which, will manage the forthcoming WB-financed Georgia Irrigation and Land Market Development (GILMD) project. It is foreseen that operating costs would be shared on a pro-rata basis amongst the various active projects to be further defined during implementation.

101. RADF will be responsible for overall coordination and management of the project, including management and fiduciary aspects. The main roles and responsibilities in project implementation are summarized in Table 1 and Table 2 below.

102. RADF will be substantially strengthened to manage the forthcoming projects and certain management and staff positions will be shared between AMMAR and GILMD for efficiency and coordination reasons (especially in areas of finance, procurement and administration).

103. To ensure efficient and effective implementation the project will build on existing and emerging systems for rural service delivery and project management. The RADF shall select and appoint technical staff or contract local service providers, as required, to:

- (i) provide expertise on climate smart agriculture promotion and landscape restoration;
- (ii) facilitate local multi-stakeholder processes in each value chain;
- (iii) provide monitoring and technical back-stopping for farmers' training and technology plots;
- (iv) advise farmers on farm plans;
- (v) conduct follow-up meetings with farmers who are recipients of grants made available under the Project;
- (vi) act, or designate the Agriculture Project Management Agency (APMA) and/or any other entity(ies) acceptable to IFAD to act, as small grants administrator and manage the small grants scheme for smallholders under Window 1 (Climate Smart Primary Production) of Sub-component 1.2 of the Project;
- (vii) act, or designate APMA and/or any other entity(ies) acceptable to IFAD to act, as large grants administrator and manage the large grants scheme for agribusinesses and cooperatives under Window 2 (Value Chain Development) of Sub-component 1.2 of the Project; and
- (viii) enter into a subsidiary agreement, as appropriate, with APMA and/or any of the entities referred to in sub-paragraphs (vi) and (vii) above setting forth the terms of the implementation of the activities in respect of the Window under Sub-component 1.2 respectively assigned thereto.

104. The recently re-vitalized regional MOA district offices, typically with 4-6 technical staff, will be engaged to:

- Support RADF in the facilitation of the local multi-stakeholder processes in each value chains,
- providing monitoring and technical back stopping of the farmer training and technology plots, and
- support RADF to follow up with farmers investing using grants.

105. Local service delivery to farmers, including delivery of farmer consultancy, training and management of CSA technology plots, could be subcontracted to local service providers operating in each of the target locations (e.g. service centres, mechanization centres, farmer associations, private service providers, cooperatives, NGOs). Potential candidate local service providers will be identified through the initial intensive phase of the value chain multi-stakeholder process in each value chain and encourage to submit proposals to the project for service provision following the project's approved procurement procedures. The local service providers may be provided with supplementary training to address specific knowledge gaps are promoted technology options where necessary.

106. Overall technical supervision and coaching of the local service providers on all aspects of GAP, climate smart agriculture practices, landscape restoration and farmer consultancy and training will be the responsibility of RADF.

107. For civil works, overall responsibility for supervision of design services and civil works would be carried out by RADF Engineers and on-site daily supervisors. For irrigation related infrastructure, representatives of the United Amelioration Service Company of Georgia (UASCG), currently mandated by Government for operation and maintenance of all irrigation infrastructure, would approve any request for payment prepared by contractors and RADF Engineers as well as the final certificate of completed services and works. Day to day supervision of civil works would be carried out by the short-term contracted on-site daily supervisors under the direct guidance of the RADF Engineers. The on-site daily supervisors would be responsible for quantity and quality of works and materials used.

RADF Engineers would regularly visit sites during implementation of construction works and be responsible for monitoring quantity and quality of implemented works.

108. Performance based contracts and agreements will be applied as a principle for all recruitments and contracted service providers to assure high performance standards.

Table 1: Summary of implementation roles and responsibilities

Component / activity	Lead Responsibility within Project	Field delivery of services/works
Component 1: Infrastructure & Agricultural VC Investment		
1.1: Irrigation and value chain infrastructure	RADF Engineers & Contracts Manager	Infrastructure Contractors (using similar contracting process to ASP)
1.2 Facilitating private investment in value chains	RADF VC Coordinator	
1.2.1 Matching grants for VC upgrading	See Table 2 for details	See Table 2 for details
1.2.2 Partnerships for deepening agricultural value chain finance	RADF VC team	Partner Banks and MFI Local coordination with MOA District Staff and Local Service Providers
Component 2: Climate Smart agricultural value chain development		
VC screening / prioritization	RADF VC team (including GEF Coordinator)	With MoA Policy Group, Bank/MFI Partners and VC stakeholders
VC facilitation and multi-stakeholder processes	RADF VC team	RADF VC team With: MOA District Offices Partner Banks/MFIs
CSA technology transfer (training, technology plots)	RADF/ Climate Change Adaptation Coordinator	Local Service Provider Field monitoring by MOA District Offices

Sub-component 1.2 - Matching Grant Scheme - Roles and Responsibilities

Table 2: Window 1: Climate Smart Primary Production - Small grants for smallholders

Process step	Grant Administrator	RADF	Others
1. Promotion of grant scheme (word of mouth, advertising, other projects/partners, events and meetings)		Coordinated by RADF VC team	Local technical service provider MoA District Offices Also via Partner banks / MFI via client base
2. Briefing to interested applicants on scheme and preliminary advice	Jointly by Grant Administrator and RADF VC team RADF Grant Officer and VC team		Supported By MoA District Offices
3. Technical advice to applicants in preparation of application / farm investment plan			Local technical service provider as part of farmer training course. Additional backstopping to farmers from MOA District Offices.
4. Application receipt, checking of eligibility and completeness of applications (desk based)	Grant Administrator		Application to include bank reference confirming account details and identity
5. Technical screening & review of feasibility incl. field verification (technical and financial) and fit with project priorities in each VC	Grant Administrator	Technical guidelines on evaluating typical farm investment plans from VC team	
6. Compliance check (business and fiduciary aspects)	Grant Administrator		
7. Submission to Grant Committee	Grant Administrator		
8. Grant decision	Grant committee		
9. Loan application review and approval (if part of investment plan)			Bank/MFI own standard processes of loan appraisal
10. Contracting and agreement of milestones /disbursement schedule	Grant Administrator	RADF Grant Officer	
11. Disbursement - phased if possible		RADF	
12. Technical support to grantee during grant implementation			MOA District Offices and Local technical service providers
13. Grant monitoring, and reporting	Grant Administrator		Bank / MFI own monitoring and management of loan (where loan taken)

Table 3: Window 2: Value Chain Development - larger grants for agribusinesses & cooperatives

Process step	RADF (plus others)	Grant Administrator (APMA)
1. Promotion of grant scheme (word of mouth, advertising, events and meetings)	Coordinated by RADF via: RADF Value chain team MoA District Offices Local technical service providers Also via: Partner banks / MFI Regional Development Agencies (were appropriate)	
2. Briefing to interested applicants on scheme and preliminary advice	RADF Value chain staff	
3. Technical advice to applicants in preparation of application	RADF Value chain team (limited) Consultants to support business plan preparation if requested.	
4. Application receipt, checking of applicants' eligibility and completeness of applications (desk based)		APMA (online submission the standard review by grant officers using same procedures as GoG scheme)
5. Technical screening & review of feasibility (technical and commercial) and fit with project priorities incl. field verification	APMA	
6. Compliance check (business and fiduciary aspects)		APMA (with partner bank/MFI if applicant is taking loan from partner bank/MFI)
7. Submission to Grant Committee	Grant Committee	APMA
8. Grant decision		APMA Grant Committee (same committee as for GoG scheme)
9. Contracting and agreement of milestones /disbursement schedule		APMA
10. Co-ordination of technical support to grantee during grant implementation	RADF Value chain team	
11. Contract monitoring, disbursement and reporting	Field verification on behalf of APMA by RADF VC team plus MOA District Offices	APMA

C. Planning, M&E, learning and knowledge management

Planning

109. The Annual Work Plan and Budget will be the main planning tool in AMMAR. The first AWPB will be prepared, together with the procurement plan, for the first 18 months of the project, as part of the final design report, and be presented for discussion during the start-up workshop for submission to IFAD for no objection.

110. The preparation of the following AWPBs should be prepared, discussed and approved no later than sixty days before the end of the financial year. To allow full participation of the project stakeholders, the process of AWPB preparation should start with consultation at the local level and

then be consolidated at the RADF level. For AMMAR, the AWPBs will also include activities and plans associated with the priority actions and investment areas identified through multi-stakeholder processes (MSPs) in each targeted value chains.

Monitoring and evaluation

111. Project monitoring and evaluation will be conducted in accordance with established IFAD and GEF procedures and will be provided by the project team with support from IFAD-GEF. The Project Logical Framework provides indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's M&E system will be built.

112. In line with the GEF/SCCF operational principles, the SCCF M&E activities will be country driven and provide for consultation and participation. As a participatory country, GEF expects involved local institutions including farmer organizations to be fully consulted with, informed and briefed about the plans, implementation and the results of evaluation activities. The value chain MSPs will provide the basis for this two-way communication.

113. The M&E system will generate quantitative and qualitative verifiable information on the project's performance in a form that will assist the Ministry of Agriculture and the RADF to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action to be taken to correct encountered problem during implementation. The M&E generated information will contribute to facilitating the workflow and quality of the decision-making by providing the means of focusing on implementation problems and ensuring effective communication and co-ordination.

114. The M&E system would be divided in two overall key functions: progress monitoring (Input/Activity/Output) and Outcome/impact monitoring and evaluation. Both are part of a systematic, participatory learning process geared towards ensuring that the project attains its planned objectives and impact.

Learning and knowledge management

115. The AMMAR project is foreseen to play a knowledge generating role that will allow for piloting innovative models in the Georgian rural context for climate smart agriculture and value chain development. Knowledge products and learning processes of project information, experiences and results will be compiled and disseminated on an ongoing basis.

116. The explicit assignment of knowledge management and communication responsibilities will be a shared responsibility. The overall responsibility would belong to the Project Manager and the M&E Officer. Service Providers would have a key responsibility for sharing lessons learnt during the project through preparation of special case studies and Learning Notes.

117. This knowledge-sharing process will be supported by a well-focused series of workshops and joint learning events and coordination with active development partners based in-country such as EU, UNDP, SDC, USAID as well as establishing links with local farmers' forums and civil society organisations, for discussing and sharing experiences as they emerge. Collaboration with private sector during implementation is expected to play a role and this experience will also be captured through publications.

118. A communication campaign is currently under design to facilitate knowledge sharing and exchange of experiences between farmers. Information on agriculture inputs, market opportunities, new techniques, established good farming practice and weather / climate related information would be shared. This will also include organisation of local events such as agriculture fairs, study tours and locally organised demonstration and learning activities; and improving access to electronic and broadcast media information.

119. RADF would participate in most of the agricultural related events organized at national and international levels allowing project staff and other implementing partners to communicate and share lessons learnt during the implementation of AMMAR.

120. **Regional Knowledge Networking:** Georgia is currently a main host of regional events for the South Caucasus countries. Important knowledge and thematic workshops/ seminars are regularly hosted in Tbilisi. The main development partners have their regional hubs for the Caucasus based in Tbilisi (EU, World Bank and others). This environment is conducive for regional networking and communication exchange on new development strategies and regional trends. IFAD is an active player in the donor coordination group.

121. The success of interaction among the diverse set of project stakeholders depends largely on the quantity, quality and timeliness of information flowing among them. This calls for developing suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, and internet).

D. Financial management, procurement and governance

122. **Country context and risk rating.** The inherent risk is the corruption perception index is rated medium at 4.9, which is among the most corruption free in the region. According to the latest Public Expenditure and Financial Accountability (PEFA) assessment report (2013), Georgia has advanced significantly its budgetary and financial managements systems since the previous assessment Report of 2008. Previous IFAD and WB-funded projects have rated Financial Management performance by the Ministry of Agriculture implemented projects as Satisfactory. The initial project risk rating for the AMMAR-project has been assessed in accordance with IFAD guidelines as low provided that the mitigation actions outlined in the paragraphs below are timely implemented.

123. **Financial management.** The RADF will be staffed with a Finance Manager and 2 accountants who will be responsible for financial management and disbursements. The RADF would maintain a full set of accounts in accordance with IFAD's requirements and internationally accepted accounting standards. For that purpose, the RADF would install an appropriate financial management and accounting system. The RADF will prepare quarterly Interim Financial Reports and annual Project financial statements in a format acceptable to IFAD using IPSAS cash basis of accounting.

124. **Accounts.** There shall be a Designated Account maintained by the State Treasury within the Treasury single FX account held in the National Bank of Georgia from which payments shall be made to cover Eligible Expenditures under the Project in both USD and in Georgian Lari (GEL). In addition, entities selected to implement activities related to grants under the Irrigation and Agricultural Value Chain Investment Component (Component 1) of the Project shall maintain a separate account to receive Project funds, in a bank acceptable to the Fund or at the State Treasury as appropriate. No funds shall be disbursed by IFAD to finance the matching grants until the related implementation and Financial Management arrangements as well as investment guidelines acceptable to IFAD have been duly formalized.

125. **External Audit.** RADF shall appoint an independent auditor to audit the accounts of the entire project on an annual basis, following international auditing standards. The auditor would examine the documentation related to expenditures carried out under Statement of Expenditure and provide an opinion on the operation of the Designated Account and would also examine the documentation related to procurement. A separate audit opinion will also be issued to cover expenditures incurred by the entities selected to implement activities related to grants under the Irrigation and Agricultural Value Chain Investment Component. An annual audited consolidated financial statement together with a management letter on audit observations on internal controls will be submitted to IFAD no later than 6 months after the end of the fiscal year.

126. **Procurement.** Given Georgia's proven excellent track record in improving its Public Procurement Systems (as assessed by Transparency International, World Bank, SIGMA/ OECD), procurement of simple goods below the threshold of US\$ 100,000, will be carried out under shopping procedures using the electronic procurement system of Georgia with minor modifications. Further modifications are being made to the Public Procurement Systems with the support of the World Bank

to enable the use thereof for more complex ICB and NCB procurement processes. Until such time, procurement of goods, works and services financed by the loan shall be carried out in accordance with the provisions of IFAD's Project Procurement Guidelines.

127. **Governance.** Georgia has a Transparency International Corruption Perception Index Score of 49 in 2013. It is currently ranking 55th out of 177 countries. In the 2014 IFC/WB's Ease of Doing Business Report, Georgia is ranked 8th out of 189 countries. Previous IFAD and WB-funded projects have rated Financial Management performance by the Ministry of Agriculture implemented projects as Highly Satisfactory.

E. Supervision

128. Supervision will be by IFAD (under its direct Supervision framework and guidelines), with a Supervision mission mobilized at least once per year. Additional implementation support from IFAD on specific identified issues, as well as for GEF financed activities, will be mobilized if considered necessary by GOG and IFAD or recommended by the Supervision mission. The composition of the Supervision missions in terms of technical expertise would be based on an annual supervision plan. The supervision plan would highlight, in addition to the routine supervision tasks (fiduciary, compliance and project implementation), the main thematic or performance areas that require strengthening and would imply deployment of additional inputs for capacity building, in-depth analytical studies or review of existing policies.

129. Within approximately the first six months of project effectiveness, IFAD will mobilize an implementation support mission, to support RADF in project start-up and resolve any immediate issues that have emerged.

130. During the first two years of the project the Supervision teams, together with GOG and the project team, will be specifically tasked to review and refine (if necessary) the detailed processes, criteria and approaches to the following critical aspects of the project:

- (a) Screening and prioritization of climate smart value chains and production cluster for project support (C2)
- (b) Selection and targeting of infrastructure works (C1.1) and links to prioritized value chains
- (c) Matching grants sizes, % of grant, targeting, eligibility criteria, grant application and administration processes (C1.2)

131. A joint Mid Term Review will be completed in PY3, with quantitative and qualitative data on project performance and impacts to be collected and analysed prior to the MTR.

F. Risk identification and mitigation

132. The project strategy specifically sets out to reduce the risks faced by smallholder farmers through coordinated public sector investment and support and, thereby, stimulate greater private investment to upgrade agricultural value chains with growth potential.

133. In general management terms, the existence and satisfactory performance of the Project Management Unit to date in managing the ongoing ASP provides a solid foundation for overall project management that will help mitigate various risks. Notwithstanding the value of the RADF to project delivery, the main potential risks to project success and mitigation strategies are summarised below.

#	Risks	Mitigation
1	Project Strategy Risks Low private sector interest in co-investing in priority value chains. This would be most likely if the project chose to work in value chains which are considered by agribusinesses and producers to have limited potential.	Through the initial VC screening process. Value chains will only be prioritised for project support where the screening process identifies specific confirmed interest in the value chains from buyers as well as producers based on direct discussions and meetings with businesses with a confirmed interest. The project's phased approach of supporting a portfolio of up to six value chains will also reduce the risk of disruption to the project if any one of the prioritized value chains does not perform as expected - for example in terms of market development or attracting the required private co-investment.
2	<i>Additionality</i> of the matching grants to agribusinesses and producers. Will the matching grants result in incremental private investments and/or changes in internal behaviours of producers and agribusinesses and/or changes in the dynamics and relationship between producers and agribusinesses in the value chains.	All matching grants schemes experience similar risks. In AMMAR the likelihood of genuine additionality will be increased by: i) the grants being limited both in number and also in the share of the investment supported, with the share of grants linked to the level of innovation in the investment ii) grants specifically targeted toward investment in "innovation" - e.g. where new production practice or business models are being established - and sized to address the perceived additional risk of first mover investors, whether producers or agribusinesses iii) priorities for the types of agribusiness and producer investments to be targeted will be based on the identified constraints and bottlenecks in each value chain, thus giving increased likelihood that such investments will contribute to wider systemic changes and genuine additionality in the wider value chain.
Irrigation and value-chain infrastructure risks		
3	Political interference could undermine selection procedures established for the selection/location of infrastructure investments.	Use of the value chain MSPs to identify priority areas and needs for infrastructure investment combined with clear and transparent criteria for the final decision of awards for particular schemes.
4	A lack of sound operation and maintenance of irrigation schemes caused by weak O&M management arrangements and financing is a credible risk given Georgia's experience on O&M over the last two decades.	As outlined in the recently approved WB financed project, support will be provided to the preparation of a National Irrigation and Drainage Strategy which will primarily define the Government's long term vision for: regulation and monitoring of irrigation water delivery including environment monitoring; institutional arrangements for on-farm and off-farm irrigation and drainage services; and water pricing and cost recovery as well as rehabilitation and modernization. The forthcoming World Bank GILMD project will seek to demonstrate improved approaches to O&M of irrigation schemes through greater water user involvement - but introduced in a phased manner in order to re-establish credibility of O&M systems among water users. AMMAR will build on these approaches and as well, invest in strengthening the capacity of O&M management in the schemes supported.
5	Poor design and/or construction can result in schemes not performing as intended.	Close supervision during construction is essential to ensure quality of the final scheme. AMMAR will strengthen the amount of senior engineering supervision by the RADF of scheme design and construction, to address the concerns relating to the effectiveness of some local supervision under ASP.

Local service delivery risks	
6	<p>At present in rural Georgia, experienced institutions serving farmers are scarce - with few functioning farmers groups (formal or informal) and associations, only recently re-established MOA District teams, relatively new farm service centres and mechanisation centres . This creates significant challenges for agricultural projects in reaching farmers and building sustainable service delivery, and thus a risk to the quality and effectiveness of local service provision.</p> <p>In terms of agricultural services, and especially the transfer of CSA technologies to farmers, the risk will be managed through: i) applying an inclusive approach to identifying and partnering with potential local service providers - allowing the project to work with whichever service providers are most interested and able to deliver the necessary services in each area, ii) building the technical capacity of the local service providers and a specific critical set of CSA technologies most relevant to each of the priority value chains, and iii) at the central level, partnering with a credible national Partner/experts organisation with a proven track record of CSA technology transfer in Georgia to coach and supervise the local service providers. In terms of access to finance this risk will be managed through the development of partnerships with established financial institutions with a confirmed interest in extending their services in target areas.</p>
Risks of low uptake of improved CSA production practices by smallholders	
7	<p>Experience shows that when knowledge on CSA technologies is not properly introduced and adjusted to local contexts, the level of acceptance from farmers is very low and can eventually jeopardise a successful shift to sustainable cropping systems.</p> <p>The project will pay adequate attention to capacity building and training as a key factor. As outlined above, the project will engage in nurturing a critical mass of services providers, and the sharing of practical experience among stakeholders, through a continuous on-farm learning process to test and adapt efficient irrigation and sustainable agriculture principles. The project will also support informal and formal farmers' organizations to facilitate the adoption and management of efficient irrigation and resilient agriculture technologies.</p> <p>The project will identify and support innovation-oriented leader farmers and farmers' organizations who are willing to transform maladaptive practices and obsolete production systems into modern and more efficient ones. These champions can play a critical role in overcoming cultural barriers and convince others to shift to sustainable agronomic practices, as farmers tend to trust their peer more than other formal advisers.</p>

134. Moreover, initial intensive implementation support efforts and annual supervision missions and follow ups, would be critical to respond to these risks in a timely manner.

IV. Project costs, financing, benefits and sustainability

A. Project costs

135. The total investment and recurrent Project costs, including physical and price contingencies, are estimated at about US\$ 31.3 million over a four-year project implementation period. Funds allocated to the project management are about 2,5 percent of the total Project costs.

Table 4: Project costs by component and financier
(Thousands of United States dollars)

Component	IFAD loan	IFAD grant	GEF Grant	Beneficiaries (both in cash and in kind)	Borrower/ counterpart	Total
	Amount	Amount	Amount	Amount	Amount	Amount
1. Irrigation and Agricultural Value Chain Investment	12,794.2	-	4,089.2	9,760.8	2,359.2	29,003.4
2. Climate Smart Agriculture and Value Chain Development	-	500.0	1,002.6	-	38.1	1,540.7
3. Project Management	505.8	-	208.2	-	60.3	774.3
Total	13,300.0	500.0	5,300.0	9,760.8	2,457.6	31,318.3

B. Project financing

136. The Project financing is foreseen from the following sources: The IFAD loan, US\$ 13.3 million (42.5 percent of the total Project costs), would finance: Component 1 - Irrigation and Agricultural Value Chain Investment (USD 12.8 million), and Project Management (US\$ 0.5 million). The GEF Grant, US\$ 5.3 million (16.9 percent of the total Project costs) if approved, would finance: Component 1 - Irrigation and Agricultural Value Chain Investment (USD 4.1 million), Component 2 - Climate Smart Agriculture and VC Development (US\$ 1 million), and Project Management (US\$ 0.2 million). The IFAD supported CBEARC Grant, of US\$ 0.5 million would finance only Component 2. Beneficiaries from their own resources (and through Financial Institutions) are expected to contribute to the financing around US\$ 9.76 million. **The Government contribution** is estimated not to exceed US\$ 2.45 million from taxes and duties foregone, however it is more likely to be in the order of US\$ 1.8 million.

Table 5: Project costs by expenditure category and financier
(Thousands of United States dollars)

Expenditure category	IFAD loan		IFAD grant		GEF Grant		Beneficiaries (both in cash and in kind)		Borrower/ counterpart		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount
I. Investment Costs											
Training	17.9	13.5	69.7	52.4	25.5	19.2	-	-	20.0	15.0	133.1
Equipment & Materials	26.0	24.8	-	-	59.7	57.2	-	-	18.8	18.0	104.5
Grants & Subsidies	4,019.9	25.6	324.0	2.1	2,307.1	14.7	9,076.5	57.7	0.0	-	15,727.6
Consultancies	69.6	6.4	44.8	4.2	950.2	88.0	-	-	15.3	1.4	1,079.9
Vehicles	-	-	-	-	66.0	82.0	-	-	14.5	18.0	80.5
Works	8,524.1	65.5	-	-	1,462.3	11.2	684.2	5.3	2,342.3	18.0	13,013.0
Total Investment Costs	12,657.5	42.0	438.5	1.5	4,870.9	16.2	9,760.8	32.4	2,410.9	8.0	30,138.6
II. Recurrent Costs	-	-	-	-	-	-	-	-	-	-	-
Salaries & Allowances	510.6	56.7	-	-	390.0	43.3	-	-	-	-	900.6
Operating Costs	120.7	50.1	61.5	25.5	18.0	7.5	-	-	41.0	17.0	241.1
Other Operating Costs	11.2	29.5	-	-	21.1	55.5	-	-	5.7	15.0	38.0
Total Recurrent Costs	642.5	54.5	61.5	5.2	429.1	36.4	-	-	46.7	4.0	1,179.7
Total	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3

C. Summary benefits and economic analysis

Project Benefits

137. The Project is expected to increase incomes and strengthen resilience of smallholder farmers in selected project areas. Benefits would derive from: (i) crop intensification and increased production due to rehabilitation of a number of small irrigation systems and value chain infrastructures; (ii) increased crop production, improved soil condition and cost savings through introduction of CSA (conservation agriculture); and (iii) improved value chains due to regular access to productive infrastructure and financial services and to better commercial relationship between smallholders and wholesalers, exporters and processors.

Financial Analysis

138. **Irrigation and VC infrastructure models:** The anticipated main benefit would occur from keeping of the existing production and in yield increase as a result of improving irrigation supply. It was assumed that cropping pattern consists of 6 ha of wheat, 1.2 ha of plum orchards and 4.8 ha of potato generating a net annual benefit of around GEL 2,248 (USD 1,284) in the without project situation. The irrigated arable land is currently lacking reliable water supply due to depreciation of the irrigation scheme. For the with-project situation a 50% increase in yields on average was assumed. The model records an NPV of GEL 27,896 (USD 15,940) over a twenty-year period and an IRR of 17.2% which is well above the opportunity cost (10%).

139. Quantification of the benefits deriving from the improvement of **value chain-related infrastructure** such as rentable wholesale facilities and certified testing facilities suggested that it will result in about USD 735,000 of incremental annual benefits in total. Approximately 1,200 smallholder farms and households will be benefiting from the improvement of the value chain-related infrastructures with increase of their annual income from 1.5% to 5% in 20-year perspective.

140. **Matching Grant Models:** Matching grants will support private investments that tackle identified value chain constraints and/or demonstrate replicable innovations aligned with each value chain strategy and action plan jointly developed with the value chain stakeholders. Most smallholders grow cereals, fruit and vegetables in small plots of land (0.6-0.7 hectare on average) using conventional technologies with low crop productivity. Several models were prepared to analyse the financial and economic impact of the introduction of the CSA technologies for smallholders. The analysis is based on the illustrative models of the **small grant subprojects** likely to be implemented by smallholders, particularly, the production of legume grains, off-season vegetables, fodder crops and wheat. In addition, one of the small grant models presents financial results for a beekeeping business.

141. For **Legume grains** the model records an NPV of GEL 3,804 over a ten-year period and an IRR of 74%. Another model for small grant financing shows how attractive the production of **offseason vegetables** can be for small farmers and records a financial NPV of GEL 17,885 thousand over a ten-year period and a very high financial IRR of 103%. Next model presents introduction of a **crop rotation** that includes cultivation of legume crops (bean) in the first year followed by two years of wheat. The model records an NPV of GEL 475 over a ten-year period and an IRR of 22.2%. **Beekeeping model** indicates that the household benefits would be improved by at least GEL 2,111 (USD 1,206) with project per year.

142. Other two models illustrate **agricultural businesses** likely to be implemented by farmer groups, cooperatives and associations, such as (i) **Cold storage**, where the IRR on the incremental net benefits is 72%, which is well above the 10% opportunity cost of capital. The business of the cold store is to fetch higher prices during the off-pick season and to reduce losses. (ii) **Fruits/vegetables dryer**, which assumed that the total investment in the first year would be GEL 341,250 (USD 195,000). The model records an NPV of GEL 360,876 over a fifteen-year period and an IRR of 34.3%.

Economic Analysis

143. The period of analysis is 20 years to account for the phasing and gestation period of the proposed interventions. The scenario presented in the economic analysis is conservative and the

analysis attempts to identify quantifiable benefits that directly relate to the activities undertaken following the implementation of the components, or that can be attributed to the project's implementation.

144. The incremental economic costs have been calculated by the removal of price contingencies and taxes/duties. The total economic cost of the Project for 4 years implementation period amounts to about USD 27.2 million. The base case Economic Rate of Return (ERR) is estimated at 25.7%. The base case net present value of the project's net benefit stream, discounted at 10%, is USD 9.5 million.

145. **Sensitivity Analysis.** Economic returns were tested against changes in benefits and costs and for various lags in the realisation of benefits. In relative terms, the ERR is equally sensitive to changes in costs and in benefits. In absolute terms, these changes do not have a significant impact on the ERR, and the economic viability is not threatened by either a 20% decline in benefits or by a 20% increase in costs. An increase in total project costs by 20% would reduce the base ERR to about 24.1%. A one-year delay in project benefits reduces the ERR to 23.7%.

D. Sustainability

146. Sustainability is central to AMMAR through its explicit focus on developing climate smart agricultural value chains which have credible comparative advantages. Sustainability will be achieved in different dimension of the project through several complementary mechanisms:

- (a) Screening to identify value chains for specific agricultural products that are adapted to the current and future climatic conditions as well as having credible comparative advantages and the potential to convert these into specific competitive advantage. The screening will include agronomic and production issues as well as market perspectives.
- (b) Promotion of specific climate smart agricultural production practices among smallholder farmers in target value chains, especially related to efficient irrigation and improved water and soil management practices.
- (c) Sustainability of irrigation schemes has been weak over the last two decades and credible systems for O&M have yet to be established on a wide scale in Georgia. The WB-financed GILMD project has set-out a specific approach to re-establishing viable O&M systems and AMMAR will build on the lessons from GILMD.
- (d) Landscape restoration will be conducted around supported irrigation schemes to reduce the risk of silting and similar related deterioration of the schemes.
- (e) Matching grant will be used selectively to stimulate initial private investments that can then be replicated and scaled-up by others using mainstream finance, with the size of the grant amounts limited to the minimum viable commercial scale so as to limit market distortions or displace mainstream finance providers.
- (f) Sustaining future levels of private investment will be facilitated through the partnerships with established financial institutions as basis for deepening access to finance for agriculture.
- (g) Institutionally, the project will seek to work through and with existing service providers - public and private - in delivering demand-driven services to farmers. This is intended to complement wider efforts by GOG and other development partners to deepen the supply and quality of agricultural services in rural areas.

Appendix 1: Country and rural context background

Facts and figures today

1. Georgia is currently a lower middle income country (US\$ 3 290 GNI per capita, 2012) with a population of about 4.5 million, of which 2.1 million live in rural area (46.2%). There are around 550,000 rural households with an average of 3.75 people per household. (GeoStat, 2014)
2. At the national level, poverty rates were an estimated 35.6% against a \$2 a day (PPP) poverty line and 18% against a \$1.25 (PPP) extreme poverty line in 2010. At the same time, against the national poverty line, the national poverty headcount was 20.9% in 2010 and had declined to 14.8% in 2012. Poverty rates are 80% higher in rural areas than urban areas - 18.8% vs 10.5% respectively in 2012 against the national poverty line. (World Bank, 2014)
3. The overall unemployment rate is estimated at 14.6 percent (2013), the highest in the region. Of those nominally employed, 79% are self-employed in rural areas compared to 30% in urban areas. The rural self-employed are typically smallholder farmers and subsistence-oriented agricultural households (often locally referred to as "peasants" as distinct from farmers) and account for 50% of all employment in the country. There are currently about 700,000 agriculture holdings of which some 90 percent are classified as family farms¹⁴. Rural households (HH) are typically highly dependent on low productive agriculture. (GeoStat, 2014)
4. There is a substantial wage gap between agricultural and other sectors, with the average monthly wage in 2013 in agriculture of 486 GEL (USD293) versus 1112 GEL (USD670) in non-agricultural sectors. Thus agricultural wages are just 44% of non-agricultural wages. (ibid)
5. Agricultural production accounts for 45 percent of rural household income¹⁵, a further 28 percent coming from social payments and pensions and only 27 percent from salaried work. The structure of the rural economy and demographics suggest that farming is likely to remain the dominant source of employment and income for the majority of rural citizens in the medium term.

The road from independence

6. Georgia declared independence in 1991, in the wake of the dissolution of the Soviet Union, and was quickly faced with dramatic economic and political challenges. Many people returned to the rural areas and engaged in agriculture as a survival strategy. This can be seen in the fact that agriculture's share of GDP jumped from 28% in 1991 to 68% by 1994 even while the economy as a whole collapsed by around 70% over the same period. This 'flight to the rural areas' was gradually consolidated through a land privatisation programme. Since then Georgian agriculture, once famous in the Soviet era for quality and volume, became structurally characterised by low-input/low output, mainly smallholder subsistence-oriented. A very good recent UNDP comparative study of agriculture in the South Caucasus (Weldon, et al., 2013) provides the following analysis of the reasons that led to such a profound collapse and slow recovery in Georgian agriculture.
7. *... "While the dismantling of the agricultural sector can be explained by the collapse of the Soviet system, comparisons with other countries in the region suggest that this is not the whole story. The post Soviet collapse in agricultural productivity was clearly a result of the failure of the Soviet system that all agricultural activity was based on, and the two wars that followed. However, every country in the region experienced the same rupture from the post-Soviet system and Armenia, Azerbaijan, Tajikistan, Russia and Moldova all went through major, ethnically driven conflicts, while no other country in the region (with the possible exception of Tajikistan) fell as far as Georgia.*

¹⁴ Less than 2ha holdings

¹⁵ This includes 35% in-kind and 10% sales.

8. *Why Georgia was so hard hit or, conversely, why other countries were not, is not merely of academic interest, but may rather help to explain why the country has experienced such difficulty in recovering. Three elements were key in Georgia:*

- *First, Georgia produced considerably more than the other countries and so had far further to fall. According to the World Bank, in 1990 Georgia was producing roughly twice as much agricultural produce as Azerbaijan and five times as much as Armenia. Given that Georgia has about half as much arable land as Azerbaijan and about twice as much as Armenia, one can conclude that, per hectare of arable land, it was approximately twice as productive as either of these countries.*
- *Second, the level of state collapse and lawlessness seems to have been greater, and to have lasted longer, in Georgia than in other places in the region, and was undoubtedly worse than in Armenia and Azerbaijan. This may seem a strange claim given the horrors of the Nagorno-Karabakh crisis but there are reasons to think that Georgia's fragmentation was more profound than in the other cases.*
- *A third factor, which is linked to the second, is that, for numerous reasons, it seems that conditions were ripe in Georgia for a high level of 'asset stripping' and a collapse in infrastructure that was not experienced elsewhere. The dismantling of existing infrastructure for scrap has been a particularly long-term and debilitating problem in Georgia and seems to have resulted in a far greater collapse in the irrigation system, electricity supply and availability of farm machinery than happened in the other two countries. In some sectors - in particular in irrigation – this practice has remained stubbornly problematic. Some elements - farm machinery for example - are slowly recovering. Others, including electricity, were recently fixed. But none of the major elements of the infrastructure have improved significantly until relatively recently."*

9. As a consequence, between 1990 and 2011 the total area planted declined by 43 percent and average production per hectare diminished proportionately as an increasing share of agricultural land was left unused. At its peak under the Soviet Union, the irrigated area reached 386,000ha (1988) which declined to approximately 25,000ha by 2013 as reported by the Ministry of Agriculture.

10. In stark contrast to the problems experienced in agriculture, following the rose revolution and independence in 1991, the government implemented wide ranging and successful reforms to tackle corruption and improve the business environment and invested heavily in public infrastructure. As a result Georgia has risen to be ranked no. 8 globally and no. 1 in the region in the World Bank's Doing Business 2014 report (World Bank, 2013).

11. These reforms and investments resulted in strong growth which averaged 9.3 percent per year during 2004–07. The August 2008 conflict with Russia and economic crisis resulted in a sharp downturn in growth as FDI, remittances and bank lending contracted and the economy shrank by 3.8 percent in 2009. The trade embargo by Russia had a major impact on agriculture as it had previously been the main export market. The government responded with a fiscal stimulus package including selected social and capital expenditures. Economic growth rebounded strongly, and GDP growth averaged 6.4% from 2010-12, accompanied by an expansion of bank lending, recovery of exports (including wine and nuts) and high public spending. GDP growth slowed somewhat in 2013 to 3.2%.

12. The strong business environment, dynamic business culture, much improved transport and communication infrastructure that now exists provide are a foundation for important competitive advantages for Georgia and will be a key asset for the country if it's agriculture sector is to successfully recover.

Green shoots of a recovery in agriculture

13. Since 2010, agriculture has begun to reverse its long term decline. After 15 consecutive years of decline (as % of GDP and in GEL output), the agriculture first halted this decline between 2010-12 (averaging 8.6% of GDP) and then in 2013 has shown the first signs of sustained growth in more than two decades.

14. By 2013 the agriculture sector's output had grown by 40.3% over 2010 levels in nominal terms to reach 3363 million GEL. In 2013 agricultural output grew 12.2% year on year, above the 2.5% nominal GDP growth rate and in real terms grew by 9.8% year on year contributing 1.0% of real GDP growth. At the same time, agriculture's share of GDP has grown to 9.3% in 2013 from a low of 8.4 percent in 2010 compared to 28 percent at independence in 1991. (World Bank, 2014; GeoStat, 2014, Bank of Georgia Research, 2014).

15. Agricultural exports increased 51% year on year in 2013 to USD774 million (equivalent to 27% of total exports), benefiting from the re-opening of the Russian market for some products in 2013 and exports to Russia reached USD107 million, approaching the pre-embargo level of USD129 million in 2005. The lifting of the embargo was initially for wines and water but the fruits and vegetables resumed in Oct 2013. Overall, major exports are wine, nuts, livestock.

16. Year on year in 2013, the total sown area for annual crops increased 19.7% to 310,700ha, the spring sown area increased by 22% to 252,000 ha., output of maize increased by 33% to 355,000 tonnes. In addition, since 2011a modest but real increase in high value products can be noted including vegetable and selected animal products such as eggs, poultry, milk, cheese and pigs. The area cultivated under perennial crops (grape, fruit trees) is still limited, yet it is precisely in this field that Georgia has a competitive advantage and the largest potential to generate export revenues. (Bank of Georgia Research, 2014) (GeoStat, 2014)

17. The state budget for agriculture has increased dramatically since 2010 - in absolute and relative terms. Agriculture's share of the state budget is 3.8% in 2014 and almost three-fold increase from 1.3% in 2010. So, combined with a growing overall state budget, the actual state budget for agriculture has increased by over 350% in the last five years. It is notable that the increased allocations to agriculture had begun under the previous government with substantial increases in 2011 and 2012 with further increases in 2013 and 2014 since the new government came to power in Oct 2012. This suggests a growing consensus across the political spectrum of the urgent need for renovation of Georgian agriculture as part of the country's economic and social development. (MOF, 2014)

Changing markets

18. An important ongoing development is the strengthening of Georgia-EU relations, with the initialing in Nov 2013 of the Association Agreement including the Deep and Comprehensive Free Trade Agreement (DCFTA) which is expected to come into force no later than 2015. This creates new market opportunities in many higher value markets - yet Georgian producers and exporters will have to make significant progress on quality and productivity if they are to successfully compete in these attractive markets.

19. Georgia also has an FTA with Turkey and preferential trade terms with 11 former CIS countries which remain the dominant agricultural export markets. Yet trade embargo with Russia, only recently partially lifted, has highlighted the risk of over reliance on these traditional, relatively low quality/low value, markets.

20. However, Georgia's strategic location and varied climate give it potentially useful competitive advantages in accessing other important non-traditional agricultural markets in the Middle East, with significant potential for Georgian products. Middle Eastern markets, especially UAE (Dubai) are large importers of agricultural produce, including fruits and vegetables. Given their demographics and economy they have strong year round demand for a full range of qualities - from more price sensitive markets serving immigrant workers to very high end markets serving an affluent elite. Yet these markets often have less demanding mandatory phyto and phtyo-sanitary requirements than, say, EU. They therefore represent a potentially important transitional market for Georgian exporters a part of their diversification outside the former Soviet space.

Land fragmentation persists

21. Fragmentation of land is often cited as a key constraint to agricultural growth - with family farms typically having around 1.25 ha. divided into 3 plots of around 0.4ha in different locations. Fragmentation of land plots is therefore certainly likely to be an issue for competitive production of cereals and other broad acre crops such as potatoes. However, it is less likely to be a defining constraint for higher value crops such as fruit and vegetables which can be competitively produced on smaller plots - especially where labour is a limiting factor for expansion of production.

22. Arguably a more important dimension of fragmentation in some villages is that potentially productive land plots are far from the village - making them unattractive to farm and certainly unsuitable for investment in high value production. With far away fields and orchards difficult to monitor and manage closely and the consequent high risks of loss or disruption to production these fields are unlikely to attract significant investment by farmers..

Agriculture institutions in transition

23. While there are (relatively recent) positive developments happening, the overall context of rural institutions and service providers in agriculture remains in transition.

24. In the last 5 years an almost nationwide network has emerged of 54 private farm service centres (31) and mechanizations service centres (23) as well as 15 large government-owned mechanisation mechanizations service centres. The private service centre is now organized under a national association (ASA). These networks are the result of sustained efforts by GoG and development partners, especially USA - initially through MCC and the by USAID through several projects and continuing into their most recent project "REAP". financial and technical support from donors (especially USAID and MCC). GoG is currently detailing plans for the privatisation of its 15 large mechanization centres (Meqanizatori LLC currently owned though APMA).

25. Since March 2013, MOA has revitalized its network of 59 district extension/information centers and hired 270 new agricultural staff to provide farmers with advisory and extension services - typically now with 4-6 technical agricultural staff per office, equivalent to an average of one extension staff for every 2000 rural households.

26. There are also a small but growing number of high quality input suppliers already operating - ranging from good quality commercial fruit tree nurseries to multi-service seed and inputs suppliers, many of whom have clear growth plans.

27. There also continues to be an active NGO sectors delivering a range of rural development and agriculture related initiatives, such as ELKANA, Association of Business Consulting Organizations (ABCO) Georgia, GIPA, Caucasus Genetics, ACA etc.

28. At the producer/farmer level. apart from around 100 small co-operatives and associations, created by foreign-assisted projects, most small farmers, 95%, are not organized in any form. Furthermore, except for very few sector-wide national organizations, there are no entities in Georgia representing the interests of farmers as a whole, thus diminishing the ability of farmers to advocate for common priorities or organize to engage better with emerging market and value chain opportunities. (EU / FAO, 2012) However, even smaller is the number of farmers who formally or informally cooperate to buy, produce or sell together. This failure is usually attributed to a low level of social capital in Georgia. This, in turn, is seen as resulting from soviet collectivisation, under which people had no need to self-organise as they were organised centrally, or from Georgian traditionalism, which encourages extended kinship networks but discourages strong civic or commercial ties that lay outside these networks. On the other hand, however, it has also been pointed out that collectivisation is currently strongly discouraged by the Georgian tax and legal system, which increases the tax liabilities of collectives by treating them as a single legal entity. (Weldon, et al., 2013)

29. In response the EU, via ENPARD, is heavily supporting efforts to develop and strengthen farmer co-operatives, with a new cooperative law having already been passed (addressing some of the financial/tax disincentives for collective action), a specialist cooperatives agency established

under MOA with teams in many districts, and four large consortium of INGOs and LNGOs contracted to support the development of at least 100 cooperatives in the coming years.

Agriculture Education, Training and Research inadequate but improvingly slowly

30. There are few functional agricultural research, education, or extension public institutions within Georgia. Agriculture-related studies attract very few students in Georgia. The Agrarian University, which was recently privatised, is under-equipped.. While agriculture is one of the focal areas for the ongoing reforms and upgrading the Technical and Vocational Education and Training sector in Georgia (including with various international support from UNDP, MCC and others), the progress to date has been limited, in part due to very low enrolment within TVET course on agriculture - understood to be less than 1% of those enrolling. (SAO, 2013)

31. In 2011, GoG initiated a training programme for agronomists with the intention that one hundred agronomists per year will study English and then travel abroad to master modern agricultural technologies. MoA trained agronomists from all parts of Georgia, within the framework of its state program and with the support from DVV International¹⁶. Trainings were conducted with invited specialists from Germany. Up to 100 agronomists were trained until the end of December 2011 and all of them are to take up positions as deputies of Gamgebelis (heads of the MOA District Offices - who AMMAR will work with) in their respective municipalities. (MoA / FAO, 2011)

32. At the field level, numerous training sessions are being conducted by different international organisations (EU, SIDA, UNFAO, USAID funded AMP, EPI, NEO, SDC, Mercy Corps, CNFA Georgia, USDA, UNDP etc.) and local NGOs (ACA, ABCO Georgia, GIPA, Caucasus Genetics etc.). Training areas include: primary production technical; agricultural managers; service providers; dairy and livestock, veterinary, plant protection, food safety and other issues. (EU / FAO, 2012)

Financial sector and rural finance is growing

33. As in other countries, commercial banks are by far the most important pillar of the financial sector. Commercial banks accounted for 94% of combined loans outstanding of commercial banks and MFIs (2012). The share of loans to SMEs has remained relatively constant over the past year, in a corridor of 20-23%. In 2012, SME lending grew at nearly the same rate as the overall bank portfolio (12% against 13%). Loans to the agricultural sector (primary production) accounted for 3.5% of total loans outstanding at the end of 2012, up from 2.0% one year before. Interest rates for agricultural loans have been at times higher, at times lower than the average rate. More recently, agricultural loans have benefitted from interest rate subsidies offered by the GoG through its Concessional Loan Programme via Agricultural Project Management Agency (APMA), with agriculture benefiting from about 2 percent points lesser rates on average than average loan interest rates.

34. While there are several MFIs only providing urban consumption credit to wage earners, others have a much wider horizon and serve both urban and rural areas, and a wide range of MSMEs. For example CREDO, the largest MFI, had 30 branch offices well spread over the country (as at end 2012).

35. Several banks and most MFIs operating in rural areas claim not to impose severe collateral requirements, which would impede smallholders or start-ups from borrowing. To the contrary, some of the dynamic banks keen to expand their SME lending do not require hard collateral for small loans up to USD 10,000/20,000, and the same applies to dynamic MFIs, albeit at lower levels (up to USD 5,000 equivalent). Interestingly, these FIs also excel in terms of repayment and have portfolios at risk much below industry averages.

¹⁶ DVV International is the Institute for International Cooperation of the German Adult Education Association a leading professional organisation in Adult Education.

36. Yet many farmers and SME's, especially early adopters, met during the design process who have obtained loans report high interest rates and punitive collateral requirements. So there still appear to be constraints to private investment, which may include:

- (a) Perceived mismatch between risk and returns among some potential investors (farmers, businesses) in early adopter investments, such as in new production technologies (for farmers) or business models, which may have been successful elsewhere but are not yet proven in their local value chains. The natural uncertainty of prospective investors about new investments is aggravated by conservative lending policies which reduce potential returns while increasing the risk of failure (though high cost of finance) as well as increasing the consequences of failure (due to high collateral requirements)
- (b) Affordable finance for "early adopter" investments in agriculture, is still not yet the norm in rural Georgia. While finance from mainstream banks and MFI is increasingly widely offered in rural areas, conservative lending policies for agriculture (demonstrated through high collateral requirements and interest rates) limit the real availability of finance for progressive investments that would help upgrade the target value chains.

New agriculture development strategy and action plans in place

37. The GoG's agricultural policy has four main directions:

- (a) Increase the competitiveness of agricultural production;
- (b) Ensure equitable increases in rural incomes to enable sustainable livelihoods and food security for all income groups;
- (c) Maintain the safety of food supplies to protect the public and to improve access to domestic and international markets;
- (d) Promote environmental sustainability to protect natural resources for the future.

38. Major investment programmes are now underway to rehabilitate irrigation systems, with the GoG aiming to achieve an x8 increase in irrigated land in the coming years to 200,000ha. GoG own investments in irrigation increased to GEL 63 million (USD38 million) in 2013 and has been a priority for new development partner investments, including from the World Bank GILMD project (USD50 million) and the Dutch (USD15 million) as well as IFAD investments under ASP (USD 11 million) and planned under AMMAR (USD 9 million)

39. Other major GoG programmes (all administered by APMA) include:

- (a) Concessional Loan Programme - involves 11 partner banks and provides subsidized loans for farmers and agribusinesses. For small farmers, loans are restricted to small working capital loans (<5000GEL, ~6 months) at zero or very low interest while agribusiness can access larger terms loans at preferential interest rates (up to 100,000 GEL, 7-8% APR of commercial rates of 16-18%). As of Feb 2014 GEL 264 million (USD 150 million) of loans had been advanced by participating banks under the scheme.
- (b) Small farmers support project ("Spring works project") - a three year government initiative to provide subsidized inputs and services (e.g. ploughing) to farmers with <1.25 ha of land. In 2013, 710,000 farmers participated in the scheme at a total cost of GEL 190 million (USD109 million). The planned budget for 2014 support is GEL 90 million (USD51 million).
- (c) Co-investing with Agribusinesses in 40 most disadvantaged districts: a complimentary matching grant scheme for the Concessional Loan Programme. The objective is to co-invest with 50 private firms in agriculture processing and handling business in disadvantaged districts. The total grant budget is USD12 million with average grants expected to be USD240,000. Each business investment is expected to be on average USD600,000 (max USD1,000,000) and will be financed through highly concessional terms - 40% is to be financed by a government grant, 50% financed through a heavily subsidized loan (within nominal interest rates of not more than 14% via the Concessional

Loan programme but with 12% of this paid by the government) and 10% financed by the private investor themselves. As of May 2014, 30 proposal had been accepted at the concept stage and invited to submit full proposals, of these 15 full proposals had been submitted to the grants committee for review and approval/rejection.

40. A summary of the MoA strategic action plan and AMMAR's fit with these priority action areas is presented in Table 6.

Table 6: MoA Strategic Action Plan 2013-15

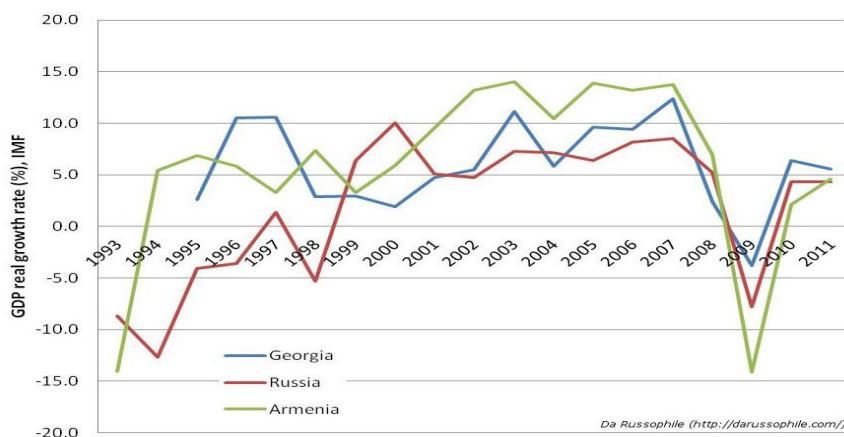
Key:	Actions which AMMAR strongly supports**	Actions which AMMAR partially supports*
Strategy Objective 1: Enhance the Competitiveness of Farmer and Rural Entrepreneurs/ Organisations		
1.1	Develop the agricultural land market	
1.2	Create farm registry	
1.3	Develop specific tools to strengthen the agricultural credit and leasing system**	
1.4	Develop an agriculture insurance market	
1.5	Develop tools to increase international awareness of agricultural investment opportunities*	
1.6	Support the development of farmer cooperatives/associations*	
1.7	Privatise and/or reorganise State enterprises	
Strategy Objective 2: Value Chain Development		
2.1	Define and support agricultural development and investment strategies for each region**	
2.2	Support the further development of geographical indication schemes and Georgian brands*	
2.3	Support the seed certification process	
2.4	Support the development of seed and seedling production**	
2.5	Strengthen the agribusiness post-harvest handling and distribution (cold storage, packing, grading etc.) and processing sectors**	
2.6	Improve access to input supply services**	
2.7	Implement a national agri-food promotions and marketing programme	
2.8	Support an effective market information collection, processing and dissemination among the different stakeholders actively engaged in the agriculture sector	
2.9	Improve access to agriculture machinery*	
Strategy Objective 3: Institutional Development and Training		
3.1	Prepare, implement and monitor a National Programme for Georgian Agriculture 2014-2017 that includes sectoral priorities and activities*	
3.2	Improve the MoA organisational structure, procedures and operation	
3.3	Strengthen the human resource management and training system of the Ministry of Agriculture**	
3.4	Improve farmer knowledge and information and the delivery of effective extension service support**	
3.5	Improve the quality of vocational training (VET) and university education within the agriculture sector	
3.6	Improve IT system and databases in the Ministry	
3.7	Improve the analytical capacity and database management of the relevant Department of the MoA in cooperation with the GeoSTAT*	
3.8	Strengthen coordination between the MoA and the donor community and other stakeholders*	
Strategy Objective 4: Development of Regional and Agricultural Infrastructure		
4.1	Improve agriculture water management**	
4.2	Establish well organized agri-wholesale, retail and farmer markets**	
4.3	Development of measures to encourage non-farm rural enterprise development	
Strategy Objective 5: Food Security		
5.1	Monitoring of food security	
5.2	Assistance to small scale agriculture development**	
Strategy objective 6: Food Safety		
6.1	Implement the approved food safety and phytosanitary system that will be consistent with EU legislation and with consideration of the specific characteristics of the Georgian agricultural market	
6.2	Strengthen laboratorial capacities and validate methodological approaches to the current food safety, animal health and phytosanitary system	
6.3	Increase public awareness on food safety and facilitate the implementation of the food safety standards amongst primary producers and food processors	
6.4	Review and develop border control veterinary and phyto-sanitary inspection points for agriculture import/export monitoring	
6.5	Development of the veterinary sector	
Strategy Objective 7: Environment and Biodiversity		
7.1	Maintain good agricultural practices, biodiversity and environmental sustainability programmes**	
7.2	Gene bank development/management for conservation of agro-diversity and endemic species	

Appendix 2: Poverty, targeting and gender

1. The socio-economic and political development of Georgia after 1990 can be divided into three main periods:

- 1991-1994 – Total political and economic stagnation
- 1995-2003 – Political and economic stabilization
- 2004-present – Economic development

Figure 2: Is Georgia a ‘Miracle Economy’?



(source: Social Impact of Emigration and Rural-Urban Migration in Central & Eastern Europe, April 2012)

Poverty in Georgia

2. Years of crisis and civil war caused the impoverishment of a large section of the Georgian population. Poverty reduction with respect to economic growth is highly elastic. Since 2010, greater social and political stability, along with the resumption of economic growth, have brought about a significant reduction in poverty. However, not nearly enough. Over the last two decades, the profile of the poor has been evolving in Georgia, but the poverty level has remained consistently high (24.7 percent: 30.7 percent in rural areas and 18.4 percent in urban areas). If the official subsistence minimum¹⁷ is taken as the poverty line, slightly more than two-fifths of the population is poor according to the latest estimations. UNICEF (2010) estimates range from 10 percent for extreme poverty to 45 percent if a less conservative poverty threshold is chosen. Arguably, persisting high poverty levels can be explained by jobless economic growth, inappropriate human capital, narrow labor markets and low agricultural productivity. Those who are unable to work (the inactive, elderly or disabled) or do not have work (the unemployed) are much more likely to be *chronically* poor. It is worth noting, that Georgia has put in place an effective social safety net and simulations indicate that social expenditures have a very significant impact on mitigating the incidence of poverty. As part of its poverty reduction and social inclusion efforts, Georgia has put in place since 2005, a targeted social assistance scheme intended for those below the poverty line and marginalised groups.

3. **Inequalities.** Poverty rates differ across regions and population groups. With a Gini Co-efficient of 42 (*World Bank, 2012*), Georgia has the highest ratio of inequality among the former Soviet countries. The 2007 LSMS found that poverty is widespread in Georgia: 23.6% of the total population are poor; the extreme poor – those who are below the lower (or food) poverty line – account for 9.3%. Rural areas continued to record high rates of poverty: 29.7% are poor and 12.4% are extremely poor in comparison to 18.3% are poor and 6.7%, respectively, in urban areas. Nearly 60% of the poor live in rural areas while the share of rural population is 48%. According to the 2007 World Bank LSMS data, poverty rate among female-headed households is 25%, only slightly higher than that among

¹⁷ Average GEL 140 for single member household and GEL 155 for working male

male-headed families (23.1%) although among the extremely poor category, incidence of poverty among female-headed households is higher (11.3%) in comparison to that of male-headed households (8.6%). According to the report commissioned by UNDP in 2013 on the Economic and Social Vulnerability in Georgia, existing evidence suggests that some groups of the population are particularly disadvantaged regarding access to assets and basic services, and have fewer opportunities to engage socially and politically. As a result of the wars in the 1990s in South Ossetia and Abkhazia and the 2008 Georgian-Russian conflict, Georgia currently counts approximately 260,000 IDPs out of a total population of 4.5 million. The most pressing issues are inadequate housing conditions and high levels of unemployment. Employment rates are very low and access to education and health services are constrained by physical barriers, societal attitudes, and financial issues. Around 60% of the population do not have means of private transport. Finally, a large proportion of the high mountain population engages in agricultural activities that are characterized by low productivity, low incomes, and orientation towards self-subsistence. Poorly developed infrastructure hampers access to product markets, health services and education in high mountain areas. Thus, despite recent signs of economic recovery and sustained growth, continued inequality will undermine the impact of this growth.

4. **Regional disparities.** Poverty rates differ depending on sectors and regions and will require context specific interventions to address them. Poverty is particularly pervasive in the northern and north-eastern parts of the country, which are characterized by the mountainous terrains. Harsh terrain, physical isolation, climatic conditions and vicinity to the conflict area make living conditions in these regions extremely hard. However, some parts of the regions have agricultural potential, especially in the southern parts of Shida Kartli and Mtskheta-Mtianeti, which are well connected to Tbilisi, as well as the wine producing areas of western Kakheti. During the course of Project implementation this data will be updated to reflect recent developments in Georgia in terms of regional disparities.

5. **Rural Poverty.** The inadequacy or lack of basic and productive infrastructure, particularly irrigation, limited off-farm opportunities, critical gaps in value chains, reduced human and social capital, and rural-urban migration especially of youth, hindered the development of the agricultural sector. The situation was exacerbated by the land privatization reform (1992-95) that resulted in small plot sizes¹⁸ (approximately 75% of households ended up with less than 1ha of land). Land fragmentation at the background of organizational deficit contributed to the development of subsistence farming¹⁹ and overall decline in agriculture as a profitable business. In 2010, only 28% of household agrarian output was turned into products, and the remaining 72% was consumed by the growers (Archvadze, 2010). Given that primary production and small land plots are not taxed, most of these households do not deal with formalized economic transactions.

6. The decline of agrarian production went hand in hand with the growing incidence of **rural poverty**. More and more households had been falling in poverty in rural, rather than urban areas²⁰ (UNICEF 2012). Despite that overall poverty somehow reduced because of social programs, such as increasing pensions, rural areas remained significantly poorer compared with urban ones. Since 2003, the agricultural economy of Georgia was overshadowed by public investments in other sectors of the economy. Remarkable shift in agrarian policies, renewed investment in irrigation development and increased efficiency of land use and investment and productivity enhancement through secured land rights would contribute to poverty reduction in rural areas.

¹⁸ 690 000 hectares of land were given to 772 000 agricultural & 33 000 urban households, (average 0.89 hectares per household). The land belonging to a household was often composed of 2-3 smaller plots. An inventory in 2004 showed that 43.2% of households owned less than 0.5 hectares, 32% of households owned 0.5- 0.99 hectares, 18.3% of households owned 1-1.99 hectares, 3% of households owned 2-2.99 hectares, and 1.4% of households owned 3-4 hectares (Revishvili 2004).

¹⁹ 82% of households were producing mainly for their own needs and 18% produced mainly for sale (Statistical Yearbook of Georgia, 2005)

²⁰ While 15 per cent of households rose out of relative poverty between 2009 and 2011, 13 per cent became newly poor who are more likely to live in rural areas. Newly poor households are likely to experience new deprivation of other dimensions.

7. **Demographics.** According to the National Office of Statistics, the estimated population in 2013, was 4.5 million (47% male). At present, 53.2% of the total population lives in urban areas (26.1% of the population resides in Tbilisi, the capital and largest city of the country), compared to 46.8% who reside in rural parts of the country (GEOSTAT, 2012). It is estimated that 52% of Georgia's population are female with 45% living in rural areas. Female headed households account for 28% of the population. Georgia, like many other countries, is confronted with an aging population. According to the census of 2002, the average median age of the population currently amounts to more than 37 years of age. The share of people aged 65 or above out of the total population has remained relatively stable since 2005 and amounts to approximately 14.5%. In contrast, the proportion of people aged below 15 has continuously declined from 22.0% in 2000 to 16.5% in 2011, and the share of the working age population (15 to 64) has increased slightly. As a result of these demographic trends, the young age dependency ratio has declined, whereas the old-age dependency ratio has remained at constant levels. Out-migration has contributed to worsening demographic conditions in Georgia. According to the International Office of Migration, 0.6 percent of the population migrated in 2010, of which 57.1 percent was female (IOM, 2012). The feminization of labor migration carries long-term socio-demographic risks, for young children whose mothers leave, mainly in search of employment.

8. **Unemployment.** According to the data of the National Statistics Office of Georgia, the overall unemployment rate as of 2013 stands at 15% and among youth aged between 15-24 years is 35.5%. There is a considerable difference between the rural and urban data. Particularly, the unemployment rate in the rural areas is less than 8%, while in the city it reaches 28%. The real situation is masked by the fact that 64 percent of the employed are self-employed, of which a large share is engaged in subsistence farming; most earning income from agriculture do not perceive themselves as employed. However, high (self-) employment in mainly subsistence agriculture in rural areas does not safeguard from poverty which is also reflected by higher poverty rates in rural areas. Youth unemployment can be explained by low motivation to practice farming and prefer to have salaried jobs. However, employment in rural areas is limited by the underdeveloped rural infrastructure and few off-farm opportunities coupled with the fact, many of the youth, do not have the required skill sets and vocational training to find jobs outside the household.

Table 7: Labor Market (source: Geostat 2013)

1. Distribution of population age of 15 and older by economic status					
	Thousand persons				
	2007	2008	2009	2010	2011
Active population (labour force), total	1965.3	1917.8	1991.8	1944.9	1959.3
Employed	1704.3	1601.9	1656.1	1628.1	1664.2
Hired	625.4	572.4	596.0	618.6	632.0
Self-employed	1078.8	1028.5	1059.0	1007.1	1025.4
Not identified	0.1	1.1	1.2	2.4	6.8
Unemployed	261.0	315.8	335.6	316.9	295.1
Population outside labor force	1138.6	1145.2	1139.3	1083.3	1045.9
Unemployment rate (percentage)	13.3	16.5	16.9	16.3	15.1
Economic activity rate (percentage)	63.3	62.6	63.6	64.2	65.2
Employment rate (percentage)	54.9	52.3	52.9	53.8	55.4

9. Economic growth does not automatically translate into better job opportunities (UNDP, 2011). Based on a national opinion poll in 2012, employment remains the main national issue for Georgians, even before territorial integrity and poverty (Navarro & Woodward, 2010, 2012; CRRRC, 2010). The demographic ageing of the population will put an increasing economic burden on the working population in the future. This process is particularly observable in rural areas where parts of the population, mainly young people, are moving to the cities due to adverse living conditions in the rural areas.

10. Rural incomes grow at much lower rates as compared to urban regions, and there is a continuous increase in urban-rural disparities in terms of poverty (see Table 9 below).

Table 8: Average monthly household income by urban and rural areas (in GEL), 2006-2011

	2006	2007	2008	2009	2010	2011
Urban	386.4	455.1	603.4	651.4	733.8	762.4
Rural	384.2	388.2	477.0	486.9	568.1	649.5
Rural as % of urban	99.4	85.3	79.1	74.7	77.4	85.2

Source: National Statistics Office of Georgia, www.geostat.ge

Note: Average monthly income includes total cash and non-cash inflows.

11. In spite of its relatively low contribution to GDP, agriculture remains Georgia's largest employment sector (51percent of all male employment and 57percent of all female employment) and an integral part of the rural economy. Farm income - including own consumption - is the single most important income source for most rural households. Agricultural production accounts for 45 percent of rural household income²¹, a further 28 percent coming from social payments and pensions and only 27percent from salaried work. Subsistence agriculture accounts for 73 percent of rural employment. The structure of the rural economy and demographics suggest that farming is likely to remain the dominant source of employment and income for the majority of rural citizens in the medium term.

12. **External Migration.** Some researchers (*CRRC, 2007*) have classified Georgia's external migration as occurring in three waves: (i) Collapse and conflict – corresponding to period of 1990-1995; (ii) Economic struggle – 1996 to 2004; and (iii) Hope and economic rebuilding – after 2004. More than one million people born in Georgia or 25% of its recent population (*World Bank, 2011*) live outside of the country; two thirds have settled at the territory of Commonwealth of Independent States of which 60% live in the Russian Federation. Migration from Georgia since the mid-1990s became primarily economically-driven and temporary, and continued at an increasingly brisk pace (*Badurashvili, 2004; CRRC, 2007*). Europe and North America became increasingly popular destination countries for Georgians, although Russia remained to be the primary destination country. Some gender-related preferences for migration to particular countries have been noted and which explains the prevalence of women in migration flows to Greece and Germany (*Lundkvist-Houndoumadi, 2010; Melashvili, 2008*), and higher concentration of Georgian men among migrants to Russia and other countries of CIS-territory (*Badurashvili, 2004; National Statistics Office of Georgia, 2006*). The majority of Georgian migrants are between 20 and 40 years with the share of migrants aged below 30 years who immigrate abroad (40% according to the latest available data (*Badurashvili, 2011*)). Villages where high external migration takes place, will be significantly less able to produce common goods and to engage in agricultural production.

13. Rural households (HH) are highly dependent on subsistence agriculture and remittances. Remittances sent by labor migrants are crucial, as they are the only income source for many families. As such they play a significant role in reducing poverty. The volume of remittances has been increasing every year and amounted to USD 1.268 billion in 2011, up 20.5% from 2010, representing 8.9 percent of GDP (National Bank of Georgia, 2012).

14. **Internal Migration.** Almost 28% of the total Georgian population do not live at their place of birth. The majority of the migrants (92.3%) changed their place of residence inside the country: every fourth person has moved from one settlement to another within the territory of Georgia. The share of internal migrants is higher in the urban population: 32.2% compared to 17.9% in the rural population of country. There were also some flows directed to rural areas in the 1990s, both from urban and other rural settlements, characterized by the large-scale forced migration of native population from the territories of Abkhazia and former Soviet Ossetia due to military conflicts representing 35% of total migrants (*2002 Census*). Migration from rural to urban settlements is most evident in the northern mountain regions of Georgia, where the majority of the population now is elderly. As a result, the share of people living in cities has been increasing constantly.

²¹ This includes 35% in-kind and 10% sales.

Targeting and Inclusive Gender Mainstreaming

15. The primary target groups are smallholder farmers in targeted value chains, while secondary target groups are other value chain actors (agribusinesses, cooperatives, service providers). The precise target groups would be defined by those communities/ farmers that demonstrate agricultural production potential in higher value commodities, are accessible to marketing channels, and show clear interest and commitment.

16. The targeting by AMMAR is provided with a private sector framework. This obviously puts certain limitations on reaching the poorest segments of the rural population. The AMMAR is seeking to assist those parts of the rural population with a productive potential. Nevertheless the touchstone of the AMMAR's **targeting strategy** is inclusivity. Project targeting seeks to combine a demand-driven modality with self-targeting parameters of Project benefits and pro-poor eligibility criteria.

17. Consistent with ASP's targeting strategy, AMMAR will have an element of **geographic** targeting in that, although the Project could cover all regions of Georgia, the prioritisation of investments is expected to identify areas with the highest concentration of poor rural people, and given the value chain focus of the Project with high potential for agricultural development. Geographical targeting criteria will be guided by the double aim of developing ad-hoc CC adaptation options through sustainable agriculture in the selected agro-ecological zones of the country, while strengthening and complementing the on-going IFAD interventions, maximising impact and exploiting synergies. Geographical targeting will take into account: (a) social, poverty and demographic indicators, (b) sites where environmental stressors are more severe and are affecting the ability of the ecosystem, the cropland productivity, and the rural households to be resilient to climate change, and (c) complementarities with on-going and planned IFAD initiatives.

18. As noted above, there are a number of available data sets such as consumption poverty, social assistance registration and nutritional status, which allow identification of rural poverty concentrations and hence investment prioritisation. Project management will throughout its implementation, track and respond to any poverty profiling up-dates such as Georgia Department of Statistics material, World Bank LSMS data and World Vision nutritional and feeding habits assessments and surveys.

19. Project investments are also expected to be **self-targeting**. Their self-targeting character is manifested in: (i) their sector specificity – agriculture or agro-related; (ii) their scale – upper limits for investments making them unlikely to be of interest to richer socio-economic categories and appealing to relatively poor rural women and men; (iii) an equitability criterion for project infrastructure investments in terms of numbers of households benefiting per USD 10 000 of investment; (iv) the requirement of representative beneficiary participation throughout project planning, implementation, monitoring and evaluation; and (v) their modality. This last includes notably: (a) the requirement of backward linkages in terms of value chains of importance to poor primary producers and employment generation among poor rural people, and; (b) the selection of pro-poor PFIs and the requirement that they commit to AMMAR growth and poverty targets and targeting measures.

20. Thirdly, the Project will also use **direct** targeting, i.e. AMMAR resources will be channelled to individuals, households or groups identified according to specific eligibility criteria. Preference will be given to those active farmers owning/operating less than 5 hectare of land.

Gender

21. Women actively participate in agricultural activities, both for crop cultivation and livestock production. For some activities, such as weeding and harvesting of cereals, vegetable cultivation and animal husbandry, women play more important roles than men. When labour is hired at the time of harvesting, it is usually women who would participate. In certain villages, this job was associated with the unfavourable economic status of the households. However, their involvement in physical tasks and handling of machinery, including those related to on-farm water management, is limited.

22. Most villages have a male *rtsmunebuli* (mayor's representative) with a few exceptions. In a few villages, *rtsmunebuli*'s staff included one to two women. As witnessed for the Rural Support Program,

about one third of the participants of the meetings were reportedly women. Discussions with women identified no barriers or pressures for their participation in public meetings. While this may suggest existence of positive environments for women's involvement in public affairs of the village community, it is difficult to assess how unconstrained women's participation and inclusion in public matters is. It was generally observed that villages have a group of 'respected persons', including some females usually with official positions, such as teachers, who would be consulted on public matters.

23. **Women's Rights to Properties.** Under the Constitution, women and men enjoy equal rights with regards to property inheritance. In the event of the death of the owner, the surviving spouse, children and parents inherit on an equal basis. The Civil Code provides for women's rights to own and dispose of property and guarantees that spouses enjoy equal rights to property. Property acquired during the marriage is common property, and its sale requires the consent of both spouses. The USAID country report on property rights argues that despite the legal framework, 'women in Georgia (particularly rural women) lack information about their rights and, as a result, tradition, customary law, and religious law shape attitudes and behavior. Although the law guarantees an equal right to inherit, women and girls are often secondary heirs with few rights' (USAID (2010)).

24. Thus, with regard to gender mainstreaming, the situation in rural Georgia suggests that a particular effort to poor rural women will be required to deliver the type of benefits envisaged under AMMAR. Targeting would give specific consideration to vulnerable women-headed households and youth by mobilizing awareness and support activities for these groups to enable them to take advantage of opportunities provide by the project. The relative age and small landholdings of female heads of farms may indicate, though obviously not necessarily, that in many cases this segment of the project's target group are not particularly interested in moving from a subsistence to commercial orientation and that the principal interest of the project to poor rural women will be in relation to more remunerative employment opportunities in agro-processing where, as noted, they currently provide significant experience and labour both informally or formally. A source of concern is that while 30% of farms are female-headed and rural female-headed households account for 29.3% of total poor, rural female-headed households also account for 34.1% of extreme poor rural households, indicating that access to land is a critical factor and that reaching very poor rural women is likely to be best achieved by greater employment opportunities.

Georgia Village Profile

25. **Villages differ by their size.** Most villages are quite small, 500 residents and less. Some, especially in mountains, are depopulated or are composed mostly from elderly. Villages differ in their ability to cooperate according to their size. Big villages are more inclined to conflicts and less optimistic about efficiency of self-governance, if introduced. Smaller units consider it easier to achieve agreement and to produce common action. Poverty is more concentrated in small villages, but the smallest ones are more prone to depopulation because of infrastructure limitations. Medium size villages are more likely to have good social capital and resources for social cohesion and agricultural development.

26. **Villagers may be sub-divided into middle and lower classes, with the middle class comprising a minority.** Most of smallholders, cultivating land, are not farmers, rather, they may be called *glekhebi* (peasants). In many (if not all) villages there is only tiny minority of households that may be considered as economic units with the sustainable interest in farming development. Only such households possess some resources (monetary, material, and human), which they may invest in further market-driven growth. Such farmers may be much more active in the project, individually or cooperating with each other. Others, *glekhebi*, the poorest strata of villagers, are likely to be passive, distrusting and/or unable to get same advantages as others. Selling land plots and falling in poverty are closely linked to each other: the poorest are more often among landless households.

Local Government Structure and Village Leadership and Governance

27. Each municipality has a legislative body (*Sakrebulo*) and an executive body (*Gamgeoba*). *Sakrebulo* members are elected for a term of four years. *Sakrebulo* members consist of those elected

on majoritarian and proportional bases. In the majoritarian system, each electoral district chooses a member (*deputat*). The seats reserved for the proportional system are distributed to political parties. *Sakrebulo* selects Mayor (*Gamgebeli*) who is the head of *Gamgeoba*.

28. The aforementioned electoral districts of the municipal *Sakrebulo* would coincide with administrative and social units which are called 'territorial organs' or *temi*²². This used to be a self-governing unit, which was also called *sakrebulo*, with its own council of elected members. A territorial organ would comprise one to several villages, depending on the population and the area. *Gamgebeli* appoints a representative (*rtsmunebuli*) at each territorial organ. *Rtsmunebuli* is a full-time position and is assisted by a few staff. Usually there is an office building for *rtsmunebuli* and his/her staff. *Rtsmunebulis* are the formal leaders in charge of all public matters within the jurisdiction, and the first point of contacts for external parties, including UASCG representatives.

29. The local self-governance reform of 1997-1998 years established representative bodies on the level of community (composed of one big village or several smaller villages). Villages are usually subdivided into parts, called *ubani*. These self-governments worked until 2005, but could not institutionalize effectively. They had very limited resources, property and responsibilities. As part of the reforms of 2005, it was decided to abandon small ineffective units and replace them with bigger ones. 64 self-governing municipalities were created from more than 1,000 self-governing units. In this process of enlargement, villages no longer governed themselves and lost their legal status and property. Practice of 2006-2013 years demonstrated that the distance between municipality and local population was too big to provide for good governance. Resources of municipalities were spent mostly in central town and neighboring villages, hardly reaching other territory of the municipality. Participation of village population in decision-making was extremely low. According to the new arrangement, adopted recently, the size of municipalities is expected to decrease; municipalities may gradually dissolve in smaller units, governing in a more democratic way. After 2014 local elections, they will also get more say in land management and privatization. With these reforms, villages are also expected to have elected head, statute of public law body and some common property. Creation of village/community based participatory decision-making instrument is on the agenda of Parliament for the next year.

30. Apart from farmers, there are **respected persons who have authority and therefore more influence (informal) on village social life**. This socio-political strata is referred to by a variety of terms (village intelligentsia, *aqsaqal* in Azeri villages, persons of position, NGO activists, etc.). Having an official position is not a precondition for being included in this elite. In the opinion of village dwellers, education and integrity is more important than wealth and position for becoming respected and acquiring authority. Their opinion is asked on issues of village development, political decisions, conflict resolution among families, etc.

Local Institutions and Mechanisms of Cooperation

31. **Almost no meso- level organizations exist that may help to link these small units to market economy**. In parallel with the land privatization, the dissolution of *kolkhozes* and *sovkhozes* left villagers atomized, unable to aggregate their limited resources into scale enterprises. At the first stage of the reform, the *kolkhozes* were still maintained. However, because of debt and the absence of state subsidies, they were soon (in 2-5 years) broken up. As *kolkhoz* served not only as an economic unit, but also as tool of social integration and governance, directing most of formal institutional grassroots communication, villagers were left mostly connected with the informal norms and institutions.

32. The important feature of smallholder's activities is that their **vast majority operates within informal economy and they have no skills and intention to deal with formalized transactions**. They do not pay any taxes as far as they are not obliged to do so. In order for the *glekhebi* to benefit from investments, they would need a system, which would not require formalization such as primary

²² This used to be a self-governing unit, which was also called *sakrebulo*, with its own council of elected members.

production where they would earn a cash income while branding, marketing and packing is left to intermediary actors. Upper strata farmers are more likely to cooperate with each other, rather than with *glekhebi*.

33. **There are no formal collective decision-making instruments on a village/community level.** Labour exchanges among relatives and neighbours are common in all the villages. Such arrangements are particularly important at the time of harvesting. Arrangements are reciprocal, and no payment is involved (the recipient family would serve meals).

34. Despite the absence of formal organization, **villages are united by a dense network of informal norms, networks and traditional rituals.** Each village has one or many places for communication – so called *birja*, where information exchange and communication is ongoing. Villagers extensively exchange any kind of news, from family events to political debates. They help each other with harvesting, construction and other problems on a reciprocal basis. They collect money for those in need, for funerals, play lotteries, help each other in labor migration, sharing experience, etc. Interactions among women are common, but within the boundaries of neighbours and friends and limited to visits and social exchanges. Churches serve as an important forum of social interactions. Some forms of cooperation are relatively stable and continue from Soviet past –such as collective pasturing or leasing machinery. Others are relatively new, scarce and less stable – such as economic cooperation, when several households merge their resources to produce something for sale. Sometimes villagers cooperate well in their *ubani*, but do not have much common activities with others.

35. The main obstacle towards cooperation is that there are no instruments to penalise “*free riders*” In the absence of such instruments, given extreme poverty of some households, cases of free riding are very frequent. As a result many villages have a long history of cooperation attempts that started but failed. The inability of enforcement just means that only ad-hoc cooperation happens. Organizations are needed to make patterns of cooperation durable, and free- riding less frequent. Furthermore, inequalities and emigration also contribute to lack of cooperation.

36. **There is some experience of promotion of CBOs and of collective decision-making.** Some successful examples have been recorded in association with a Government programme, the Rural Support Programme, under the Ministry of Regional Development and Infrastructure which provides a small block grant annually to all villages in the country²³. They could decide on how to spend the money, however, this has to be publicly discussed and agreed upon, according to the requirements. Some village meetings which attracted about 100 participants, included 20-30 women. In some cases, the population were not very active in attending such meetings and decisions were made by the local authorities but this depended on the village. In other cases, villages had very strong opinions regarding their choice. Many demands relate to social, rather than economic necessities but in the last years, more decisions were made in favor of agricultural objects, such as tertiary irrigation, mini-tractors, etc.

Participatory Irrigation Management

37. Village discussions suggested that Water User Associations if established and managed as the former Amelioration Associations (AAs) were, would have a very small chance of success and sustainability. AAs in the villages visited were not perceived as those entities which the water users owned and controlled. It appears that to them the AAs were ‘service providers’, which failed to provide expected services, most important of which was to provide water.

²³ The size of the grant depends on the population and the area of the village. In the two villages where this programme was discussed the amount received was about GEL 27,000 for the 2013 allocation. The programme has been implemented since 2009. The budget increased from GEL20 million in 2009 to GEL50 million in 2012, according to an MOA officer who used to work for the programme. Some minor irrigation rehabilitations at the village level could be also financed under the programme. Both villages decided to use the money for the rehabilitation of cultural houses of the village.

38. The current modality of service provision to the water users by the UASCG (signing contracts with and collecting fees from individual farmers) is possible because the number of water users is small. And after a long period of irrigation disservice due to the deterioration of the structures, villagers are aware that, unless rehabilitation of physical structures takes place, their expectations for better access to irrigation will never be met. In this context, their interest in institutional arrangements for irrigation management appears secondary.

39. Lacking experience in active involvement in irrigation management at the community level and with very negative perceptions about the past AAs, approach to participatory irrigation management at the community level would need to be carefully designed. Village discussions revealed certain evidence of farmers' willingness to make collective efforts and contributions (in kind or cash) for rehabilitation of village level structures. Although such examples may be limited and sporadic, these seem to suggest that such initiatives are possible where the scale of work is within their capacity (financially and technically) and clear and direct benefits are anticipated. The current village governance structure could serve as a basis for public awareness building, discussions and participatory decision makings within the village community although certain measures to ensure inclusiveness, especially that of the poor members of the community and women, would be needed. In this regard, AMMAR will involve the communities in the public discussions on the rehabilitation of lower level structures (tertiary) from the very beginning to identify which works could be rehabilitated with farmers' participation to strongly institute the sense of ownership, as well as to discuss and agree on their roles and responsibilities for future operation and maintenance. The project will support community mobilization and capacity building as an integral part of strengthening the community level irrigation management alongside with the efforts being made by the World Bank's GILMD project. This support would ensure the participation and inclusion of women, especially female heads of the households, and the poorer members of the community.

40. The ongoing Rural Support Programme by the Ministry of Regional Development and Infrastructure may provide some useful lessons on collective decision makings on public investment at the village level. Lessons learnt from this programme would be studied and analyzed in order to identify a suitable model for community participation in irrigation structure rehabilitation at the village level.

IFAD's targeting policy - checklist for design

Updated June 2014

	DESIGN
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	The productive poor, the food-insecure and those at risk of losing their livelihoods due to lack of irrigation, access to market and climate change are primary target group.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences?	Appendix 2 sets out an analysis, which differentiates the intervention strategies for gender and youth.
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups?	During the Project design process, several meetings were organized with the target sub-groups to discuss the main elements of the Project. Also, during Project implementation, several validation workshops will be organized to validate the Project interventions with beneficiaries.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, <i>involving some or all of the following measures and methods:</i>	

	DESIGN
<i>4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or programmes, geographic areas (and within these, communities) with high concentrations of poor people</i>	The AMMAR will have an element of geographic targeting. Although the Project will cover the central and eastern regions of Georgia, the prioritisation of investments is expected to identify areas with the highest concentration of poor rural people, given the value chain focus of the Project, combined with agricultural potential.
<i>4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households</i>	The Project will also use direct targeting, i.e. AMMAR resources will be channelled to individuals, households or groups identified according to specific eligibility criteria. Preference will be given to those owning/operating less than 5 hectare of land.
<i>4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups</i>	Project investments are also expected to be self-targeting, which is manifested in: (i) sector specificity – agriculture or agro-related; (ii) scale – upper limits for investments making them unlikely to be of interest to richer socio-economic categories and appealing to relatively poor rural women and men; (iii) modality. This last includes notably: (a) the requirement of backward linkages in terms of value chains of importance to poor primary, and; (b) the selection of pro-poor PFI and the requirement that they commit to AMMAR growth and poverty targets and targeting measures; (iv) an equitability criterion for Project infrastructure investments in terms of numbers of households benefiting per USD 10 000 of investment; and (v) the requirement of representative beneficiary participation throughout Project planning, implementation, monitoring and evaluation.
<i>4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organisational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power</i>	Inclusive market development is at the core of the project approach, working with primary and secondary actors to tackle critical constraints along the value chains - from raising the competitiveness of primary production through to collection, processing and marketing.
<i>4.5 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building</i>	There are operational measures mentioned in Appendix 6 that describes the knowledge product that the project will produce and share with different partner and stakeholder to raise their awareness on poverty issues and create dialogue on the best practices to target the poor in Project areas.
<i>4.6 Attention to procedural measures - that could militate against participation by the intended target groups</i>	The Project will pay special attention to the procedural measures of targeting to move towards active participation of women and youth. Community mobilization meetings, validation workshops and stakeholders meeting will be organized to ensure a comprehensive coverage for the intended target groups.
<i>4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers</i>	Appendix 5 sets out Institutional aspects and implementation arrangements, which describes the procedures intended to target the poor.

DESIGN	
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	Yes to all.

IFAD's key features of gender-sensitive design and implementation

Updated June 2014

Design	
1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women's participation.	For AMMAR, a brief gender analysis was carried out and enclosed as Appendix 2. During the Start-up Workshop, and as part of the effort to elaborate the PIM for the Project Component, Appendix 2 will be detailed with specific data.
2. The project design report articulates – or the project implements – actions with aim to:	AMMAR will support women to access productive assets through the provision of matching grants that will enable project's beneficiaries to invest in climate proofed innovative activities.
<ul style="list-style-type: none"> Expand women's economic empowerment through access to and control over productive and household assets; 	The Project will take concrete measures, including community mobilization of women, to ensure that women are represented in value chain assessment and development activities.
<ul style="list-style-type: none"> Strengthen women's decision-making role in the household and community, and their representation in membership and leadership of local institutions; 	Not Applicable.
<ul style="list-style-type: none"> Achieve a reduced workload and an equitable workload balance between women and men. 	Gender perspective is mentioned in the targeting section.
3. The project design report includes one paragraph in the targeting section that explains what the project will deliver from a gender perspective.	Appendix 2 does this.
4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant project components.	
5. The design document describes - and the project implements - operational measures to ensure gender-equitable participation in, and benefit from, project activities. These will generally include:	
5.1 Allocating adequate human and financial resources to implement the gender strategy	There are provisions for a disaggregated data by gender in the M&E. Moreover, the Project Manager M&E and KM Manager Specialist will allocate adequate time to implement the gender strategy.
5.2 Ensuring and supporting women's active participation in project-related activities, decision-making bodies and committees, including setting specific targets for participation	All of these measures are included in AMMAR, and detailed guidelines for a Gender Strategy for will be developed during the Startup Workshop.
5.3 Ensuring that project/programme management arrangements (composition of the Project Implementation Unit/programme coordination unit, project terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns	Adequate attention will be put to tackle women's empowerment concerns and gender equality.

	Design
5.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited	Efforts will be made in areas that have low participation/ turn-out rates in consultations, to understand the reasons and encourage greater participation. This could include separate sessions for women, given the tendency for women not to speak up in the presence of men.
5.5 Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue	The Project will ensure that gender and women empowerment concerns are voiced out during the donor coordination meetings. Moreover, the Project will seek partnership with other donor/partner institutions such as the EU, USAID and the World Bank to elaborate and synchronize the appropriate measure of intervention to address gender issues in Georgia.
6. The project's logical framework, M&E, MIS and learning systems specify in design – and project M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.	The logframe contains gender disaggregated indicators. Also, gender disaggregated data will be collected for M&E and RIMS and other studies and surveys.

Appendix 3: Country performance and lessons learned

1. IFAD's collaboration with Georgia dates back to 1997. The COSOP (2004-9) aimed at improving the productive capacity of the rural poor, enhancing their access to markets and conserving of natural resources. It addresses IFAD's strategic objectives of strengthening the capacity of the rural poor, improving their equitable access to productive natural resources, markets and financial assets. While the specific underlying information and data may be partly out-dated, these objectives, as confirmed by recent IFAD missions, are still relevant and perfectly consistent with the current Strategic Framework of IFAD and fully in line with the Government's ten-year Strategy of Agriculture Development (SADG).
2. Since 1997, IFAD has invested a total of US\$ 38 million in financing four projects with a total outreach of approximately 21,000 households. This has generated co-financing of circa US\$ 47 million from the Government, World Bank, Participating Financial institutions and Beneficiaries.
3. The mainstay activity of IFAD programs has been to support the rehabilitation of market-driven infrastructure which directly benefits smallholder farmers. The Agricultural Development Project (ADP), co-financed with IDA, was completed in June 2005. The ADP provided the legal framework for the emergence of private land markets and the establishment of credit unions. However, early success of the credit unions as a vehicle for rural credit was short lived due to the low performance in repayments, savings' generation and long-term viability. The Rural Development Programme for Mountainous and Highland Areas (RDPMHA) aimed at assisting populations in mountainous and highland areas improving their quality of life in a sustainable manner by increasing incomes while protecting the natural resource base and the environment. The programme experienced significant implementation problems, including a loan suspension in August 2006 due to irregular financial reporting. The suspension was lifted at the end of 2007 and the programme was reformulated in 2008. The RDPMHA focused on small scale rural infrastructure and was completed in 2011 reporting moderately satisfactory achievements. The Rural Development Project (RDP), co-financed with IDA completed in 2012 and was rated satisfactory with respect to rural finance, food safety and institutional support.
4. The Agricultural Support Project (ASP) is currently the only on-going project in IFAD portfolio. It became effective in July 2010 under IFAD direct supervision and is due to be completed in September 2014. The Project's objectives are: (i) to increase assets and incomes of poor rural women and men with potential to evolve towards commercial agriculture and associated rural enterprises; and (ii) to remove infrastructural bottlenecks which inhibit participation of economically active rural poor in the rural economy. The ASP has been implemented in an evolving policy context as explained in this report. Typical of such situations, there has been a gap between the change in policy orientations and their translation into actual solutions on the ground. This was manifest in a number of stop and go decisions, trial and error process in establishing the related implementation and management structures characterised, all resulting in delays in decision making and implementation progress. Despite these initial setbacks, progress in implementation has been noted by the IFAD follow up missions in March, June and November 2012, and lately in January 2013. A number of remedial actions were put in place and the project is now on a sound platform to enable smooth implementation performance and for achieving project objectives.
5. Key lessons have been learnt over the past years and these have also been recently documented in the Project Performance Assessments (December 2013) conducted by IFAD's Independent Office of Evaluation. These lessons have been considered in shaping the AMMAR design (*see summary table below*).

Key Lessons Learnt (include the IFAD IOE assessment of RDP and RDPMHA/ Dec 2013)	Lessons Adopted in AMMAR Design
<p>In future operations, IFAD should consolidate the progress made in rural financial services by previous IFAD's projects, and ensure the MFIs continue lending to small rural entrepreneurs in practical and efficient ways. MFIs still need capacity-building support to cater to the needs of farmers in remote areas, and also the growing businesses of on-farm and off-farm enterprises.</p>	<p>This approach is included in the AMMAR design. Technical Assistance and capacity-building support will be provided to MFIs in enable them to better target smallholders.</p>
<p>Future rural finance policy dialogue and interventions should consider enhancing support for financing supply chain development and other off-farm production and services, such as storage, packing, transportation, trading, branding and marketing, which hold high potential to generate employment and income for poor households. The rural credit scheme could also be developed to complement the credit line launched by the Government.</p>	<p>The AMMAR project will complement the Concessional Loan Program initiated by the GoG, as well as will ensure the link between value chain development and credit schemes in the project target areas.</p>
<p>A specific package could be offered to small farmers owning less than one hectare of land. This service would tackle the high interest rate problem, which is basically stunting the growth opportunities of small farmers.</p>	<p>The credit line scheme will be complemented by a matching grants scheme that will be tailored to smallholders, who are willing to improve their productivity and resilience to climate change.</p>
<p>Enhance marketing and value chain interventions. Future IFAD operations need to emphasize the importance of marketing and value chain development to rural poverty reduction in Georgia. The Georgia market is relatively narrow considering there is limited entry to Russian and EU markets. On top of that, Georgian farmers are largely isolated in their neighbourhood markets, as they lack market access and market information. In this regard, future interventions should include a wide range of activities, such as: capacity-building in marketing, cold chain development, value chain development, market information, and technology transfer for micro, small and medium enterprises. These activities will increase opportunities to benefit from upgraded farming and exploring new markets.</p>	<p>AMMAR's component on value chain development will cover most of the issue related to value chain development in the project target area.</p>
<p>Continue strengthening food safety institutions in terms of equipment provision and staff capacity-building. In this respect, cooperation with international partners could complement IFAD's relatively thin experience and lack of knowledge of this area. Particular attention should be given to regional or district level food safety branches. These services should be market-oriented or export-oriented, which means the services will enhance the market competitiveness of Georgian agricultural products, either in domestic or foreign markets.</p>	<p>Currently the EU, within the framework of the European Neighbourhood Policy activities, is planning to strengthen Georgia's food safety institutions. The AMMAR project will closely coordinate with the EU in this regard.</p>
<p>Emphasizing Government ownership and leadership. All components and especially institutional changes must be relevant to Government strategy and have strong Government ownership. Project management arrangements should be through a semi-autonomous unit of the Ministry of Agriculture, with employment conditions that attract and retain competent staff. A binding exit strategy has to be put in place in advance for maintenance.</p>	<p>These lessons are built into AMMAR's design to ensure better government ownership, competent management unit and the existence of a valid and timely exist strategy.</p>
<p>Keeping project design simple and realistic. Project design must be simple, realistic and fit local management capacities. The component mix should, to a large degree, be based on a needs-based assessment exercise with intended beneficiaries. A baseline survey, structured M&E and an impact analysis must be included and implemented as main project activities and supervised as such.</p>	<p>The AMMAR project relies on a set of simple bur robust interventions aimed at increasing the productivity and income of smallholders</p>

Key Lessons Learnt (include the IFAD IOE assessment of RDP and RDPMHA/ Dec 2013)	Lessons Adopted in AMMAR Design
Promote marketing associations and value chain connections with smallholder farmers. Any promotional interventions would have to be market-led and based on realistic business planning. Technical assistance support in value chain development, to identify markets and assist in regulatory issues, branding, packaging and quality control, is needed.	The AMMAR Project contributes to the GoG and the EU ongoing efforts in establishing of market oriented cooperatives and associations that can support smallholder farmers to improve their access to the local and international market.
Strengthen district extension and on-farm trial services, and provide quality training for extension staff. Particular consideration should be given to promoting crop improvement packages based on improved seeds and plant nutrition through fertilizer supply and plant sprays where necessary; improving land cultivation and soil management; and, testing and promoting improved forage systems to increase milk and meat productivity.	In cooperation with the EU, the project envisages to provide support to the Agricultural Cooperative Development Agency in areas related to extension development. Also the project will organize demo-farms to present new agricultural practices to the farmers.
Improvement of basic infrastructure to improve general accessibility and community access to social services and local markets.	These lessons are built into AMMAR's design as a separate component.
Weak public institutional capacities have been a constraint to project implementation effectiveness. The new Government plans a radical makeover of the support to the agricultural sector and will need a lot of support to improve institutional capacity.	As IFAD cannot engage in such a vast agenda alone, it will require a great deal of consultation and dialogue with all stakeholders, specially the EU and the World Bank.
Weak monitoring and evaluation (M&E) arrangements and previous projects lacked a well-functioning M&E system, hindering the timely response to taking corrective actions and the proper documentation of impact results.	This weakness is already being addressed under the on-going ASP and will serve as a ground for sound M&E system for AMMAR projects.

Appendix 4: Detailed project description

Development objective and impact indicators

1. The Project Goal is *"to sustainably increase incomes and reduce poverty for women and men in rural Georgia"*.
2. The Project Development Objective is *"to stimulate investment in climate smart agricultural value chains to increase incomes and strengthen resilience of small farmers"*
3. Key performance indicators for the project will be:
 - (a) 20% increase in real net household farm incomes for more than 10,000 households in target value chains,
 - (b) 20% increase in total value of surplus agricultural production of targeted products sold by participating producers, traders and agribusinesses (relative to reference market prices),
 - (c) 50% of trained smallholder producers adopting one or more Climate Smart GAPs or technologies promoted by the project, such as efficient irrigation technologies.

(Data to be disaggregated by gender, social group, age, district and value chain)

Outcomes

4. Project outcomes are cross-cutting and achieved through the contribution of activities under both Component 1 and 2 and are:

Outcome	Indicators
Outcome 1: Rural population agricultural livelihoods improved and their resilience to climate-change enhanced	<ul style="list-style-type: none"> ▪ At least 4750 farmers have improved soil conditions and/or water availability ▪ Diversification of farming systems is increased by at least 3000 farmers, with 20% increase over baseline in farmers practicing appropriate crop rotation, inter-cropping or similar soil/nutrition enhancement systems
Outcome 2: Inclusive climate smart VC are expanded providing improved market opportunities for small farmers and producers	<ul style="list-style-type: none"> ▪ Private investment in inclusive VC exceeds additional USD 9 million for farmers, agribusinesses and service providers ▪ Increased lending volumes from partner FIs to producers and agribusinesses active in target value chains ▪ The volume of improved services and inputs from private service providers used by farmers in target VC clusters increases by 20% over current levels

Components

5. The project will be organized into two closely related components which are described below.

Component 1: Irrigation and Agricultural Value Chain Investment

6. This Component is intended to support "hard" investments by private and public sector to upgrade the priority value chains and associated infrastructure. Specific investment priorities under Sub-components 1.1 and 1.2 will be determined for each value chain area²⁴ through the multi-

²⁴ One or more physical locations that have (or have the potential to develop over the short/medium term) sufficient combined scale (in terms of volume/quality/timing of production) to attract sufficient numbers of buyers to regularly source product from the area. To be attractive to buyers, there needs to be sufficient density of production within a connected area to make it economically attractive for buyers to operate regularly in that area (to reduce their transaction costs in terms of money and time). A single VC cluster area does not necessarily need to be a contiguous physical area, but can include several different physical areas that are reasonably well connected by roads such that buyers/traders can move efficiently between them. The scale required should ideally be sufficient to support multiple buyers in order to create

stakeholder process under Component 2 or other participatory mechanisms. Priorities will be periodically updated as emerging issues and opportunities are identified through the ongoing multi-stakeholder processes in each of the value chains as they develop.

7. In addition to providing direct financial support for investments, through irrigation and value chain infrastructure (Sub-component 1.1) or financial incentives for private investment via matching grants (Sub-component 1.2).

Sub-component 1.1: Irrigation and value chain infrastructure

Overview

8. The project will invest in demand-driven irrigation and value chain infrastructure in target value chain cluster²⁵ areas. Investments are expected to primarily include rehabilitation of irrigation (limited secondary²⁶ and tertiary) and a number of value chain-related infrastructure requiring public investment (such as certified testing laboratories, rentable wholesale storage facilities etc.). The sub-component is expected to rehabilitate irrigations schemes serving at least 4750 ha of land and up to 10 value chain infrastructure investments.

9. Moreover, the sub-component will award competitive grants for investments in public (for common use) infrastructure that would enable and enhance private sector investments and activities in target value chain areas. It would not be a stand-alone component from which any public infrastructure investment could be financed.

10. The identification of investments would be undertaken in a participatory and demand-driven manner through the multi-stakeholder process run under Component 2 and ensure that they meet the specified selection criteria.

11. All investments under this sub-component must have clear benefits to a wider group of value chain actors, with an equitable distribution of expected benefits and be investments which are not likely to be 100% financed through private investment (for example due to less attractive financial returns). As a result of investments, disadvantaged communities would be provided with opportunities for improved livelihoods and economic growth. All the investment proposals would have to demonstrate the financial viability of the proposed venture, especially concerning operation and maintenance, and its capacity to increase economic opportunities.

12. Investment priorities for schemes and works to be supported will be determined for each of the value chains and cluster areas to tackle specific value chain constraints prioritized in the value chain strategy and action plan developed via the multi-stakeholder process in each value chain (Component 2). AMMAR will not work in areas requiring investment by AMMAR in drainage.

Implementation of sub-component

13. Management of the sub-component implementation would be carried out through RADF, currently responsible for implementation of the on-going ASP, in accordance with the procedures described in the Project Implementation Manual. The main focus of the expertise that would be required for the sub-component implementation would be screening and analysis of applications for financing, procurement and supervision of works including development of engineering designs.

genuine competition among the buyers in order to increase market efficiency. However, in the early stages of the VC cluster development, the scale may only be sufficient for producers to work with one or two main buyers in their areas, while production volumes are increasing. It goes without saying that VC cluster areas also need to have confirmed interest from sufficient numbers of producers and a comparative advantage for competitive small scale production of the specific product. Implementation details will be elaborated in the PIM.

²⁵ Value chain cluster areas, for the purpose of AMMAR, are defined as physical zones that encompass a sufficient concentration of existing or potential primary production for the agricultural commodity to sustainably attract competing buyers, agricultural service providers and input suppliers to operate in the cluster area.

²⁶ Limited rehabilitation works on critical secondary irrigation canals (up to USD 200 per hectare) aim to ensure reliable water management and to enhance UASCG operation and maintenance capacity

RADF will include one Senior Engineer and one Engineer who will take the lead responsibility for the sub-component managements.

14. In terms of the sub-component investment the RADF would have the following main tasks:
 - (a) To review and rank investment proposals in accordance with the guidelines and mechanisms described;
 - (b) To develop short-list of proposals from the highest ranked proposals eligible for investment under the sub-component;
 - (c) To develop Terms of References for development of engineering designs for selected infrastructure rehabilitation and subsequently monitor them;
 - (d) To carry out procurement of goods, works and services;
 - (e) To monitor and carry out supervision of civil works implementation of investment projects by contractors; and
 - (f) To conduct Impact Assessment of irrigation investments under the sub-component.
15. A Selection Committee (SC) would be established for the purpose of approval of the long list and the short list of investment proposals. Composition of the Selection Committee would be established by MOA with the prior approval of the Fund.
16. The number of the grants for each year would depend on the size of each investment and budget allocation for particular year. RADF staff responsible for AMMAR implementation, and short-term consultants (if required) would review and evaluate applications (technical feasibility, financial and economic viability) and provide recommendation to the Selection Committee for approval of investment proposals.
17. The RADF would have the main responsibility for procurement of services and works under the sub-component. Procurement of services and works would be carried out in accordance with the IFAD Procurement Guidelines, and Sample Bidding Documents and procedures developed under the ASP. Procurement of services for feasibility studies and engineering designs, and civil works, including bid announcement, evaluation, contract award and management would be carried out by the RADF on a centralized manner.
18. The overall responsibility for supervision of design services and civil works would be carried out by RADF Engineers and on site daily supervisors as per the procedures developed under the ongoing ASP. The on-site daily supervisors would be responsible for quantity and quality of works and materials used. RADF Engineers would regularly visit sites during implementation of construction works and be responsible for monitoring and maintaining quantity and quality of implemented works.

Scheme identification and selection

19. Request for funding from infrastructure grants (VC based approach) would come from communities based on thorough consultation with farmers' interest groups, formal producers' associations, other associations, village authorities and local entrepreneurs/businesses through the multi-stakeholder process. The application would be done in writing and should consist of required information and data for decision making.
20. The main *criteria for competitive grant award for all infrastructure would be:*
Ranking criteria
 - (a) expected total incremental annual income to farmers in target value chains per USD10,000 of investment
 - (b) inclusive distribution of benefits among farmers, e.g. in the form of actual water supply to fields, consistent with AMMAR priorities of equitable benefits to active farmers who are poor or near poor.

Minimum mandatory requirements

Pre-qualification criteria

- (a) verified direct link to target value chains, demonstrated through the endorsement of the wide group of stakeholders engaged in the multi-stakeholder process (for VC based approach); sound and credible operation and maintenance arrangements elaborated, including O&M financing plan;
- (b) equity contribution by applicants of at least 5 percent of the total investment cost;

Additional minimum mandatory criteria

- (a) investment which generate a public good;
- (b) technical feasibility;
- (c) financial viability (rate of return higher than the opportunity cost of capital); consistency with nationally applicable regulations on environmental impact.

21. The process for identification and selection of infrastructure schemes for investment is summarized below.

Detailed Selection Procedures

22. The decision-making (selection) procedure to be followed for the award of competitive grants is guided by the principles of transparency, demand-driven allocation, production efficiency, market linkage, and cost sharing. Sub-component implementation would be based on a set of criteria that would ensure that the Project resources reach the intended target groups. The specific steps each application will have to go through, in chronological order are described below.

23. All applications would go through two step selection process of: (i) screening, pre-qualification and initial ranking; and (ii) qualification.

(i) Screening, Pre-qualification and Initial Ranking

24. For pre-qualification, applications would be required to be compliant with three compulsory "pre-qualification criteria" outlined above, namely:

- (a) verified direct link to target value chains, demonstrated through the endorsement of the wide group of stakeholders engaged in the multi-stakeholder process (for VC based approach) sound and credible operation and maintenance arrangements elaborated, endorsed by the responsible institution
- (b) equity contribution by applicants of at least 5% in cash of the total cost of the investment from their own resources;

25. For irrigation works, the endorsement would be subsequently formalized in a letter stating the commitment to transfer the assets to the relevant institution's balance sheet and to make yearly provisions for maintenance. Tertiary level irrigation investment proposals have to be compliant with additional criterion of having the main and/or secondary canal system rehabilitated (under the ASP, World Bank funded GILMDP or UASCG) and fully operational with sufficient amount of available water (or reasonably expected to be so by the time of completion of the proposed AMMAR-funded works).

26. Any proposal which did not satisfy these criteria would be rejected.

(ii) Qualification

27. After the pre-qualification stage, a team of RADF relevant staff would review the actual situation in the field conditions. Field verification would be carried out on the state of infrastructure, linkage with commodity/value chain, fit with the joint action plan developed during the multi-stakeholder process, potential for enhancing a particular market linkage, feasibility of proposed works, maintenance arrangements and other relevant items. The link between the proposed investment, the expected benefits and the commercial justification would be researched and confirmed.

28. RADF team will then assess if the proposal fulfills the full set of "*minimum mandatory requirements*", as outlined in para 20 above. For proposals meeting the requirements, a brief assessment report would then be submitted to the Selection Committee. Those proposals not meeting the minimum requirements would be rejected.

29. Proposal assessed as meeting the "*minimum mandatory requirements*" would then be scored by the Selection Committee against the "*ranking criteria*" using an Objective Ranking table to be developed in the PIM. Those proposals scored highest would be ranked highest. Proposals would then be approved for funding in order according to their rank up to the limit of the funds available in the given round of grants. Proposals that meet the minimum requirements but are not funded due to budget constraints in the given grant round may be reconsidered in subsequent infrastructure grant rounds and rescored/ranked along with all other eligible proposals in that round using the above process.

30. After approval by the SC a request for review and no-objection for each proposal would be sent to IFAD prior to final decision.

Landscape restoration

31. Landscape restoration (LR) activities should be included within grants linked to the supported infrastructure schemes where such restoration is beneficial in reducing the risk of erosion jeopardizing the proper functioning of the supported irrigation schemes and the protection of agricultural land in the target VC cluster areas. An assessment of the need for landscape restoration activities as well as design of suitable activities will be included in the feasibility assessment of all irrigation schemes to be supported.

32. Landscape restoration will be financed through the GEF grant and may, for example, include the use vegetative cover along irrigation canals and river banks. For this purpose the project will adopt a landscape restoration (LR) approach to assess climate risks, including erosion, in each cluster area, identifying vulnerable sites and supporting ecological restoration measures to restore them. The project will promote participation of the affected farming community in the restoration actions, to increase farmers' understanding, buy-in and commitment to maintain the restored land and will actively seek the involvement of local farmers' organizations or informal groups where they exist.

Value chain infrastructure - additional considerations.

33. Value chain infrastructure proposals for investment may come from any source, but all must be endorsed prior to implementation by the wider group of value chain actors through the multi-stakeholder processes (Component 2). Appropriate cost sharing (in cash or kind) with value chain actors should be encouraged wherever possible, and will in all cases be a minimum of 5% from the private sector. The level of cost sharing should be appropriate to the relative balance of public good vs private benefit from the investment. This means, for example, that in cases where the investment is made on a PPP basis with one private partner gaining commercial benefits as well as generating a public good, it is expected that the private partner would finance a larger share of the costs with the appropriate level of cost sharing to be approved by the Selection Committee but not less than 5% in all cases.

34. Each value chain infrastructure investment must have its own business case and associated business plan - even where it will be operated on a not-for-profit basis. These must have clearly defined objectives, costs and timeline that can be reviewed by the RADF team and also shared with value chain stakeholders (allowing for sensitive treatment of any commercially confidential information).

35. The vast majority of investment is expected to be on physical infrastructure and facilities. However, in exceptional cases, where a binding constraint to value chain development is identified related to a "public good" in the value chain then such investment may also be supported under the sub-component. Examples may include, among others; development of a common industry quality

standard; support to the costs of training and certification of a testing laboratory, or; support to the negotiation of an export market access protocol that facilitates greater competitiveness.

Environmental Risks

36. Given the small scale and rehabilitative nature of the interventions, no significant negative environmental impacts are expected from the sub-investment. The main foreseeable environmental concerns are the ones associated with the management and disposal of excavated materials and construction debris. However, all approved proposals/designs that are to be implemented through the AMMAR would be required to meet requirements of the environmental legislation of Georgia.

Operation and maintenance

37. Sound operation and maintenance (O&M) frameworks (including financial arrangements) will be a mandatory pre-requisite before implementation of any infrastructure works begins on the ground. Under the component, the project will invest in establishment and/or strengthening of credible water O&M arrangements as part of its irrigation investments. Initially, it is expected that the UASCG will be responsible for all aspects of the operation and maintenance of supported schemes from primary through to tertiary, to the point of delivery of water to the "field gate", as mandated by Government decree in 2012²⁷. Water users' willingness to pay and sign contracts with UASCG for water supply will be a key criteria in prioritizing schemes to be supported.

38. However, to respond to concerns about the longer term viability of existing approaches to O&M management, the recently approved WB financed project will support the preparation of a National Irrigation and Drainage Strategy which will primarily define the Government's long term vision for: regulation and monitoring of irrigation water delivery including environment monitoring; institutional arrangements for on-farm and off-farm irrigation and drainage services; water pricing and cost recovery; as well as rehabilitation and modernization. The GILMD has set out a structured approach to institutional strengthening both for, the UASCG and water users themselves. It will support a phased transition to improved arrangements for on-farm irrigation service delivery involving greater water user participation. The AMMAR project will build on the improved arrangements for O&M management, learning from the experience under the forthcoming GILMD project. Specifically, during the first two years, the project will design and test improved arrangements for O&M management of the supported irrigation schemes.

Scheduling, allocation and disbursements

39. It is expected that RADF would start reviewing the first batch of applications for funding from the sub-component after seven-eight months of operation. This will follow other project activities including the identification of value chains to be supported under the AMMAR and conducting the first stages of the multi-stakeholder process in target locations through which the infrastructure demands will be identified. It is expected that the first disbursement of the fund can be made after some eleven-twelve months after starting the Project implementation.

40. The budget requirements in the first year would be contingent to the time required for preparation of infrastructure investments. The main indicative budget allocations would be in the second, third and fourth years. It is estimated that some 50% of total funds would be disbursed in the first and second years (25% in each) and about 40% in the third year. The remaining 10% would be expected to be disbursed during the fourth year. This progression of financing is reflected in the detailed cost tables.

41. No fixed pre-allocation of funds per Project area, region or district would be undertaken for infrastructure investments. The award of competitive contributory grants would be on a voluntary, demand-driven basis for eligible investment proposals. Proposals targeting to an individual

²⁷ The UASCG was assigned the full responsibility of irrigation and drainage operation activities (Government decree N 672, dated 12 April, 2012).

businesses without a clear public good would not be considered as eligible under the sub-component (although may be eligible under the Matching Grants scheme for private investment - Sub-comp 1.2).

Impact monitoring for sub-component

42. With specific reference to sub-component, data on the actual benefits after the completion of the infrastructure works as compared to the estimated and presumed benefits would be studied to enrich the decision-making (selection) process in subsequent years. The re-assessment of the benefit streams and of thus of the IRR calculation carried out at the selection stage for the economic infrastructure investments would be carried out regularly after completion, based on actual feedback from the field.

43. An evaluation of the quality of completed works and of the effectiveness of operational and maintenance arrangements would be carried out by the RADF relevant staff on all completed investments upon issuance of a Final Completion Certificate. Periodic follow up in subsequent years would be carried out on a sample of investments (at least 20% of total) covering all types of financed infrastructure.

44. The RADF Engineers will also maintain an updated database of unit costs for all completed infrastructure investments, in order to support future cost estimates. The type of information that would be collated would include:

- Technical data on implementation of infrastructure works, including an updated database of unit costs;
- Socio-economic data on the impact that the new infrastructure has had on the livelihoods and incomes of the beneficiaries;
- Cost-benefit analysis on whether the commercial performance of producers justified the investment costs (for economic infrastructure investments);
- A review of the efficiency of the selection process; and
- In case of unsatisfactory performance an evaluation of the elements in the process would be made to ascertain where the problems arose.

45. M&E reports would be part of the progress and annual reports to be submitted to the Government and IFAD. AMMAR would be assisted by the IFAD supervision to develop indicators, measure the indicators and analyse conclusions to ensure proper phasing, balance among the components and efficient use of Project resources.

46. Besides the relevant Result and Impact Management System (RIMS) indicators, some additional indicators that may be used to assess, on a yearly basis, the progress and the specific impact of the subcomponent are listed below. The assessments may be carried out through short surveys, focus group or structured interviews, complemented by data maintained by the RADF.

- Number of direct and indirect beneficiaries (disaggregated by gender/municipality);
- cost of infrastructure construction vs. preliminary estimation (by type);
- beneficiary contribution (by type/municipality);
- number of benefitting SME and micro-enterprises (by municipality);
- number of functioning infrastructure after three years (by type/municipality);
- actual IRR vs. originally estimated for investments (by type/municipality).

Sub-component 1.2: Facilitating private investment in agricultural value chains

47. The project will stimulate private investment by small farmers and producers and agribusinesses to upgrade priority value chains through a coordinated use of matching grants for innovative "early adopter" investments combined with partnerships with mainstream financial institutions (FIs) to expand lending to agriculture for follow-on and replication investments.

48. The sub-component specifically seeks to address the dual constraints to private investment of:
- (a) Perceived mismatch between risk and returns among some potential investors (farmers, businesses) in early adopter investments, such as in new production technologies (for farmers) or business models, which may have been successful elsewhere but are not yet proven in their local value chains. The natural uncertainty of prospective investors about new investments is aggravated by conservative lending policies which reduce potential returns while increasing the risk of failure (though high cost of finance) as well as increasing the consequences of failure (due to high collateral requirements)
 - (b) Affordable finance for "early adopter" investments in agriculture, is still not yet the norm in rural Georgia. While finance from mainstream banks and MFI is increasingly widely offered in rural areas, conservative lending policies for agriculture (demonstrated through high collateral requirements and interest rates) limit the real availability of finance for progressive investments that would help upgrade the target value chains.
49. By offering matching grants to incentivize early adopter investments, AMMAR will help to demonstrate profitable investment opportunities within the target value chains that can then be replicated and scaled-up by other farmers and businesses with greater confidence and a better understanding of likely risks and returns. In parallel, partnerships with the banks and MFI can deepen the understanding of their credit officers, managers and credit systems in assessing the real risks and lending opportunities to different types of investment in the priority value chains so that they can profitably increase lending for such investments.

Matching Grants for Value Chain Upgrading

50. Matching grants will be used to incentivise "early adopter" private investments that tackle identified value chain constraints and/or demonstrate replicable innovations aligned to each value chain strategy and joint action plan developed through the multi-stakeholder processes in each value chain (Comp 2).
51. The sub-component budget is USD16.8 million, within which USD6.1 million of matching grants is expected to leverage USD9.2 million of private investment from farmers and businesses.
52. Matching grants will be made for "early adopter" and/or innovation investment in business (e.g. processing, storage, marketing), primary production by small farmers and producers or critical agricultural services. In line with IFAD recommended practice (IFAD, 2012), grants will only be made to early adopter and innovative investments that would also be profitable if financed through mainstream credit sources, but where investments has not yet been forthcoming under current market conditions. In the current Georgian rural context, the near complete absence of functional farmers' groups and extremely limited coverage of farmers' cooperatives and associations (estimated to cover <5% of farmers) means that in order to achieve the desired demonstration effects on small farmers and producers production from the matching grant, the grants need to be made to individual small farmers and producers rather than via groups.
53. Innovation investments are those that are being implemented for the first time in the local area or value chain - be it the first few farmers in a village to introduce improved orchard management practices including efficient irrigation and soil management technologies as part of an orchard upgrading investment or an exporter investing in upgrading a pack house, grading station, treatment facility and cold store to international export standards to access non-traditional high value export markets. Private investment in landscape restoration on-farm or near the farm will also be treated as innovations under the grant scheme.
54. Grants should not displace mainstream commercial finance but rather address the risk "gap" associated with early adopter investments in the current financial market conditions. As such, individual grants should only be of a size sufficient to support the *minimum* commercially viable investment that also addresses the identified constraint and/or demonstrates the particular innovation. In assessing the required size of the grant, particular attention must be given to the sequencing of

investments to improve cash flow and limit initial investment capital required, for example by avoiding early construction of excessively large or expensive buildings and facilities that may not be needed by the business for the first 2 or 3 years but only for later expansion.

55. The **main principles** of the matching grants comprise:

- Matching of costs and risk commensurate with the respective risk bearing and leverage capacity of farmers and agribusinesses;
- Facilitating access to credit for those who do not have sufficient capital for their matching contribution;
- Accurate record keeping of the results, costs, inputs and outputs, and the technical and organizational viability of the investments made;
- Analysis of data and experiences made and their presentation to stakeholders, other interested farmers, and the financial sector.

56. In addition, for small farmer and producer grants:

- Learning about relevant techniques, tools, instruments and implements during the demonstrations, training sessions and implementation process arranged for under the project;
- Application of the new techniques etc. in a mutual learning context among peers, technically supported by experts, advisors and extension agents, and financially supported through MGs;

Grant operations

57. One matching grant fund will be established with two windows:

- Window 1: Small farmer and producer grants (for primary production related investments for Climate Smart Agriculture)
- Window 2: Agribusiness grants (for non-primary production related investments)

58. For both grant windows:

- (a) grants will be targeted towards private investment in *innovation* and/or *early adopter* investment in targeted value chains.
- (b) the types of investment to be prioritized for support should be endorsed through the multi-stakeholder process by the wider network of primary VC actors (i.e. producers, producer groups and agribusinesses) in the VC cluster as being a priority for grant-supported investment to address recognized bottlenecks and VC constraints.
- (c) proposal will be sourced through periodic public calls for proposals and by invitation from the project or referral from project partners at any time (e.g. banks, MFIs). These will be in rounds each targeting specific value chains.
- (d) grants must form part of a sound overall investment plan for the concerned business or farm and grant disbursement will be subject to financing being secured for the overall investment plan (not just the elements financed by the grant).
- (e) only private entities (businesses, co-operatives, registered producer groups, individuals) are eligible to receive matching grants. State-owned companies, agencies and similar entities are not eligible for grants.

59. The proposed sizes and percentage share of the matching grants available as well as the form of eligible beneficiary contribution under each Window are summarized below. These may be adjusted, subject to GoG and IFAD approval, from time to time based on the growing experience of the project on what is necessary and appropriate to achieve the project objectives.

60. The main characteristics of each Window are summarized below:

Window 1: Climate Smart Primary Production (incl. private investment in landscape restoration)

- (a) Eligible investments: farm investment plans related to climate smart primary production, landscape restoration and initial farm-level post-harvest management in target value chain cluster areas. Examples include: introduction of efficient irrigation technologies (drip irrigation) or greenhouses.
- (b) Eligible grantees and criteria:
 - (i) individual small farmers with not more than 10 ha total land-holding of which a maximum of 4 ha of irrigated land. (Landholding may be owned or rented).
 - (ii) cooperatives, associations and legally registered farmer groups, where more than 70% of the expected benefits from the investment flow to small farmers and producers meeting criteria (i).
 - (iii) the project will aim to have at least 30% of grants going to women applicants
- (c) Number of grants expected: 1000 grants (or equivalent in co-operative/association grants)
- (d) Grant size:
 - (i) Individual small farmers and producers: max= USD1,500
 - (ii) Cooperatives & associations: max= USD 15,000
with maximum per benefiting member not to exceed limit for individual farmers.
- (e) Max % grant: 40% of investment plan value (excluding working capital)
- (f) Eligible costs for grant financing: equipment for improved irrigation and soil management technologies; landscape restoration costs.
- (g) Grantee contribution may be cash (including loan funds) or in-kind. Grantee contribution from own funds (not including loans) must be at least 20% of total investment costs.

Window 2: Value chain development (excl. primary production)

- (a) Eligible investments: private investment to tackle identified value chain constraints and/or demonstrate replicable innovations not related to primary production aligned to each value chain strategy and action plan developed jointly with the value chain stakeholders. Examples include: improved storage, handling, processing, treatment and marketing.
- (b) Eligibility grantee and criteria:
 - (i) Agribusinesses, registered cooperatives and associations
 - (ii) at least 2 years operation as a legally registered entity by the grant applicant or majority shareholders/members
 - (iii) verifiable evidence of profitable business record
- (c) relevant agri-business experience of management team as assessed by RADF Number of grants expected: 37 grants
- (d) Grant size: average = USD75,000, max.= USD100,000
- (e) Max % grant: 40% of total investment (to harmonize with GoG scheme)
- (f) Eligible costs: all reasonable costs of investment plan except working capital
- (g) Grantee contribution must be cash (including loan funds). Grantee contribution from own funds (not including loans) must be at least 20% of total investment costs. Contribution of existing assets (e.g. building, vehicles, materials, stock) is not eligible as grantee contribution.

Applicant mobilization and support

61. Mobilizing good quality applicants among small farmers and producers and agribusinesses is vital for the success of the grant scheme. The multi-stakeholder processes of value chain facilitation

will be central to this and will be initiated in advance of any grant awards. The MSP in each VC cluster area will identify the main bottlenecks to the value chain's development as well as specific opportunities for catalytic private investment that should be prioritized for matching grant support. These priorities will then be part of the priorities adopted for the first round call for expressions of interest (EOI) from potential grantees. During the MSP, awareness among small farmers and producers and agribusiness of investment opportunities for upgrading their farms and businesses will be facilitated through awareness visits to more progressive farms and businesses already applying improved technologies and business models.

62. Small farmers and producers who then submit a simple expression of interest for a matching grant for investment in improved CSA production will be invited to attend practical field training session on the relevant CSA technologies (Comp 2.). Part of this training will include the preparation of simple farm investment plans for adapting the improved technologies onto their own farm. These individual farm investment plans will then form the basis for the submission of the full grant application under Window 1. At the end of the training, each farmer's capacity to implement their investment plan will be assessed by the trainers. Priority for grant approval will then be given to those farmers that have completed the training and were assessed as having the higher chance of successfully implementing their farm investment plan.

63. Agribusiness, co-operative and associations that submit an expression of interest under Window 2 will be initially screened for eligibility and fit with the identified priorities from the MSPs. Those confirmed as eligible and fitting with the MSP priorities will be able to request, if they wish, advisory support from the project to strengthen and refine their main investment plans. Such advisory support will be either provided directly by the project agribusiness specialists or by externally contracted business advisory services providers paid for on a cost sharing basis between the project and investor on a ratio of 40:60.

64. These support arrangements shall be strictly on a demand basis and attuned to the expressed needs of target groups. For the purpose of business plans, the project will establish a list of tried and tested persons and institutions offering their support in this domain, from which eligible beneficiaries will be able to select their preferred consultant. Project staff shall assist eligible investors during the preparation or implementation process with names of qualified consultants only upon request; the principle responsibility of selecting the right expert lies with the investor. To the contrary, training of beneficiaries in domains desired by target groups shall be arranged for by project staff in locations suitable for beneficiaries. The basic rule pertaining to the latter is that beneficiaries cover their own transport and accommodation costs, unless the duration exceeds three days; in such cases, the above specified cost sharing formula applies.

Grant operations - roles and responsibilities

65. Implementation with the above activities shall be vested with a number of different instances and actors as follows:

- (a) All activities related to application receipt and selection of grant recipients, contract arrangements, their post-disbursement monitoring and supervision of compliance, plus impact monitoring and reporting, shall be vested with the a sub-contracted grant administrator. This relates to process steps 4, 6, 7, 10 and 13 in the table below.
- (b) Activities related to the promotion of the scheme, technical screening and approval of draft grant agreements with beneficiaries shall be vested with the RADF which has substantial IFAD Project Management experience. This relates to process steps 1, 5 and 9 in the table below.
- (c) Briefing to interested applications on scheme and preliminary advice and technical advice to applicants in preparation of application and post-grant implementation shall be vested with the RADF working with local technical service providers and the MoA District Offices. These shall also be involved with the promotion of the scheme along with partner banks and MFIs. These process steps concerned are 1, 2, 3 and 12 in the table below.

- (d) Specific responsibilities related to supporting agribusinesses under Window 2 fall onto the dedicated value chain/agribusiness support staff under the RADF as indicated in steps 1, 2, 3, 5, 10 and 12 in the table below.
- (e) Consultants and other technical service providers shall be engaged in the preparation of business plans and the provision of specific technical assistance to agribusinesses as shown in processes 3 and 12 in the table below.
- (f) Partner FIs shall be involved in the promotion of the scheme through their branch and head office staff and compliance checks, as indicated in steps 1, 6 and 9 in the table below, plus of course in the disbursement and recovery of loans granted to their clients and grant recipients.
- (g) Finally, a Grant committee established shall be responsible for the approval of all grants.

Table 9: Grant operations - roles and responsibilities

Process step	Window 1: Climate Smart Primary Production (Small farmer/producer grants)	Window 2: Value Chain Development - (agribusinesses & cooperatives grants)
1. Promotion of grant scheme (word of mouth, advertising, other projects/partners, events and meetings)	Coordinated by RADF VC team with local technical service provider MoA District Offices Also via Partner banks / MFI via client base	Coordinated by RADF via: RADF Value chain team MoA District Offices Local technical service providers Also via: Partner banks / MFI Regional Development Agencies (where they are operating)
2. Briefing to interested applicants on scheme and preliminary advice	RADF VC team With MoA District Offices and Local Service Provider	RADF VC team With MoA District Offices
3. Technical advice to applicants in preparation of application / farm investment plan	Local technical service provider as part of farmer training course. Additional backstopping to farmers from MOA District Offices.	Consultants to support business plan preparation if requested. RADF Value chain team (limited)
4. Application receipt, checking of eligibility and completeness of applications (desk based)	Grant Administrator Application to include bank reference confirming account details and identity	Grant Administrator (APMA) Expected to be online submission with standard review by grant officers using same procedures as GoG scheme
5. Technical screening & review of feasibility incl. field verification (technical and financial) and fit with project priorities	Grant Administrator Using Guidelines on evaluating typical farm investment plans from VC team	RADF Value chain team
6. Compliance check (business and fiduciary aspects)	Grant Administrator	Grant Administrator (APMA) (with partner bank/MFI if applicant is taking loan from partner bank/MFI)
7. Submission to Grant Committee	Grant Administrator	Grant Administrator (APMA)
8. Grant decision	Grant Committee	Grant Committee (same committee as for GoG scheme)
9. Loan application review and approval (if part of investment plan)	Bank/MFI own processes of loan appraisal (no project involvement)	Bank/MFI own processes of loan appraisal (no project involvement)

Process step	Window 1: Climate Smart Primary Production (Small farmer/producer grants)	Window 2: Value Chain Development - (agribusinesses & cooperatives grants)
10. Contracting and agreement of milestones /disbursement schedule	Grant Administrator With technical input from RADF on milestones	Grant Administrator (APMA) With input from ARDF VC team on milestones, disbursement schedule and special conditions
11. Disbursement	ARDF	ARDF
12. Coordination of technical support to grantee during grant implementation	Local technical service providers MOA District Offices assisting	ARDF Value chain team Consultant contracted on cost sharing basis
13. Grant monitoring, and reporting	Grant Administrator Bank / MFI own monitoring and management of loans (where loan taken)	Grant Administrator (APMA) Bank / MFI own monitoring and management of loans (where loan taken)

66. Discussions have been held between design missions and the Agricultural Projects Management Agency (APMA), a special unit established as a parastatal under company law by the MOA to manage projects related to the ministry and agricultural development, as well as subsidy programmes of the MOA. The possible agreements with MOA on behalf of APMA envisages:

- (a) APMA to assume the role and responsibility of grant administrator as outlined in the table above.
- (b) APMA will receive a compensation with the amount to be confirmed for its services over the five years of project implementation.

67. Final negotiations of the above will be concluded by MOA and APMA, within the budget allocations outlined the attached cost tables. Payment of the grant administration fee to the grant administrator shall be paid based on actual value of grants disbursed.

68. Under the sub-component all sub-contracted services will be procured in accordance with financial management and procurement regulations pertaining to this programme.

Partnerships for deepening agricultural value chain finance

69. Increasing availability and use of credit from mainstream financial institutions (banks and MFIs) is essential for the expansion of private investment and growth of the value chains and scaling of impacts. At the same time, it is also recognized that availability of credit by itself is not always sufficient to catalyze investment as the mitigation of major external production risks, such as floods or draughts, as well as other major risks (e.g. market) play an important role in mobilizing agribusiness investment as well as farmers' investment in their own farms (Karlan, et al., 2012). Hence the project will also support stronger linkages within the value chains (through the MSP) and investment in key infrastructure constraints to complement the activities to promote private investment.

70. To help increase the availability and use of mainstream finance by small farmers and producers and agribusinesses, the Project can develop partnerships and collaborations with established financial service providers for credit and financial services. The project will not contribute capital for lending or risk sharing through these partnership. Rather, the partnerships are expected to have direct benefits to the project supported farmers and agribusinesses as well as to the banks and MFIs themselves and will cover several aspects, including:

Credit facilitation for small farmers and producers

71. Georgian small farmers and producers typically have very limited experience of investing in their own farm businesses, which impacts on their propensity to actually do so. As a consequence, it will not suffice to offer co-financing through matching grants to ensure that the envisaged investments actually take place. Rather, some additional arrangements with financial institutions (FIs) are to be made.

72. The project can establish a list of financial institutions interested in collaboration with AMMAR and willing to appraise loan requests from eligible grant beneficiaries, plus the respective terms and conditions for loans and names of contact persons in the nearby branches or agencies. This list shall be made accessible to small farmers and producers participating in the MSPs and technical training, with a clear responsibility of investors to convince a FI to provide them with a loan. It should be noted that FIs are to conduct their loan appraisal solely along their own terms and conditions, and with their own, full responsibility, and that neither the project staff nor consultants shall interfere in any way into the autonomy of FIs.

73. In addition, farmers who want to make their own investment in priority VC (i.e. without project grant support) who approach the project and local service providers for technical advice (for example through technical training, consultancy, farmer field days or ad-hoc discussions) will also be referred to local branches of the partner banks/MFI, as above, even if they do not receive a matching grant

Participation of FIs in MSPs in each value chain

74. Partner FIs' staff from local branches and head office, will be invited to fully participate in the MSPs in each value chain as key service providers to the farmers and businesses. This participation is both intended to help farmers and businesses better understand the perspectives and interests of the FIs in providing credit and other financial services and the products and services available. At the same time, the FI staff should gain a far deeper understanding of the issues and opportunities within the concerned value chain as well as being able to promote their service to potential clients.

Networking with progressive small farmers and producers and agribusiness

75. FIs, especially at the local level in Georgia, often have relatively strong networks among more progressive farmers and agribusiness - typically those that are already looking to invest and may therefore be good candidates for making early adopter/innovative investments. AMMAR will therefore leverage these networks to increase the participation of these more progressive farmers and business in the MSPs in each value chain.

76. Similarly, partner banks and MFIs can introduce their own clients who are interested in or could benefit from project activities / support in the target value chains. For example, this may include introduction of business clients known to be looking to strengthen their supplier network who want to be introduced to additional groups of farmers being supported by the project.

Component 2: Climate smart agriculture and value chain development

77. This component will set the priorities and coordination of all activities within the project and guide the direction of all other activities. Notably, the selection of infrastructure schemes to be supported and priorities for matching grants under Component 1 will be determined on the basis of the value chain upgrading strategies and joint action plans that are outputs from the multi-stakeholder process under Component 2.

78. AMMAR, and this Component, will support up to six priority climate smart value chains and address critical constraints for example, in marketing, processing, storage, post-harvest, primary production or the provision of key services to producers and agri-businesses.

79. Priority value chains will be selected and intervention initiated in two batches in order to facilitate a rapid project start-up while allowing time to build the capacity of the project implementation teams and refine the project processes. The first batch of 2-4 value chains will be identified and interventions started in Project Year 1 (PY1). The second batch identification and interventions will begin once satisfactory progress is made on the first batch, expected to begin in PY2.

80. The component objectives will be achieved through stimulating complementary private investment along the value chain (with financial investment support under Component 1) to accelerate systemic changes to upgrade each value chain that cannot be easily achieved by ad-hoc individual private investments. The objective is to *increase the aggregate value* created within each value chain as the basis for increased profits for farmers and agri-businesses alike and thereby create the

incentives for wider replication and "crowding-in". The objective is *not just to redistribute* existing margins among different actors.

81. The component will therefore focus on the following areas to tackle perceived risks and stimulate private investment:

- (a) Value chain screening and prioritization will be among the very first activity initiated under the project. In coordination with the smallholder producers, the process will be led by the RADF value chain staff in collaboration with MoA Policy Group (responsible for MoA strategic action plan), prospective partner FIs and other key stakeholders. The process should take not more than 4 months in total to identify the first batch of 2-4 priority value chains and will involve direct discussions with value chain actors and technical experts (e.g. on climate smart production opportunities) as well as desk research, market and data analysis. The second batch of priority value chains will be identified once satisfactory implementation progress has been made in the initial batch of value chains.

82. Value chain screening and prioritization criteria will focus on assessing:

- (a) Credible market opportunities, with confirmed interest and demand from buyers/agri-businesses to collaborate with the project on VC upgrading.
- (b) Competitiveness potential against market requirements (including basic benchmarking against main competitors).
- (c) Potential scale and coverage, including identification of viable production clusters with interested farmers as initial VC upgrading entry points.
- (d) Main constraints in the value chain and production clusters and feasibility/cost of addressing these.
- (e) Indicative typical ROI (return on investment) for farmers and agribusinesses.
- (f) Identification of local production constraints especially those affected by climate change, in interested production clusters and feasibility to address these constraints (either through the project's instruments or external means).

83. A key output from the screening and prioritization process will be a provisional roadmap and upgrading strategy for each of the selected value chains. This should include a tentative results chain²⁸ for the overall value chain upgrading to demonstrate how the project interventions can credibly lead to systemic changes and improvements in the value chains selected as well as making explicit any critical risks or assumptions. The provision upgrading strategy and roadmap will be further refined and validated through the multi-stakeholder process in each value chain.

84. Multi-Stakeholder Processes of value chain facilitation for development of each VC cluster area will begin informally through the value chain screening exercise and then continue through the duration of the project, with an initial more intensive process over the 1-2 years. The multi-stakeholder process (MSP) for each VC serves several critical purposes:

- (a) oversee delivery of a joint action plan developed with the main VC stakeholders in each cluster (producer, agri-businesses and service providers), the project and other development partners.
- (b) identify specific bottlenecks in the VC that can be tackled with the support of the project - through matching grants to stimulate private investment on critical issue and/or investment in public good infrastructure.
- (c) to facilitate meetings between groups of buyers/agribusinesses and farmers/producer and other service providers (banks, nurseries, input suppliers, service centres, technical production consultancy providers etc.) to deepen mutual understanding and identify win-win opportunities for greater collaboration.

²⁸ For practical advice on the use of result chains see DCED (2013) Guidelines to the DCED Standard for Results Measurement: Articulating the Results Chain downloadable at <http://www.enterprise-development.org/page/download?id=1833>

- (d) identification of main bottlenecks and development of cluster upgrading road-map and immediate priorities - including who will do what and who will pay for what.
- (e) VC actors (via MSP strategy and action plan) set priority areas for project support - e.g. main "types" of post-harvest/marketing investments to be prioritized for matching grant/TA support, critical public and market infrastructure for project investment, types of technical support needed (Note that VC actors do not identify individual beneficiary businesses/farmers but the "types" of investments that should be prioritized for support).

85. MSP facilitation will be one of the key responsibilities of the ARDF Value Chain team. They will be supported by the MOA District Staff in each VC cluster area. International technical assistance will be provided to the ARDF VC team for a total of approximately 10 months over the first 2 years of the project to build their capacity in VC facilitation.

86. Local service providers in each cluster area will be encouraged to actively participate in the initial intensive stages of the MSP in each value chain, to better understand the needs of the farmers and agribusiness as well as raise awareness among farmers and agribusiness of the services and opportunities available. Through this process the project team will also identify interested local service providers to act as potential partners in the project implementation - especially for activities on Climate Smart GAP and technology transfer (see below). Where private service providers are interested to invest to improve or expand their service delivery, they will be eligible to apply for matching grants under the standard procedures of Window 1 (Comp 1.2).

87. Agricultural input suppliers, whether for fertiliser, chemicals, seeds or seedlings, are a vital part of any value chain. In AMMAR they will be actively engaged in the MSPs in each value chain in their area. Through this pro-active engagement of local input suppliers it is expected that some of them, such as the more advanced tree nursery businesses met by the design mission, are likely to be interested in working with AMMAR in the role of Local Service Providers, to establish technology plots and delivery training to farmers on climate smart agriculture as they see the long term benefit to their business of a growing and vibrant sector. In other cases, input suppliers may be more reactive, and through participating in the MSP seeing opportunities through to begin selling new products and equipment, such as micro sprinklers or drip irrigation systems, for which there is a growing demand generated by the AMMAR's promotion activities. For these input suppliers, AMMAR will be able to help connect them to suitable wholesale suppliers, as well as providing technical advice to input suppliers on how the various technologies should be used by farmers - advice which they can pass on to their customer.

88. Climate Smart GAP and technology transfer and training for farmers in target value chain clusters is expected to be a critical element for sustainably raising primary productivity and, hence, the competitiveness of most of the prioritized value chains and farmers' incomes. To be effective, the training must be practical and respond to explicit farmer demand.

89. To ensure that technology promotion and farmer training is explicitly demand-driven, the project will apply the following approach:

- (a) production technology options that are developed and promoted in each VC will be based on the priorities for production improvement that are identified through the MSP.
- (b) CSA technology plots will be located in communities in VC cluster who have expressed a firm interest through the MSP in upgrading their production and will be open to visits from anyone interested in the promoted production technologies.
- (c) training to farmers will be delivered to farmers based on the explicit demand for training / consultancy from farmers in VC cluster areas, in the first instance especially to farmers that have given an Expression of Interest to invest in the production technologies.
- (d) no training allowances will be paid to farmers (though food/refreshments may be provided for longer duration sessions).

90. The climate smart GAPs and improved production technologies promoted will be aimed at the level of the "practical optimum" improvements for farmers to gain a rapid increase in income given their starting point in terms of knowledge and resources. The principle underpinning this is to focus on the few (e.g.3-5) key changes in the production system that will give the biggest and quickest return for a given level of investment (similar to the Pareto principle - sometimes called the 80:20 rule). This is specifically intended to increase the likelihood of farmers adopting the promoted technologies themselves. The project will avoid promotion of theoretically ideal production technologies and systems aimed at delivering the theoretical maximum but which may have less likelihood of widespread adoption.

91. It is expected that for most (but not all) targeted VC products that technologies to be promoted will focus on financially profitable and climate smart GAPs in the main thematic areas of:

- (a) improved water management and efficient water usage;
- (b) improved soil and nutrition management including conservation agriculture techniques such as crop rotation and intercropping methods, soil fertility management, crop residue and mulch management, zero tillage, selection of suitable varieties, and integrated pest management;
- (c) landscape restoration on the farm and nearby areas.

92. The approach to technology transfer and promotion will be through a combination of practical CSA technology plots, promotion events, short and longer duration practical field training (for example through a series of half day practical field training session at critical points in the production cycle) and systematic follow-up with farmers.

93. Farming as a business - the practice of farmers managing their farm as a household enterprise that invests and adapts its production to target identified market demands to increase returns - is still the exception rather than the norm in much of Georgian agricultural. Yet, it is an essential part of a vibrant agricultural sector and so the project will foster these practices among farmers in targeted value chains through the inclusion of training and advice to farmers on key skills necessary to shift from a traditional supply-driven production mindset to one of farming as a business.

94. Technology promotion will be fully integrated with the promotion of matching grants and links to partner banks and MFIs under Component 1 to enable farmers to invest in adopting the promoted technologies and improved production systems on their own farms.

95. CSA technology plots will be set-up by local service providers, ideally on the farms of interested progressive small farmers and producers in VC cluster areas. CSA technology plots act as a focal point to:

- (a) visibly show the benefits of the promoted technology options and production systems;
- (b) conduct practical farmer training;
- (c) provide advice to interested farmers on:
 - (i) the available matching grants schemes under the project and other sources of finance, such as partner FIs, including contact details and how to apply;
 - (ii) where to obtain additional technical advice/consultancy from local service providers to enable them to adopt the technologies;
 - (iii) where to buy the necessary equipment and inputs;
 - (iv) on the pros and cons of the technologies and how to adopt them on a farmer-to-farmer basis (from the progressive farmer on whose farm the technology plot is located).

96. RADF experts will play a key role in this, including:

- (a) identifying the set to 3-5 critical changes/production improvements most relevant to small farmers and producers in each targeted value chain;
- (b) developing specific training packages and materials on these critical production improvements for each targeted product including design of CSA technology plots;
- (c) conducting training of trainers (ToT) and periodic coaching/follow-up with local service providers that will be directly supporting farmers under the project;
- (d) supervising the delivery of training, operation of CSA technology plots and other technology promotion and transfer activities under the component;
- (e) provide technical backstopping to local service providers on the promoted technologies.

97. Targeting of training will be inclusive, in that all interested farmers in a VC cluster area will be eligible to attend training, subject to available places. However, priority for 80% of training places on each course will be given to farmers that also meet the criteria for being eligible for matching grants (i.e. not more than 10ha total land holding of which not more than 4ha of irrigated land). Within this, priority will be given to women and to younger farmers (taken to be under 40 years old) and the project will aim to achieve participation of 30% and 60% respectively. The balance of the 20% of places is expected to be made available normally on a "first come, first served basis".

98. The first round of training in a VC cluster area is expected to lead to a several farmers investing immediately in the promoted technologies and demonstrating the benefits and viability to other farmers. Consequently, during the first round of training in each VC cluster area, priority for training will be to farmers that have already given an Expression of Interest to invest in adopting the technologies.

Component 3: Project Management

99. RADF will be the project implementing agency and will be assigned project management responsibility to manage AMMAR and the WB-financed Georgia Irrigation and Land Market Development (GILMD) project. It is foreseen that operating costs would be cost-shared amongst active projects implemented by RADF, irrespective of financier.

100. This component would finance project management, coordination and technical supervision of the implementation of the various activities of the project under Components 1 and 2 including, financial management, procurement, monitoring and evaluation. In addition to the provision of staff and operating costs for the RADF, specific provision has been made for financing of baseline survey, interim and final impact evaluation surveys, workshops and staff training in specialised areas related to overall project management.

Appendix 5: Institutional aspects and implementation arrangements

1. MOF is the official Representative of Georgia as the Borrower/ Recipient. In this role MOF will be responsible for: (i) Providing inter-agency coordination when required; (ii) Fulfilling the government fiduciary oversight and management responsibilities; (iii) Providing sufficient counterpart contribution in a timely manner to finance the Project activities (where agreed).
2. The MOA will be the lead executing agency through the Rural and Agriculture Development Fund (RADF) as the project implementing agency. The RADF is a semi-autonomous non-profit (non-entrepreneurial) legal entity chaired by the Prime Minister with the Minister of Agriculture serving as the Deputy Chairman (see Table 13 for profile of RADF).
3. RADF will be assigned with project management responsibility, and is expected to manage the forthcoming WB-financed Georgia Irrigation and Land Market Development (GILMD) project.
4. The RADF will be responsible for overall coordination and management of the project, including management and fiduciary aspects. The main roles and responsibilities in project implementation are summarized in Table 11 and 12 below.
5. The RADF will be substantially strengthened to manage the forthcoming projects and certain management and staff positions will be shared between AMMAR and GILMD for efficiency and coordination reasons (especially in areas of finance, procurement and administration).
6. To ensure efficient and effective implementation the project will build on existing and emerging systems for rural service delivery and project management. The RADF shall select and appoint technical staff or contract local service providers, as required, to:
 - (i) provide expertise on climate smart agriculture promotion and landscape restoration;
 - (ii) facilitate local multi-stakeholder processes in each value chain;
 - (iii) provide monitoring and technical back-stopping for farmers' training and technology plots;
 - (iv) advise farmers on farm plans;
 - (v) conduct follow-up meetings with farmers who are recipients of grants made available under the Project;
 - (vi) act, or designate the Agriculture Project Management Agency (APMA) and/or any other entity(ies) acceptable to IFAD to act, as small grants administrator and manage the small grants scheme for smallholders under Window 1 (Climate Smart Primary Production) of Sub-component 1.2 of the Project;
 - (vii) act, or designate APMA and/or any other entity(ies) acceptable to IFAD to act, as large grants administrator and manage the large grants scheme for agribusinesses and cooperatives under Window 2 (Value Chain Development) of Sub-component 1.2 of the Project; and
 - (viii) enter into a subsidiary agreement, as appropriate, with APMA and/or any of the entities referred to in sub-paragraphs (vi) and (vii) above setting forth the terms of the implementation of the activities in respect of the Window under Sub-component 1.2 respectively assigned thereto.
7. The recently re-vitalized regional MOA district offices, typically with 4-6 technical staff, will be engaged to:
 - Support RADF in the facilitation of the local multi-stakeholder processes in each value chains,
 - providing monitoring and technical back stopping of the farmer training and technology plots, and
 - support RADF to follow up with farmers investing using grants.

8. Local service delivery to farmers, including delivery of farmer consultancy, training and management of CSA technology plots, will be subcontracted to local service providers operating in each of the target locations (e.g. service centres, mechanization centres, farmer associations, private service providers, cooperatives, NGOs). Potential candidate local service providers will be identified through the initial intensive phase of the value chain multi-stakeholder process in each value chain and encourage to submit proposals to the project for service provision following the project's approved procurement procedures. The local service providers may be provided with supplementary training to address specific knowledge gaps are promoted technology options where necessary.

9. Overall technical supervision and coaching of the local service providers on all aspects of GAP, climate smart agriculture practices, landscape restoration and farmer consultancy and training will be the responsibility of RADF recruited experts.

10. For civil works, overall responsibility for supervision of design services and civil works would be carried out by RADF Engineers and on-site daily supervisors. For irrigation related infrastructure, representatives of the United Amelioration Service Company of Georgia (UASCG), currently mandated by Government for operation and maintenance of all irrigation infrastructures, would approve any request for payment prepared by contractors and RADF Engineers as well as the final certificate of completed services and works. Day to day supervision of civil works would be carried out by the short-term contracted on-site daily supervisors under the direct guidance of the RADF Engineers. The on-site daily supervisors would be responsible for quantity and quality of works and materials used. RADF Engineers would regularly visit sites during implementation of construction works and be responsible for monitoring quantity and quality of implemented works.

11. Performance based contracts and agreements will be applied as a principle for all recruitments and contracted service providers to assure performance is kept to a high standard.

AMMAR Management Team will include:

Project management

- Project Manager
- Planning M&E Officer²⁹
- Finance Manager
- Accountant
- Procurement & Contracts Officer
- Administrative Assistant
- Drivers (x2)

Technical staff and Advisors

- International Technical Advisor (10 months input over PY1-2)
- Value Chain Coordinator / Deputy Project Manager
- Value chain & Agri-business specialist (x2 - one staff initially, second post hired as/when workload requires)
- Climate Change Adaptation Specialist
- Engineer - Senior
- Engineer

12. To facilitate a quick start to project implementation, the RADF will begin the process of advertising and selection of staff and advisors using the IFAD and/or GEF grant funds so that the team is fully in place and operational as soon as the main IFAD loan becomes effective.

²⁹ Cost sharing of position with WB GILMD project from 2015-2019

Table 10: Summary of implementation roles and responsibilities

Component / activity	Lead Responsibility within Project	Field delivery of services/works
Component 1: Infrastructure & Agricultural VC Investment		
1.1: Irrigation and value chain infrastructure	RADF Engineers & Contracts Manager	Infrastructure Contractors (using similar contracting process to ASP)
1.2 Facilitating private investment in value chains	RADF VC Coordinator	
1.2.1 Matching grants for VC upgrading	See Table 12 for details	See Table 12 for details
1.2.2 Partnerships for deepening agricultural value chain finance	RADF VC team	Partner Banks and MFI Local coordination with MOA District Staff and Local Service Providers
Component 2: Climate Smart agricultural value chain development		
VC screening / prioritization	RADF VC team (including GEF Coordinator)	With MoA Policy Group, Bank/MFI Partners and VC stakeholders
VC facilitation and multi-stakeholder processes	RADF VC team	RADF VC team With: MOA District Offices Partner Banks/MFIs
CSA technology transfer (training, technology plots)	RADF GEF Coordinator and supporting team	Local Service Provider Field monitoring by MOA District Offices

Table 11: Sub-component 1.2 - Matching Grant Scheme - Roles and Responsibilities

Process step	Window 1: Climate Smart Primary Production (Small farmer/producer grants)	Window 2: Value Chain Development - (agribusinesses & cooperatives grants)
Promotion of grant scheme (word of mouth, advertising, other projects/partners, events and meetings)	Coordinated by RADF VC team with local technical service provider MoA District Offices Also via Partner banks / MFI via client base	Coordinated by RADF via: RADF Value chain team MoA District Offices Local technical service providers Also via: Partner banks / MFI Regional Development Agencies (where they are operating)
Briefing to interested applicants on scheme and preliminary advice	RADF VC team With MoA District Offices and Local Service Provider	RADF VC team With MoA District Offices
Technical advice to applicants in preparation of application / farm investment plan	Local technical service provider as part of farmer training course. Additional backstopping to farmers from MOA District Offices.	Consultants to support business plan preparation if requested. RADF Value chain team (limited)
Application receipt, checking of eligibility and completeness of applications (desk based)	Grant Administrator Application to include bank reference confirming account details and identity	Grant Administrator (APMA) Expected to be online submission with standard review by grant officers using same procedures as GoG scheme
Technical screening & review of feasibility incl. field verification (technical and financial) and fit with project priorities in each VC	Grant Administrator Using Guidelines on evaluating typical farm investment plans from VC team	RADF Value chain team
Compliance check (business and fiduciary aspects)	Grant Administrator	Grant Administrator (APMA) (with partner bank/MFI if applicant is taking loan from partner bank/MFI)
Submission to Grant Committee	Grant Administrator	Grant Administrator (APMA)
Grant decision	Grant Committee	Grant Committee (same committee as for GoG scheme)
Loan application review and approval (if part of investment plan)	Bank/MFI own processes of loan appraisal (no project involvement)	Bank/MFI own processes of loan appraisal (no project involvement)
Contracting and agreement of milestones /disbursement schedule	Grant Administrator With technical input from RADF	Grant Administrator (APMA) With input from RADF VC team on milestones, disbursement schedule and special conditions
Disbursement	RADF	RADF
Coordination of technical support to grantee during grant implementation	MOA District Offices and Local technical service providers	RADF Value chain team Consultant contracted on cost sharing basis
Grant monitoring, and reporting	Grant Administrator Bank / MFI own monitoring and management of loans (where loan taken)	Grant Administrator (APMA) Bank / MFI own monitoring and management of loans (where loan taken)

Table 12: Rural and Agriculture Development Fund (RADF) - Summary Profile

RADF establishment and status

On 24 December 2012 a non-profit and non-commercial Rural and Agriculture Development Fund was established by the Governmental decree # 2051.

The Fund was registered on January 22, 2013 as a non-profit (non-entrepreneurial) legal entity.

Governance

The highest governing body of the Fund is the Board. Board Membership includes:

- Prime Minister - Chairman of the Board
 - Minister of Agriculture - Deputy Chair
 - Minister of Economy & sustainable development
 - Minister of Infrastructure and regional development
 - Minister of Finance
 - Minister of Justice
 - Minister of Environmental protection
 - Deputy Minister of Agriculture
 - Deputy Minister of Finance
 - Head of Agrarian Committee of Parliament
 - Head of Majority of Parliament.
-

RADF Fund and Objectives

The objective of the Fund is to assist to rural and agricultural development in Georgia

Goals of the Fund are:

- Implementation of assistance programs for farmers, who possess small plots of land;
 - Development of rural infrastructure;
 - Assistance to legal entities and natural persons, engaged in agricultural production, in accessing cheap credits ;
 - Provision of co-funding to profit-oriented agricultural projects;
 - Introduction of modern technologies in agriculture;
 - Promotion of cooperatives in agricultural sector;
 - Elaboration and promotion of pro-active, regional specifics' oriented insurance mechanism;
 - Establishment of agricultural land fund and its consolidation.
-

RADF current activities

RADF currently manages the funding for two major initiatives:

1. Smallholder spring works support programme (budget 2013 - GEL 180 million, 2014 GEL90 million).
2. Concessional Loan Programme (annual budget GEL 27 million)

Both projects are implemented via APMA

Staff

The pre-existing staff of RADF, prior to the incorporation of the recently relocated RADF, includes:

1. CEO
 2. Lawyer
 3. Finance manager
 4. Accountant
 5. Administration assistant
 6. Driver (1 car)
-

Table 13: Agriculture Project Management Agency (APMA) - Summary Profile

APMA establishment and status

On 28 January 2013, Decree #2-30 of the Minister of Agriculture, the Agriculture Development Fund (2011) was transformed into a non-profit, non-commercial organisation established by the Ministry of Agriculture.

Governance

Founded by the Ministry of Economy and Sustainable Development, after its establishment, the Ministry of Agriculture has full legal rights to implement all activities of the Founder.

The highest governing body of the Agency is a Board, defined by the Cabinet of Ministers, and which consists of:

- Prime Minister - Chairman of the Board
- Minister of Agriculture - Deputy Chair
- Minister of Economy & sustainable development
- Minister of Infrastructure and regional development
- Minister of Finance
- 3 Deputies of the Ministry of Agriculture

APMA Objectives: To promote development of the Agriculture Sector in Georgia

APMA current activities

Concessional Loan Programme - involves 11 partner banks and provides subsidized loans for farmers and agribusinesses. As of Feb 2014 GEL 264 million (USD 150 million) of loans had been advanced by participating banks under the scheme.

Small farmers support project ("Spring works project") - a three year government initiative to provide subsidized inputs and services to farmers with <1.25 ha of land. In 2013, 710,000 farmers participated in the scheme at a total cost of GEL 190 million (USD109 million). The planned budget for 2014 support is GEL 90 million (USD51 million).

Co-investing with Agribusinesses in 40 most disadvantaged districts: a complimentary matching grant scheme for the Concessional Loan Programme. The objective is to co-invest with 50 private firms in disadvantaged districts. The total grant budget is USD12 million with average grants expected to be USD240,000. As of May 2014, 30 proposals had been accepted at concept stage, of which 15 full proposals had been submitted to the grants committee for review and approval/rejection.

In addition, APMA owns a number of agricultural enterprises and assets on behalf of MOA. These include Mekanizatori Ltd which is the company operating the 13 large Farm and Machinery Service Centres (GEL220 million invested in agricultural machinery). Other assets and enterprises include greenhouses, nurseries, fruits and vegetables processing and cold storage, grain processing and storage facilities, wineries, plots of land equipped with drip irrigation for vegetable and grain farms. As of May 2014, APMA is in the process of selling these assets through auction.

Staff The pre-existing staff of APMA, includes:

Director & Two Deputy Directors, Assistant Director

Advisor to the Director

Technical Divisions (3) – Enterprise Management, Property and Project Analysis

Finance, Internal Audit, Legal– 3 Divisions

Administrative, HR, IT - 3 Divisions

Marketing and Communications

Table 14: United Amelioration Service Company of Georgia (UASCG) - Summary Profile

UASCG establishment and status

Established through Government decree No. 672 dated 12 April 2012, a Limited Liability Society.

Governance

The powers of the company partner are exercised by the Ministry of Agriculture except for the powers of privatization and/or administration of shares which are exercised by the Ministry of Economy and Sustainable Development. The General Meeting of Partners makes a decision on the appointment and dismissal of the Director of the UASCG.

Management of the Company is designated to a Director assisted by three Deputy Directors

UASCG Objectives

To provide water through state-owned irrigation systems, ensure state control in water use and protection, arrange measures to combat against the flood and flood waters, prepare together with relevant state bodies basin and territorial schemes, to ensure the proper use of trans-boundary water objects, inter-state joint use of irrigation systems, and responsible for construction, operation and maintenance of irrigation and water objects.

UASCG current activities

- Plan the company activities in the business area and determine the development prospects taking into account the users (water users) demands for water and amelioration services.
- Provide amelioration services (water delivery and excess water removal) to physical and legal persons through water use, water management, irrigation, drainage and pasture watering schemes.
- Carry out operation and protection of amelioration, pasture watering schemes and independent hydraulic structures under the current legislation
- Provide amelioration, land reclamation, forest amelioration, soil conservation and other complex services
- Contract legal and physical persons for the execution of works, water supply, excess water removal and provision of other services.
- Train and improve the qualifications of the staff members and ensure their participation in conferences, workshops and other events
- Carry out any other activities provided that they are not contrary to the current law and interest of the Company and its partners.

Staff (Approx 220 staff plus temporary staff as needed)

Director and Three Deputy Directors

Advisor (1 staff)

Internal Audit Service (3 staff)

Department of Economics and Finance (23 staff)

Department of Administration and Legal (33 staff)

Department of Logistics and Procurement (8 staff)

Department of Rehabilitation and Investment Programs (50 staff)

Division of New Technologies, Industrial Bases and Mechanization (11 staff)

Technical Exploitation Department (23 staff)

Amelioration of the Service Organisation (10 staff)

Geographic Information Systems (7 staff)

Service Divisions (43 staff)

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

Overview

1. This appendix describes the planning, monitoring, evaluation and knowledge management arrangements for the AMMAR project. The Project Design team has taken on board the guidance provided by IFAD's Results and Impact Management System (RIMS), Rural Finance Policy, Decision Tools and the technical notes, prepared to guide design teams.
2. AMMAR's Monitoring and Evaluation (M&E) system is based on the recognition that IFAD's interventions would produce better results when design, reporting, and monitoring focus explicitly on key measures of performance that are measured and reported regularly. The design acknowledges that the more transparent the results are, the more likely that IFAD is to learn from successes and failures, and to take corrective actions when needed.

Planning and Budgeting

3. The purpose of Annual Work Plan and Budget (AWPB) is to provide AMMAR's Project Implementation Unit (RADF) with a timetable for implementation of a set of carefully scheduled activities, together with their respective budgets/inputs. AWPBs are formulated taking into account the previous AWPBs, project design report, supervision report recommendations and legal agreements, contract and management agreements of service providers and participating partners.
4. The AWPB is a tool for underlining and specifying implementation priorities, predicting inputs needed and procurement requirements, and most importantly establishing staff work plan both within RADF, and between implementing agencies. Financial allocations within the AWPB constitute a basis for release of funds and for financial control. A quality AWPB facilitates the preparation of progress reports and the work of the supervision missions.
5. An AWPB is an essential covenant in the legal financing agreement; failure to prepare it on a timely basis may lead to delay or suspension of fund disbursement by IFAD. The first AWPB will be prepared, together with the procurement plan for the first 18 months of the project, as part of the design report, and be presented for discussion during the start-up workshop for submission to IFAD for no objection. The preparation of the following AWPBs should be prepared, discussed and approved no later than sixty days before the end of the financial year. To allow full participation of the project stakeholders, the process of AWPB preparation should start with consultation at the local, regional and national levels and then be consolidated at the RADF level. For AMMAR, the AWPB will also include activities and plans associated with the priority actions and investment areas identified through multi-stakeholder processes (MSPs) in each targeted value chains.
6. The Project would conduct, at its onset, a **Start-up Workshop**, with the aim of sensitizing and training project partners, RADF staff and other potential implementing partners in the project objectives and scope. At this workshop, time would be allocated to familiarize all participating partners with the planning and annual work plan process as well as the monitoring and evaluation system. A special session would be included in the start-up workshop on M&E to brief participants about the project Logical Framework, progress reporting and evaluation arrangements. A session would also be held to familiarize the participants with IFAD's RIMS system, Performance Based Contracting System and Key Performance Indicators regarding rural and microfinance.

Monitoring and Evaluation

7. Project monitoring and evaluation will be conducted in accordance with established IFAD and GEF procedures and will be provided by the project team with support from IFAD-GEF. The Project Logical Framework provides indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's M&E system will be built on.

8. In line with the GEF/SCCF operational principles, the SCCF M&E activities will be country driven and provide for consultation and participation. As a participatory country, GEF expects involved local institutions including farmer organizations to be fully consulted with, informed and briefed about the plans, implementation and the results of evaluation activities. The value chain MSPs will provide the basis for this two-way communication.

9. The M&E system will generate quantitative and qualitative verifiable information on the project's performance in a form that will assist the Ministry of Agriculture and the RADF to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action to be taken to correct encountered problem during implementation. The M&E generated information will contribute to facilitating the workflow and quality of the decision-making by providing the means of focusing on implementation problems and ensuring effective communication and co-ordination.

10. The M&E system would be divided in two overall key functions: **progress monitoring** (Input/Activity/Output) and **Outcome/impact monitoring and evaluation**. Both are part of a systematic, participatory learning process geared towards ensuring that the project attains its planned objectives and impact.

11. **Progress monitoring** is concerned primarily with the monitoring of input delivery, activity implementation and output achievements that can help project management to continually take timely decisions and self-evaluate. This would be done at all levels; by RADF, implementing partners and by the beneficiaries. The system for monitoring of project outputs is based on a set of performance indicators associated with the project's components and sub-components and will mainly concentrate on the immediate, short-term financial and physical results.

12. The Progress monitoring would be based on performance indicators following the Logical Framework. An attempt has been made to ensure the selection of SMART indicators (specific, measurable, attributable, reliable and time bound) and fulfil the RIMS requirements. A Project Output Data Sheet will serve as a real time tracking instrument of the implementation of the project activities and associated outputs and should be calculated taking into consideration the period that goes from 1st January to the 31st December of a given year. The AWPB should ideally be translated into an action plan, where annual target of outputs shall be provided to be implemented and monitored at national and regional levels associated with each supported value chain.

13. **Outcome and Impact assessments** are concerned with nature, intensity, and sustainability of the occurred changes to the livelihood and the environment of the participating households that is brought about by the direct effects of the achieved outputs, as well as the effectiveness of the targeting and gender mainstreaming strategy. Sustainability of these changes is a necessary factor for positive and lasting impact.

14. The *Outcomes* are the medium-term effects of the outputs produced by the project. The purpose of monitoring the outcome is to inform project management of the mid-term results of project initiatives, identify the most successful implementation experiences as well as the setbacks that have hindered the achievement of expected objectives. The project outcomes, which also include RIMS Second Level indicators, can be tackled starting from the second year of the project and should be reported to IFAD either on annual or biannual basis, depends on the type of indicator and the methodology used to measure it. Outcome indicators should be collected through conducting of focus groups, in-depth interviews, participatory assessments, studies/surveys in the project target areas.

15. *Impacts* are the changes that are logically expected to occur once one or more outcomes have been realized. The development objective is usually achieved by the end of project implementation. The goal sets the macro-level context (national development objective) within which the project fits, and describes the long-term impact that it is expected to contribute towards. The Impact of AMMAR project, which includes also RIMS Third Level indicators, will be measured through two sets of surveys, namely a Baseline Survey that should be conducted during the first year of the project and immediately after the project Start-up Workshop, and; a final Impact Assessment Survey that should

precede the project Completion Mission and will be able to measure the impact of the AMMAR project throughout the course of its implementation.

16. Immediately after the formation of the RADF, the AMMAR Project M&E officer would develop, with IFAD support, the **Management Information System** at national and regional levels. The system would be designed based on the requirements identified in the Project Logical Framework and in keeping with IFAD RIMS requirements and the guidance provided by the technical divisions of IFAD on M&E. The system would have the capacity to provide gender disaggregated data on all key indicators. The overall responsibility for the M&E activities would lie with the Project Manager, however, she/he would be assisted by the M&E officer in preparing all progress and monitoring reports.

17. **Reporting routine** captures data periodically from different sources (stakeholders) about project interventions, which is consolidated at different levels, processed, analyzed, classified and presented into customized tables that are used for the preparation of different reports namely: (i) monitoring reports (including RIMS), (ii) progress reports (iii) financial reports; (iv) audit reports; and (v) completion reports. This set of reports constitutes the minimum reporting requirements. The different reports of the M&E will be categorized by period covered, partners producing them as well as by the project objective hierarchy and the indicator level. Project external monitoring will comprise: annual IFAD supervision; Mid Term Review; ad hoc thematic/diagnostic studies; yearly audits; and a Project Completion Evaluation/Impact Assessment.

18. The M&E list of indicators that will be employed to monitor project implementation and assess its impact, including RIMS indicators are described in the Logical Framework. The M&E system for IFAD-financed project is required to include among its M&E indicators a list of RIMS indicators at the three different levels (compiled from the standard list provided by IFAD).

19. The RADF M&E officer will be responsible for running the internal M&E and organizing the base line and impact assessment survey. The M&E unit of the RADF should develop formats, questionnaire and other data collection tools that will be used to identify baselines and progress during the course of the project.

20. The Project team will fine-tune the progress and performance/impact indicators of the project at the Inception Workshop with support from IFAD. Specific targets for the first year of implementation, progress indicators, and their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

Evaluation Arrangements

21. **Measuring Results and Impact:** The AMMAR project's Logical Framework will form the basis for the overall results-based M&E system. Initial M&E indicators will be provided in the project's Logical Framework and final indicators will be developed in the course of the preparation and findings of the project's Start-up Workshop.

22. Performance monitoring will concentrate on the financial and physical outputs and the outcomes of project activities. Performance indicators will be monitored annually or biannually for outcomes and quarterly for outputs and will include IFAD RIMS 1st and 2nd level indicators. RIMS mandatory anchor indicator on household asset ownership will be used for assessing the impact of the project at the baseline and completion levels.

23. From the onset of Project operations, the project would establish the **baseline data**, though a baseline survey and data collection that correspond to the indicators mentioned in the Logical Framework for each component. The information would be used to compile a base line profile and to assess the socio-economic baseline status of the project area and to measure the monitoring

indicators before the project commencement. The results of this would be systematically recorded to allow for a comparative assessment during the Project life.

24. **Mid-Term Review:** A mid-term review would be carried out towards the end of the project's third year. The review would cover, among other things: (i) physical and financial progress as measured against AWPBs; (ii) performance and financial management of contracted implementing partners; and (iii) an assessment of the efficacy of technical assistance and capacity building activities.

25. **Final Evaluation:** An independent Final Evaluation will take place three months prior to the project completion date, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. Accordingly, and Impact Assessment, as an input into the Project Completion Report that should be undertaken by a neutral agency with no previous involvement in project implementation.

26. During the final year of project implementation, as part of the preparation of the IFAD-required Project Completion Report/Impact Assessment, the M&E data collected over the project implementation period will be used as part of a thorough assessment of project achievements, in terms particularly of changes in the livelihoods of beneficiaries that relate to the implemented project activities, and the sharing of lessons learned and development experience.

Knowledge Management

27. The success of interaction among the diverse set of project stakeholders depends largely on the quantity, quality and timeliness of information flowing among them. This calls for developing suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, and internet).

28. The explicit assignment of knowledge management and communication responsibilities will be a shared responsibility. The overall responsibility would belong to the Project Manager and the M&E Officer. Service Providers would have a key responsibility for sharing lessons learnt during the project through preparation of special case studies and Learning Notes.

29. This knowledge-sharing process will be supported by a well-focused series of workshops and joint learning events. Where applicable, regional knowledge networking will be supported to build and share approaches, tools, methodologies, technologies and best practices. This would be achieved through special brochures on certain thematic experience during project implementation as well as establishing links with local farmers, community based organizations at the village level and with policy forums at the national level. The Project Steering Committee would have the responsibility for identifying the policy lessons and ensuring that these are communicated appropriately.

30. The RADF would participate in most of the agricultural related events organized at national and international levels allowing project staff and other implementing partners to communicate and share lessons learnt during the implementation of AMMAR.

Appendix 7: Financial management and disbursement arrangements

Financial management risk assessment

Inherent risks: country issues, entity risks and Project design

1. The inherent financial management risk and country risk is rated as Medium. Georgia has a TI Corruption Perception Index Score of 49 in 2013. Current ranking 55th out of 177 countries. In 2012 it was 51st out of 176 countries with a score of 52. . In the 2014 IFC/WB's Ease of Doing Business Report, Georgia is ranked 8th out of 189 countries. The CPIA ratings in public sector management and institutions cluster average (1=low to 6=high) which measures public sector management and institutions cluster including property rights and rule-based governance, quality of budgetary and financial management, efficiency of revenue mobilization, quality of public administration, and transparency, accountability, and corruption in the public sector, rates Georgia at 4.0 for 2012, higher than the 3.8 rating for 2011. The PEFA of 2008 has been updated in 2013 and several areas of weaknesses found in the PFM systems have advanced significantly. Noteworthy are, systems have been put in place for strategic budget planning, budget formulation and execution. The integrated public financial management system is being implemented and according to the Ministry of Finance (MoF), several key modules are already in place. These include Treasury Operations, Spending Institutions, Budget Preparation, Payroll and External/Internal Debt Management modules introduced by the MoF Financial Analytical Service in January 2012. The introduction of international good practice in the budget cycle of the Government is well advanced, including robust systems for budget preparation, adequate chart of accounts, reliable execution (including accounting and reporting,) and sufficient controls. Accounting, Recording and Reporting indicators also improved and significant improvement has been noted in terms of improving the scope and nature of external audit by the State Audit Office of Georgia (SAOG) who have implemented a much improved set of auditing standards and audit methodology that focus on significant and systemic issues. As a result the inherent risk is rated medium.

2. In May 2013, IFAD undertook an FM assessment as per IFAD guidelines of the PIU managing the ongoing ASP project and the risk was assessed at Low. Additionally, an FM assessment at design was conducted in May 2013, as part of the co-financed Loan with the World Bank, and inclusions to the WB financial management assessment had been provided at that time. As IFAD is now going into this project alone, the FM assessment and sections for the design will be based on the assessment completed last year and further updated in this design.

3. **Strengths and Weaknesses of proposed FM arrangements.** From a Financial Management (FM) point of view the strengths of the future project is that the FM-arrangements will follow the standards already applied in previous IFAD projects (ASP), which have been rated low risk and have adequately complied with IFAD requirements. In addition, mitigation actions have been embedded in to the project design to address previous FM-related weaknesses such as in the controls for payments in infrastructure, which were addressed and largely implemented by the project. These will be further enhanced and included in the new project implementation manual for Component 1, which includes infrastructure (the largest component in AMMAR project).

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

that the project staff and all stakeholders of the project are familiar with IFAD's as well as the national anticorruption policies and whistle blowing procedures. The IFAD anticorruption policy is available on the IFAD website at www.ifad.org/governance/anticorruption/index.htm). The IFAD website also provides instructions on how to report any alleged wrongdoing to the Office of Audit and Oversight (<http://www.ifad.org/governance/anticorruption/how.htm>).

5. **Taxation.** As per IFAD policy, none of the IFAD proceeds of its financing can be utilized for the payment of Taxes during the course of project implementation.

6. **Financial Management Risk Assessment.** IFAD undertook a financial management assessment in accordance with IFAD's Financial Management Guidelines, issued on 1 November 2012. The findings of the assessment and mitigation actions are summarized in the table below:

Table 15: Summary of FM Risks and mitigating actions

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
Inherent Risks			
Country Level: While significant improvements have been noted in the Public Financial Management (PFM) systems, PFM institutions remain weak and require improvement.	M	The RADF is to maintain independent financial management system, use of private auditors and use of Treasury for designated account. In addition a series of DPO on PFM strengthening are implemented.	L
Entity and Project design: Implementation arrangements have changed in the past (ADPCC to IOPID) resulting in disruption to project activities	H	Any changes to the structure in the implementing agency should require agreement with IFAD. The experienced staff, including FM, previously employed by ADPCC and which is implementing the current IFAD project should be assigned for the project implementation of the new project.	M
Project Control Risks			
Organization & Staffing	M	a) Sufficient training on donor procedures to be given to all staff within the unit to ensure that roles and responsibilities can be inter-changed.	M
a) Adequate staff, with prior knowledge of donor procedures exist within the implementing unit. However, it is to be noted that the Financial Manager and 2 Accountants are a consultants and not full time ministry staff, and FM can leave his position at any time.			

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
Budgeting a) Project budget will follow a bottom up approach, and coordination with the technical staff will be challenging. b) Overruns and unrealistic budgets.	M	a) Budget preparation and coordination will remain with the RADF. b) To ensure that timely inputs are received, the Project Director will initiate the process 4 months before the budgets are due. c) To ensure a realistic budget, deliverables on previous budgets will be reviewed by the technical and financial teams. d) Budgets to include all sources of financing separately and to show estimates by quarter. e) Interim financial reports showing progress against budgets to be submitted to IFAD semi-annually.	L
Funds Flow & Disbursements a) IFAD and GoG funds flow through a central Treasury System monitored by the Financial Manager. b) Expenditures related to the infrastructure component have had weaknesses in the past	L	a) Clearly detailed fund flow arrangements and continuous follow-up of the same within the first year of implementation to ensure any course corrections will be made to mitigate risk of liquidity problems. b) The expenditures incurred against the infrastructure component will require additional certifications to be carried out before payment can be processed. These will be defined within the project implementation manual.	L

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
Internal Control a) There is overall adequate internal control system in place at the MOA and the implementing unit. However these could change with a change of staff as there is insufficient documentation of the internal control procedures. b) Sufficient segregations of duties exist and there are appropriate mechanisms in place for safeguarding of assets. c) A financial management manual exists but is dated d) Internal controls for payment against expenditures for infrastructure were assessed as weak.	M	a) Internal control procedures will be documented within an updated project implementation manual. b) Training will be offered to all staff with rotation of some activities to ensure that learning of all finance staff is enhanced. c) Updated guidelines for payment against infrastructure activities will be included in the financial management manual.	L
Accounting Systems, Policies & Procedures a) The accounting system was designed for the unit to implement donor funded projects and is linked with the Treasury system. b) Accounting is on a modified-cash basis. c) Adequate procedures are in place for accounting, however documentation of the same is dated. d) Advances to other institutions or contract-based service providers is appropriately captured	L	a) Financial manual will be enhanced to ensure that policies and procedures are up to international standards and will be a condition for first disbursement. b) All finance staff will be required to take and pass IFAD's e-learning on financial management.	L
Reporting & Monitoring a) Periodic financial progress reports and interim financial reports are available and can be produced by the system. These have been timely and accurate.	L	a) The progress and interim financial reports are to be circulated to relevant team members on timely manner.	L

Risk Category	Initial FM Risk Rating (H/M/L)	Proposed Risk Mitigating Measures	Residual FM Risk Rating (H/M/L)
Internal Audit a) While internal audit exists in MOA, the function is not a strong one in Georgia and the IA of MOA has not ever audited the unit that manages the donor-funded projects.	H	a) The possibility to include the project under the IA of MOA to be explored. Capacity to be developed in this aspect during start up and early implementation.	M
Auditing a) State Audit Office, the country's supreme audit institution, performs external audits of MOA and the projects it implements, however donor funded projects have not typically used the SAI and no assessments of the same have been conducted.	M	a) Independent private auditors will be hired for the project audit, with the TORs for the auditor to be cleared by IFAD.	L
Project Fiduciary Risk at design:	MEDIUM		
OVERALL FM RISK	LOW ³⁰		

* H=High, M=Medium, L=Low

7. **Conclusion.** The existing financial management structure, processes, and skills are mostly adequate to meet IFAD's requirements. Therefore the initial project risk rating is considered to be Low provided that the mitigation actions are timely implemented.

Proposed Financial Management Arrangements

8. **Organization and Staffing:** The Department of International Relations, under the supervision of the Finance Manager and two accountants are responsible for financial management and disbursements. The staffing in terms of experience, qualification and number is deemed sufficient for the management of this Project and no changes to the TORs are envisaged. It is expected that the current staff will move under the RADF Implementation Unit, however, it is not anticipated that major changes will take place. However if the financial management functions and current staffing undergoes a change i.e. then risks will have to be reassessed.

9. **Budgeting:** AWPB will be prepared by the Project Manager in a fully participatory manner. The Division will submit its projected budget to the MOA, at the end of July beginning of August of the previous year allowing some possibility to correct the amounts before the end of the year. Adjustments to the budget may be made during the year, as long as they are well justified. On exceptional cases, it's possible to request reallocation between budgets categories, but the total ceiling amount approved in the Budget for the year cannot be amended. The AWPB is usually ready by end of July. Budgeted amounts are based on theoretically best possible amount. With respect to receipt of counterpart funds, these are budgeted on an annual basis and released quarterly, but the quarterly amounts are released on the basis of need by the implementing agency. Once a contract has been signed, it is registered in the Treasury system, including monthly projections for payment, and the project cannot exceed what is indicated on a monthly basis; when registered and approved they may submit the commitment document - on monthly or quarterly basis - but commits the amount from the budget; on payment, there is a payment order which is within the monthly budgeted amount and within the overall budgeted amount.

³⁰ If no staffing changes occur in the RADF.

10. The RADF Will submit the annual work plan and budget (AWPB) including a procurement plan to IFAD for its non-objection at least two months before the beginning of the relevant fiscal year. The format of the AWPB will indicate at least the following: expenditure items by activity, component, expenditure category, and by implementing entity as well as funding requirements by financier on a quarterly basis. In addition the detailed cost tables should indicate the unit cost and quantity for each item and physical targets/indicators for each activity.

11. It is important to notice that for an expenditure to be eligible for IFAD financing, it has to be included in the AWPB approved by the relevant national authority and IFAD (i.e. received the IFAD's non objection). Therefore proper budget discipline will have to be enforced and it is recommended that the approved AWPB should be inserted in the budget module of the accounting/reporting software to make full use of the budget controls features.

12. **Internal Controls.** In order to ensure: (i) efficiency; (ii) reliability of financial reports; and (iii) compliance with applicable laws and regulations including the conditions set forth in the financing agreement, the RADF will ensure that adequate internal controls are maintained through the project implementation by all implementing partners. The key features of the internal control system are summarized below:

- Policies and procedures –the financial management procedures;
- Segregation of duties;
- Authorization;
- Fixed asset maintenance and inventory checks;
- Periodic cash and bank Reconciliations and checks;
- Restricted access; and
- Monitoring and review.

13. **Project Financial Management Procedures.** An important internal control is formed by the project's Financial Management manual. The FM manual will be updated/revised to reflect the functioning environment and these will be shared with all staff working on the project prior to the first disbursement. In particular the FM manual will be updated to reflect the flow of funds and reporting arrangements as well as investment guidelines including selection criteria with regards to the matching grants,

14. **Accounting:** Accounts are maintained on an IPSAS modified cash basis, however Financial Statements are prepared on an IPSAS cash basis. The double entry accounting system was specifically created for donor-funded projects and is housed in the server of the implementing Ministry where it can be accessed by the Finance staff. Treasury systems have undergone a recent change which allows them to enter the transaction from the USD account to the GEL account the following day, this has led to an improvisation in the accounting of the transactions to postpone entry by a day to not have a constant USD gain/loss.

15. **Financial Reporting and Monitoring:** Financial Reports are available from the system and can be customized to a great degree. RADF will provide IFAD with consolidated financial reports within agreed timeframes as follows:

- Quarterly unaudited interim financial reports (IFRs) as agreed with IFAD consisting of the following: Sources and Uses of Funds, Summary of Expenditures by Loan Categories and by Financing source, Financial performance by Financier and by Component, Statement of Expenditures/ Disbursements - Withdrawal Application Statement, Special/Designated Account Reconciliation Statement, Register of contracts and a progress report regarding the matching grants, (The exact format and content will be agreed with between the PMU and IFAD). The IFRS are to be submitted to IFAD within 45 days following the end of each reporting period.
- Annual consolidated Financial Statements within four months after the end of the fiscal year, prepared in compliance with International Accounting Standards (IPSAS cash) and IFAD requirements. The project Financial Statements will include interalia: (i) statement of project

management responsibilities including a Management Assertion that project funds have been expended for the intended purposes as specified in the relevant financing agreements; (ii) statement of cash receipts and payments (by category and by financier); (iii) statement of cash receipts and payments (by component); (iv) statement of comparative budget and actual amount; (v) statement of Designated Account movements; (vi) Statement of Designated Account Reconciliations; (vii) SOE-Withdrawal Application Statement; (viii) cumulative use of funds by category of expenditure preferably in SDR for each of the IFAD financing sources and (ix) Notes to the Financial Statements.

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

16. **Internal Audit:** While the MoA does have an internal audit (IA) department, the Project Implementing Unit has not yet been audited by the department. Provisions do exist for the unit to be audited by the IA of MoA, however capacity for IA is still developing within the country. The possibility to include the project under the IA of MOA to be explored.

17. **External Audit:** The RADF shall appoint an independent auditor to audit the accounts of the entire project on an annual basis, following international auditing standards (ISA). To ensure that the auditors meet the necessary quality standards, the auditors should be procured in the future using procurement method should be Quality and Cost Based Selection method (QCBS). The Terms of Reference for the audit will be cleared by IFAD on an annual basis. The performance of the auditor shall be reviewed every year to confirm whether the auditor will be reappointed. An auditor once appointed can serve for a maximum of three (3) years after which another auditor might be appointed. The audit report will be submitted to IFAD annually no later than 6 months after the end of the fiscal year. The Audit Report will include the following elements which should also be reflected in the auditor's TORs: i) An opinion on the Project's financial statements, ii) A separate opinion on the eligibility of expenditures included in the WA /Statement of Expenditure procedure and A separate opinion if the use of the Special Account/Designated Account is in compliance with the financing agreement. In addition to the audit report, the independent auditor will prepare a management letter. This will include comments and recommendations on the adequacy of the financial management system, and on the system of internal controls. The management letter should also include a follow up section on the status of implementation of previous years recommendations. The Borrower shall ensure that the subsidiary agreement entered into by the RADF with each entity selected to implement activities related to Irrigation and Agricultural Value Chain Investment Component (Component 1) of the Project shall specify that independent auditors are required to provide a specific opinion on the procedures employed by such entity, the adequacy of the documentation in support of relevant fund transfers, and whether Project resources have been used in accordance with the Investment Guidelines as approved by the Fund.

Funds flow and Disbursement Arrangements:

18. **Flow of funds.** Ministry of Finance, on behalf of the Borrower, will maintain the Designated Accounts for each financing source in the State Treasury within the Treasury Single FX Account in USD in the National Bank of Georgia. The incurred expenditures will be covered by from the Treasury budget line of the Ministry of Agriculture and subsequently reimbursed from the Designated Account within 24 hours. The Designated Account will be administered following Imprest Account arrangements.

19. **Withdrawals from the IFAD Loan Account and/or Grant Account.** Between the date of entry into force of the Financing Agreement and the Financing Closing Date, the RADF may request withdrawals from the Loan Account and/or Grant Accounts of amounts paid or to be paid for Eligible Expenditures.

20. **IFAD Disbursement Procedures.** Four standard disbursement procedures may be used for withdrawal of financing:

- Advance withdrawal.
- Direct payment.

- Special commitment.
- Reimbursement.

21. However, it is expected that most expenditures will be through the designated account using the imprest mechanism. The ceiling authorized allocation will be based on budgets for six months for each financing source.

22. **Authorized Allocation.** IFAD will make an initial deposit to the Designated Account equal to the approximate requirements for average six months implementation (Authorized Allocation) upon request by borrower after loan and grant effectiveness. Replenishment of the Designated Accounts from the loan and grant accounts at IFAD will be by way of Withdrawal Applications, supported by appropriate documentation or Statements of Expenditure and duly signed by the authorized representative of the Borrower.

23. **Conditions for First Withdrawal.** As per standard IFAD practices, the following conditions related to financial management are to be met before the first withdrawal can be realized:

- IFAD has received from the Minister of Finance, – a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s).
- IFAD has received from the Minister of Finance, – a letter designating the name(s) of official(s) authorized to sign withdrawal applications, which includes their authenticated specimen signature(s).
- The Designated Accounts have been duly opened;
- The Project Implementation Manual (PIM) including the FM manual have been adopted by the RADF substantially in the form approved by the Fund.
- no withdrawals shall be made in respect of expenditures for smallholders and agribusiness grants under Category IV (Grants and Subsidies) of the allocation table set forth in paragraph 1 of Schedule 2 hereto until:
 - (i) The RADF shall have entered into a subsidiary agreement acceptable to the Fund with each of the entities selected to implement activities related to grants under the Irrigation and Agricultural Value Chain Investment Component (Component 1) of the Project covering, among other things, budgeting, flow of funds, accounting, financial reporting, internal controls and external audit arrangements;
 - (ii) The Investment Guidelines to be prepared by the RADF and adopted by each of the entities selected to implement activities related to grants under the Irrigation and Agricultural Value Chain Investment Component (Component 1) of the Project shall have been approved by the Fund; and
 - (iii) Any one of the entities referred to in Section B.6 above shall have opened an account to receive Project resources from the Designated Account in a bank acceptable to the Fund, and shall have communicated to the Fund the names and titles of the persons authorised to operate such account.

24. **Statement of Expenditure (SOE).** The SOE thresholds shall be following:

- for all expenditure items under all categories.

25. The project will retain the relevant support documents and make them readily available for inspection and review by supervision missions and the auditors.

26. **Minimum Withdrawal amounts.** In order to minimise transaction costs, the minimum withdrawal amounts are set as follows:

- Withdrawal Applications requesting replenishments of the Designated Account should at least cover a minimum amount of thirty per cent (30%) of the initial advance.
- Direct Payment method should only be used for payments of USD 200 000 and above while expenditures below USD 200 000 should be financed from the Designated Account if possible and claimed through the replenishment of the Designated Account.

27. **Further** Details regarding the designated account allocations and SoE thresholds will be found in the Letter to the Borrower.

28. The Funds Flow arrangements to meet eligible Project expenditures is described below.

29. A mechanism for disbursement of matching grants will be reflected in the updated financial manual of the project.

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

- one on-site visit that will involve inter alia visits to the implementing partner of the matching grants and updating the FM assessments.
- Detailed review of adequacy of the staffing arrangements at the RADF, and relevant implementing partners.
- Detailed review of the Project Financial Management manual including, relevant policies, guidelines and criteria with regards to the Rural finance component.
- Detailed review of the accounting software and financial reports produced by the accounting software and the use of budget controls by the RADF,
- Detailed review of the fixed asset register.
- Detailed review of the operation of the designated and project accounts (including monthly reconciliations).
- Detailed review of records management, back up and the use of the Statement of Expenditure (SOE) procedure and the applicable SOE-thresholds (adequacy of supporting documentation) by the RADF, and relevant implementing partners.
- Follow-up on contracting the project (independent) auditors.
- Follow-up on work performed by the Internal audit function.

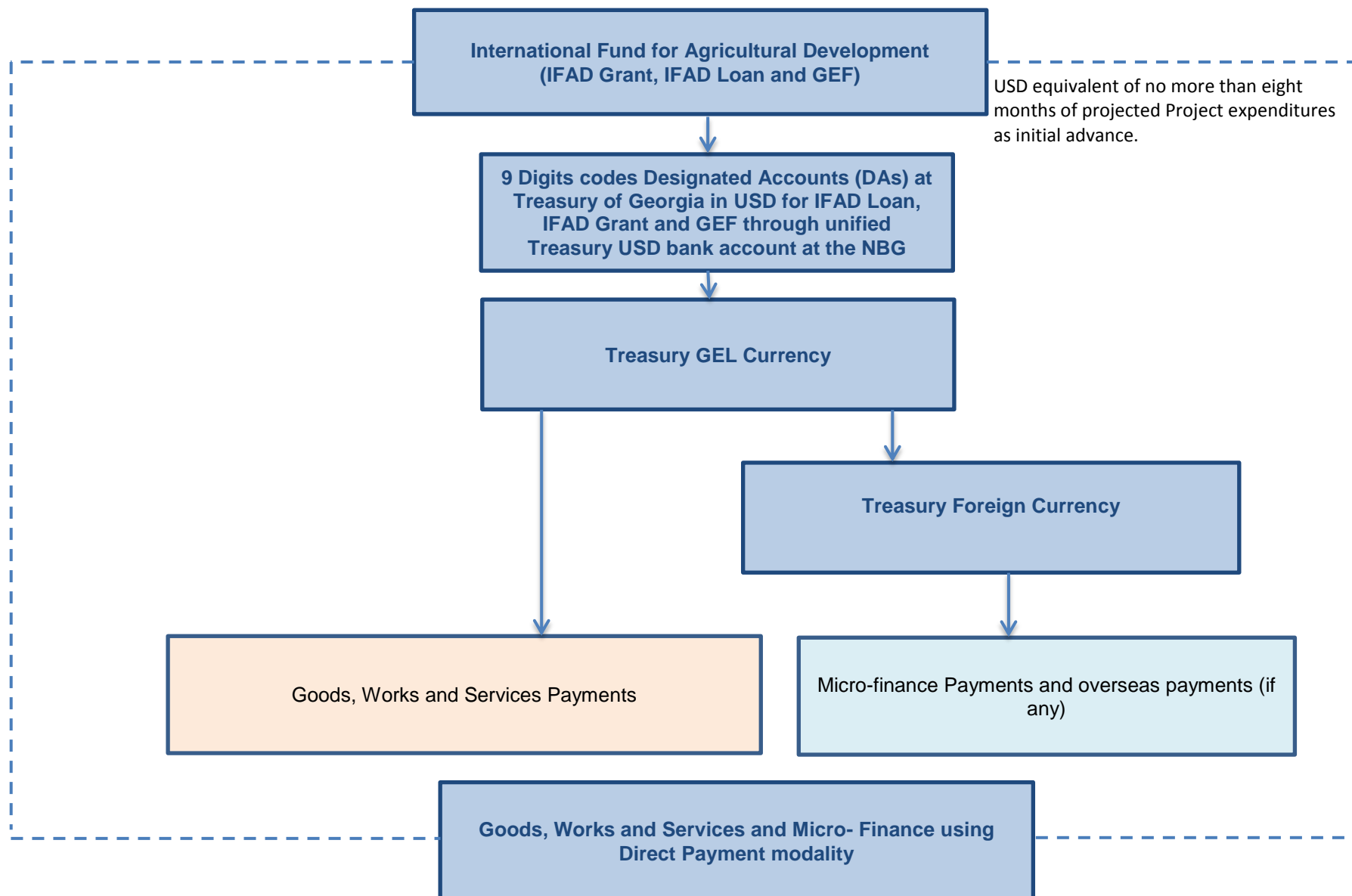
31. The supervision process will be complemented by desk review of progress and financial reports, the programme's annual financial statements, internal audit reports, and annual audits.

Implementation Readiness

32. A list of key tasks are summarized below:

Action	By Whom	When	Conditionality
Agree on the Start-up funds (if any)	IFAD and the Borrower	As part of design	Negotiations
Draft FM manual (including matching grant disbursement mechanism) and investment guidelines and selection criteria have been established.	RADF	Start up	Start Up and disbursement condition for matching grant expenditure category
Opening of Designated Account, with operating mandate specified	Borrower/RADF	Start up	Disbursement condition
Format of the Quarterly financial statements to be agreed	RADF	Start up	
Agreement on audit TOR. The Audit TORs should be customized to take into account that the bulk of the expenditures will be related to Civil works	RADF/IFAD	Start up	
Explore the possibility to develop the capacity of the IA of MOA	RADF/IFAD	Start up	
Agree on pari-passu arrangements for drawing down the IFAD loan and the GEF grant. To be documented in the PIM/FAM	RADF/IFAD	Start up	

Flow of Funds



Appendix 8: Procurement

Public Procurement

1. State Procurement Agency of Georgia was created on 31 March 2014 according to the amendments of 21 March 2014 to Georgian Law of State Procurement. According to these amendments the former Competition and State Procurement Agency was divided into independent legal entities of public law — State Procurement Agency and Competition Agency. The State Procurement Agency is an independent legal entity of public law of Georgia which conducts oversight of the legitimacy of government procurement procedures and establishes the policy for regulation of procurement process. The structure and regulations of the Agency is approved and by Government of Georgia. The Government of Georgia exercises state control over the agency activities. The Agency is supervised by its chairman, which is appointed and dismissed by the Prime Minister of Georgia.
2. Public procurement in Georgia is regulated by the Law of Georgia on State Procurement that entered into force on 1 January 2006 and its subsequent amendments.
3. Major reforms have been implemented in the field of state procurement in the recent years, the creation of Georgian Electronic Government Procurement System in 2010 (Ge-GP System), which is one of the most transparent, fair and efficient electronic procurement system according to the assessment of various international organizations (OECD-SIGMA, World Bank). As a result of Ge-GP system the level of competition has significantly increased in state tenders, and its transparency and flexibility guarantee the systematic prevention of corruption whereby any person can fill claim electronic complaints that are reviewed by the Dispute Resolution Board. However, there are many exemptions that allow tendering outside the system and this area needs to be improved.
4. **Country Procurement Assessment.** The latest 2012 European Bank for Reconstruction and Development's (EBRD) Regional Public Procurement Legislation Self- Assessment for EBRD Regional 26 countries, of the quality of the public procurement legal framework scored '*high compliance*' for public procurement policies on the books, efficiency instruments, institutional and enforcement capacity, and transparency safeguards. The assessment also revealed regulatory gap ranging from 2 per cent (Pre-tendering Process) to 11 per cent (tendering process), and 10 per cent (post tendering process). These regulatory gaps highlight the opportunity for improvement in key public procurement policy areas with regard to transparency, efficiency and an appropriate institutional and enforcement framework.
5. **Goods, Works and Services.** The WB assessed the Ge-GP system and have decided to use the same for the Bank funded projects for procurement of simple goods following shopping procedures, below threshold of US\$ 100,000 with minor modifications to the current system as agreed with the Competition and State Procurement Agency (CSPA). Further modifications are being made with the support of the World Bank to enable the system to be used for major complex ICB and NCB procurement methods. Until Such time, works and services to be financed out of the proceeds of IFAD/GEF Financing would be carried out in accordance with IFAD procurement guidelines, and by observing the following specific principles:
 - Procurement will be carried out in accordance with Financing Agreement and any duly agreed amendments thereto;
 - Procurement will be conducted within the Programme implementation period, except as provided under Article 4.10(a)(ii) of IFAD General Conditions;
 - The cost of the procurement is not to exceed the availability of duly allocated funds as per the Financing Agreement;
 - Procurement is to be consistent with the duly approved annual work plan and budget (AWP/B) including a procurement plan for at least 18 months initially and subsequently, for 12 months; and
 - Procurement is to result in the best value for money.

6. All goods, works and services procured will be exempt from duties and taxes.
7. The following methods are recommended:
8. **Works.** The procurement of works will largely be carried out under National Competitive Bidding. The International Competitive Bidding will be applied for contracts estimated to cost USD 2 million equivalent and above, and National Shopping less than USD 100,000 equivalent.
9. **Goods.** Contracts for procurement of goods costing USD 500,000 equivalent or more will be awarded based on International Competitive Bidding; those costing USD 100,000 equivalent or more but less than USD 500,000 equivalent will be based on National Competitive Bidding; and less than USD 100,000 equivalent will be based on National Shopping.
10. **Non-consulting Services.** Contracts for procurement of non-consultancy services costing USD 200,000 equivalent or more will be awarded based on International Competitive Bidding; those costing USD 20,000 equivalent or more but less than USD 200,000 equivalent will be based on National Competitive Bidding; and less than USD 20,000 equivalent will be based on National Shopping.
11. **Consulting Services.** The Quality and Cost Based Selection will be the standard method applied unless otherwise approved. The following processes will apply: (i) Request for Proposal – for contracts with a value of USD 100,000 equivalent and above; and (ii) Request For Quotation - for contracts with a value of less than USD 100,000 equivalent. Contracts for procurement of individual consultancy or TA services will be based on National Shopping. These financial thresholds may be adjusted as appropriate, with prior IFAD approval, depending on the nature of the assignment. For audit firms (international and national), the WB shortlist will apply.
12. **Operating costs.** These expenditures, approved by IFAD on the basis of budgets (acceptable to the Fund) will be carried out by the RADF for Project implementation, management and monitoring, including the costs of support staff salaries, communication, editing, printing and publication, translation, vehicle operation and maintenance, bank charges, local travel costs and field trip expenses, office rentals, utilities, and office supplies.
13. Specific applicability for procurement items will be clearly identified in annual procurement plans.
14. The following **Prior Review** thresholds are proposed:
 - All Work, Goods and Non-Consulting Services tenders under ICB;
 - All Goods and Non-Consulting Services tenders under NCB;
 - Only invitation to quote (ITQ), including specifications prior to initiation of procurement process for simple goods less than USD 100,000 equivalent using government's e-procurement portal;
 - The solicitation and award of any contract for consulting firms estimated to cost USD 100,000 equivalent or more and all consulting services for individuals;
 - Any direct contracting or single-source selection.
15. The processes and procedures will be elaborated in the Project Implementation Manual and Letter to the Borrower.
16. **Procedure.** The PMU will be responsible and accountable for executing procurement in compliance with the stipulated procedures of financiers and Government. The bid evaluation committee will consist according to ministerial decree and its composition will be determined depending on the nature of the contract. The head of (PMU) will be the signatory of all contracts.
17. **Contracting.** Contracts for civil works will be based on unit costs and bills of quantities, while contracts for services will be based on achievement of deliverables and compliance with milestones rather than based on inputs, to the extent feasible.
18. **Post-review:** All other contracts would be subject to post-review and may be subject to procurement audit by the Fund. The project staff would maintain accurate records of all procurement

activities and documents related to the project. The procurement files would be maintained for review by IFAD supervision missions and independent audits. The project staff would also consolidate procurement activities into quarterly and annual progress reports.

19. **Ex post review:** The Project would retain all documentation up to five years after the closing date of the financing for examination by IFAD or by independent auditors. This documentation includes, but not be limited to, the signed original contract, the evaluation of the respective proposals and recommendation of award. IFAD does not finance expenditures for goods, works or consulting services that have not been procured in accordance with the procedures specified in the financing agreement. In such cases, IFAD may, in addition, exercise other remedies under the financing agreement, including cancellation of the amount in question from the financing. Even if the contract was awarded after obtaining a “no objection” from IFAD, IFAD may still declare mis-procurement if it concludes that the “no objection” was issued on the basis of incomplete, inaccurate or misleading information furnished by the Project or the terms and conditions of the contract had been modified without IFAD’s approval.

20. **Register of Contracts:** Procurement carried out at project level would be recorded and registered against the Procurement Plan. In addition, all contracts, with or without prior IFAD approval, would be listed in the Register of Contracts maintained by the procuring entity with the dates of approval as provided by IFAD. When a contract is amended, the amendment would be recorded in the Register of Contracts. If a contract is cancelled or declared ineligible for financing by IFAD, this information would be written in the Register of Contracts. As this register facilitates the review and approval of payment requests on contracts, it is to be updated and submitted to the IFAD Country Programme Manager on a quarterly basis. The sample form to be used and instructions are detailed in **Annex 6 of IFAD’s Loan Disbursement Handbook**. It would also be necessary that the RADF prepare annual statistics disaggregated by type and methods of procurement, for the overall procurement transactions carried out for the project.

21. **Bidding documents.** All bidding documents for the procurement of goods, works and services would be prepared by the procurement officer with the support of the technical expert(s), who would supply specifications, terms of reference, Bills of Quantities, etc. as required.

22. **Staffing and Capacity Development:** A Procurement and Contracts officer with required experience and familiarity with IFAD and WB procurement procedures would be required at the RADF. The position would be filled through a competitive recruitment process.

23. **Governance.** Georgia has been involved in a number of international initiatives and is party to the OECD Anti- Bribery Convention and member of The United Nations Convention against Corruption (UNCAC). Further Georgia has an action plan for anti-corruption for the period 2014 – 2016 and one of its priorities is related to Transparency and Reduction of Corruption-Related Risks in Public Finance and Public Procurement. Major achievements in fighting corruption and bribery were made by Georgia according to various international organization reports.

24. In particular, good governance measures built in to the project would include (a) undertaking all necessary measures to create and sustain a corruption-free environment for activities under the project; (b) instituting, maintaining and ensuring compliance with internal procedures and controls for activities under the project, following international best practice standards for the purpose of preventing corruption, and shall require all relevant ministries, agents and contractors to refrain from engaging in any such activities; and (c) complying with the requirements of IFAD’s Policy on Preventing Fraud and Corruption in its Activities and Operations.

25. IFAD will also seek the concrete assurances of the Government of Georgia to ensure that: (i) it is engaged actively to allow potential Project beneficiaries and other stakeholders to channel and address any complaints they may have on the implementation of the project; and (ii) after conducting necessary investigations, the Government shall report immediately to IFAD any malfeasance or maladministration that has occurred under the project.

26. **Procurement Plan (PP).** The PP will be updated and approved by IFAD at least annually.

Appendix 9: Project cost and financing

Main assumptions

1. **Introduction.** This section describes the assumptions underlying the estimation of Project costs and financing plan. Project costs are based on May 2014 prices.
2. **Project Period.** The proposed Project will be financed over a four-year period.
3. **Inflation.** Since 2009, the monetary policy of the National Bank of Georgia (NBG) has relied on inflation targeting. This regime implies the announcement of an inflation target that should be maintained in the medium term. For the year 2014, the inflation target is defined at the level of 6%, and at 5% for 2015. According to NBG, in the long-run, the inflation target will gradually decrease to 3%.
4. The inflation rate increased to 3.4% in April 2014 after relatively long period of deflation in 2012-2013. The increase in inflation is, in part, a result of the elimination of deflationary pressure from the supply side, which was reflected in food prices. Imported prices also made an impact on inflation. An inflation rate of 3% has been assumed for the whole Project period taking into consideration the NBG long-term forecast and the recent years trend.
5. **Exchange Rate.** Georgia has a floating exchange rate regime. Such a regime is characterized by short-term fluctuations of the exchange rate and, because of this flexibility, it is capable of absorbing shocks. However, in the long run the exchange rate is stable. In Georgia the exchange rate is formed on the foreign exchange market that consists of commercial banks, corporations and individuals that are interested in trading with foreign currencies.
6. During the last five years the average annual GEL/USD exchange rate has fluctuated from GEL 1.88 in June 2010 to GEL 1.62 to the US dollar (USD) in May 2012. The volatility of the GEL has in large part been linked to the fortunes of the euro zone. However, the overall steady weakening against the US dollar since beginning of 2013 also reflects lowering in expected foreign direct investment (FDI) inflows and signs of a widening trade deficit.
7. With taking into account the historical and on-going trends, the base exchange rate for this analysis has been set at GEL 1.75 to USD 1.00. This rate was also prevailing in May 2014 and it is also close to the historical average for last several years.
8. Project costs are presented in USD. Conversions from current USD values into GEL use the following constant purchasing power exchange rates:

Table 16: Constant Purchasing Power Exchange Rates (GEL/USD)

Up to Project Start-up	PY1	PY2	PY3	PY4
1.75	1.77	1.80	1.84	1.87

9. **Taxes and Duties.** As with past projects, the Government of Georgia will provide the VAT exemption on supplies of goods and services used for the Project. In addition, it also will provide the exemption on tax and custom duties. Therefore, the Government co-financing of the Project would be in form of waiving of all taxes and duties on goods and services procured under the Project. The rates and amounts of the taxes and duties in the Project's costs presented below are defined only to determine the Government contribution and to value the total Project cost.
10. The items to be imported for the Project attract import and excise duties of varying proportions, and a value-added tax (VAT) of 18% is levied on all imported goods. International technical assistance is assumed to be contracted with 0% tax, national technical assistance with a payment of 20% for physical persons. Currently, the VAT rate in the country is 18% and applies to all goods and services used for the Project (including the contractual services, training and studies).

11. **Expenditure Accounts.** The expenditure accounts, together with the breakdown of taxes, physical contingencies and the average rates for foreign exchange used in the analysis are shown in the Table 19 below. Physical contingencies have only been applied to items for which the required amounts could not reasonably be estimated, and have not been applied to the funds earmarked for grants.

12. Under the previous projects, contractors undertaking civil works were exempt from VAT; a procedure that is expected to be continued under the Project. However, VAT has been included in the costing so as to estimate the government contribution in the form of taxes and duties. All goods to be procured under the project are expected to bear duties and/or tariffs between zero and five percent.

Table 17: Expenditure Accounts

Description	Taxes	Physical Contingency	Foreign Exchange
Investment Costs			
Civil Works	18%	5%	20%
Equipment and Goods	18%	5%	80%
Vehicles	18%	0%	73%
Technical Assistance			
International TA	0%	-	100%
National TA	20%	-	0%
Training	18%	0%	15%
Grants	0%	0%	30%
Recurrent Costs			
Salaries	20%	-	0%
Operating Costs	18%	5%	60%

13. **Project Structure.** The project has three components, as follows: 1. Irrigation and Agricultural Value Chain Investment; 2. Climate smart agricultural and VC development, and 3. Project Management. Details of each component are described in the relevant Appendixes of the Project Design Report.

Project Costs

14. The total investment and recurrent Project costs, including physical and price contingencies, are estimated at about USD 31.3 million (GEL 54.8 million). The foreign exchange component is estimated at USD 7.5 million or about 24% of the total Project costs. The amount of exempted taxes and duties make up approximately USD 1.8 million. Funds allocated to the project management are about 2.5% of the total Project costs.

15. The summary tables (Tables 24 to 27) and detailed cost tables (Tables 28 to 30) are presented in this Appendix.

Table 18: Project Costs by Component

	(Local '000)			(US\$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
Component 1. Irrigation and Agricultural Value Chain Investment	35,031.4	11,627.5	46,658.9	20,018.0	6,644.3	26,662.3	25	92
Component 2. Climate smart agricultural and value chain development	2,159.4	477.5	2,637.0	1,234.0	272.9	1,506.9	18	5
Project Management	1,048.4	265.7	1,314.2	599.1	151.8	751.0	20	3
Total BASELINE COSTS	38,239.3	12,370.8	50,610.1	21,851.0	7,069.0	28,920.1	24	100
Physical Contingencies	817.5	216.9	1,034.4	467.2	124.0	591.1	21	2
Price Contingencies	2,845.0	317.4	3,162.5	1,625.7	181.4	1,807.1	10	6
Total PROJECT COSTS	41,901.8	12,905.2	54,807.0	23,943.9	7,374.4	31,318.3	24	108

16. **Disbursement Accounts and Rules.** The disbursement accounts and the financing rules (total allocation net of taxes) adopted for each of the disbursement accounts are summarised in Table 21 below. The exempted taxes and duties account is called Government of Georgia (GOG). BEN is expected contribution of the grant beneficiaries/ receivers.

Table 19: Disbursement Accounts and Financing Rules

Description	Financing Rules (total allocation net of taxes)
Investment Capital:	
Smallholders Grants	IFAD_LOAN (10%), GEF_GRANT (30%), BEN (60%)
Agribusiness Grants	IFAD_LOAN (35%), GEF_GRANT (5%), BEN (60%)
Civil works:	
Irrigation	IFAD_LOAN (82%), GEF_GRANT (13%), BEN (5%)
VC Infrastructure	IFAD_LOAN (60%), GEF_GRANT (20%), BEN (20%)
Equipment and Furniture	IFAD_LOAN (100%) or GEF GRANT (100%) as applicable
Vehicles	GEF GRANT (100%)
Technical Assistance	IFAD_LOAN (100%) or GEF GRANT (100%) or IFAD_GRANT (100%), as applicable
Training	IFAD_GRANT (70%), GEF_GRANT (30%) or IFAD_GRANT (75%), GEF_GRANT (25%) as applicable
Operating Expenses	Comp 1: IFAD_LOAN (100%); Comp 2: IFAD_GRANT (100%), GEF_GRANT (100%); Comp 3: IFAD_LOAN (100%) or GEF_GRANT (100%) as applicable
Salaries and Allowances	IFAD_LOAN (100%) or GEF_GRANT (100%) as applicable

Financing

17. The IFAD loan, USD 13.3 million (42.5% of the total Project costs), would finance: 44% of the Component 1 - Value Chain Enhancing Infrastructure (USD 12.8 million), and 65% of the Project Management (USD 0.5 million).
18. The GEF Grant, USD 5.3 million (16.9% of the total Project costs), would finance: 14% of the Component 1 - Value Chain Enhancing Infrastructure (USD 4.0 million), 65% of the Component 2 - Climate smart agricultural VC development (USD 1.0 million), and 27% of the Project Management (USD 0.2 million).
19. The IFAD Grant in amount of USD 0.5 million would finance only about 32.5% of the Component 2 - Climate smart agricultural VC development.
20. The Government contribution is estimated at USD 2.5 million (7.8%) and it is the total amount of exempted taxes and duties. Beneficiaries' contribution to the financing is estimated at around USD 9.8 million (31.2% of the total Project Costs).
21. The Government contribution would be the exemptions from taxes and duties on all Project inputs that involve funding from the IFAD Loan or any other external source of funding associated with the IFAD loan (IFAD Grant and GEF Grant). The estimate of taxes and duties was based on the rates in effect prevailing at the time of the design. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD loan/grant, any future changes in tax legislation would have to apply to the Project.
22. The recurrent costs for the positions of the Finance Manager, Accountant, Procurement & Contracts Officer, Planning, M&E Officer and Administration assistant are computed 50% as there will be an overlap with financing of the Georgia Irrigation and Land Market Development (GILMD) project of the World Bank. The Project Manager and drivers will be financed 100% during all project years.
23. Tables 22 and 23 below provide summaries by Project components and expenditure accounts of the proposed financing arrangement. The other summary financing tables are provided in this Appendix (Tables 31 to 33).

Table 20: Financing Plan by Components (USD)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Component 1. Irrigation and Agricultural Value Chain Investment	12,794.2	44.1	-	-	4,089.2	14.1	9,760.8	33.7	2,359.2	8.1	29,003.4	92.6
Component 2. Climate smart agricultural and value chain development	-	-	500.0	32.5	1,002.6	65.1	-	-	38.1	2.5	1,540.7	4.9
Project Management	505.8	65.3	-	-	208.2	26.9	-	-	60.3	7.8	774.3	2.5
Total PROJECT COSTS	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Table 21: Financing Plan by Expenditure Accounts (USD)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs												
Training	17.9	13.5	69.7	52.4	25.5	19.2	-	-	20.0	15.0	133.1	0.4
Equipments and goods	26.0	24.8	-	-	59.7	57.2	-	-	18.8	18.0	104.5	0.3
Grants	4,019.9	25.6	324.0	2.1	2,307.1	14.7	9,076.5	57.7	0.0	-	15,727.6	50.2
National and International TA	69.6	6.4	44.8	4.2	950.2	88.0	-	-	15.3	1.4	1,079.9	3.4
Vehicles	-	-	-	-	66.0	82.0	-	-	14.5	18.0	80.5	0.3
Civil Works	8,524.1	65.5	-	-	1,462.3	11.2	684.2	5.3	2,342.3	18.0	13,013.0	41.6
Total Investment Costs	12,657.5	42.0	438.5	1.5	4,870.9	16.2	9,760.8	32.4	2,410.9	8.0	30,138.6	96.2
II. Recurrent Costs												
Salaries	510.6	56.7	-	-	390.0	43.3	-	-	-	-	900.6	2.9
Operation and Maintenance	120.7	50.1	61.5	25.5	18.0	7.5	-	-	41.0	17.0	241.1	0.8
Other Operation Costs	11.2	29.5	-	-	21.1	55.5	-	-	5.7	15.0	38.0	0.1
Total Recurrent Costs	642.5	54.5	61.5	5.2	429.1	36.4	-	-	46.7	4.0	1,179.7	3.8
Total PROJECT COSTS	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Summary Cost Tables

Table 22: Project Components by Year -- Totals Including Contingencies

	Totals Including Contingencies (Local '000)					Totals Including Contingencies (US\$ '000)				
	2015	2016	2017	2018	Total	2015	2016	2017	2018	Total
Component 1. Irrigation and Agricultural Value Chain Investment	1,019.1	9,266.0	21,893.9	18,576.8	50,755.9	582.3	5,294.9	12,510.8	10,615.3	29,003.4
Component 2. Climate smart agricultural and value chain development	604.6	779.8	734.8	577.0	2,696.1	345.5	445.6	419.9	329.7	1,540.7
Project Management	531.9	238.6	285.1	299.4	1,355.0	303.9	136.4	162.9	171.1	774.3
Total PROJECT COSTS	2,155.5	10,284.4	22,913.9	19,453.2	54,807.0	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3

Table 23: Expenditure Accounts by Components - Totals Including Contingencies (US\$ '000)

	Component 1. Value Chain Enhancing Infrastructure	Component 2. Climate smart agricultural VC development	Project Management	Total
I. Investment Costs				
Training	-	112.0	21.1	133.1
Equipments and goods	-	48.5	56.0	104.5
Grants	15,127.6	600.0	-	15,727.6
National and International TA	595.8	316.1	168.1	1,079.9
Vehicles	-	-	80.5	80.5
Civil Works	13,013.0	-	-	13,013.0
Total Investment Costs	28,736.3	1,076.6	325.7	30,138.6
II. Recurrent Costs				
Salaries	168.0	390.0	342.6	900.6
Operation and Maintenance	99.0	74.0	68.0	241.1
Other Operation Costs	-	-	38.0	38.0
Total Recurrent Costs	267.0	464.0	448.6	1,179.7
Total PROJECT COSTS	29,003.4	1,540.7	774.3	31,318.3
Taxes	2,359.2	38.1	60.3	2,457.6
Foreign Exchange	6,937.5	278.9	158.0	7,374.4

Table 24: Expenditure Accounts Breakdown (US\$ '000)

	Base Cost				Physical Contingencies				Price Contingencies				Total Incl. Cont.			
	Local (Excl. Taxes)		Duties & Taxes	Total	Local (Excl. Taxes)		Duties & Taxes	Total	Local (Excl. Taxes)		Duties & Taxes	Total	Local (Excl. Taxes)		Duties & Taxes	Total
	For. Exch.				For. Exch.				For. Exch.				For. Exch.			
I. Investment Costs																
Training	18.9	88.1	18.9	125.8	-	-	-	-	0.4	5.8	1.1	7.3	19.3	93.8	20.0	133.1
Equipments and goods	78.4	2.0	17.6	98.0	3.9	0.1	0.9	4.9	1.2	0.1	0.3	1.6	83.6	2.2	18.8	104.5
Grants	4,455.0	10,395.0	-	14,850.0	-	-	-	-	107.9	769.7	-	877.6	4,562.9	11,164.7	-	15,727.6
National and International TA	-	1,031.1	14.4	1,045.5	-	-	-	-	-	33.6	0.9	34.5	-	1,064.7	15.3	1,079.9
Vehicles	58.4	7.2	14.4	80.0	-	-	-	-	0.3	0.1	0.1	0.5	58.7	7.3	14.5	80.5
Civil Works	2,311.7	7,166.3	2,080.5	11,558.5	115.6	358.3	104.0	577.9	68.5	650.3	157.8	876.6	2,495.8	8,174.9	2,342.3	13,013.0
Total Investment Costs	6,922.4	18,689.5	2,145.8	27,757.8	119.5	358.4	104.9	582.8	178.3	1,459.5	160.1	1,798.0	7,220.2	20,507.5	2,410.9	30,138.6
II. Recurrent Costs																
Salaries	-	900.6	-	900.6	-	-	-	-	-	-	-	-	-	900.6	-	900.6
Operation and Maintenance	136.3	52.2	38.6	227.2	3.9	1.5	1.1	6.6	2.8	3.3	1.3	7.4	143.1	57.1	41.0	241.1
Other Operation Costs	10.4	19.0	5.2	34.6	0.5	1.0	0.3	1.7	0.2	1.2	0.3	1.7	11.1	21.2	5.7	38.0
Total Recurrent Costs	146.7	971.9	43.8	1,162.3	4.5	2.5	1.4	8.3	3.0	4.5	1.5	9.1	154.2	978.9	46.7	1,179.7
Total	7,069.0	19,661.4	2,189.6	28,920.1	124.0	360.9	106.3	591.1	181.4	1,464.1	161.7	1,807.1	7,374.4	21,486.3	2,457.6	31,318.3

Table 25: Expenditure Accounts by Years -- Totals Including Contingencies

	Totals Including Contingencies				
	2015	2016	2017	2018	Total
I. Investment Costs					
Training	22.3	36.9	37.9	36.0	133.1
Equipments and goods	52.2	16.0	19.9	16.3	104.5
Grants	626.0	4,066.2	5,752.0	5,283.3	15,727.6
National and International TA	124.8	251.5	353.3	350.3	1,079.9
Vehicles	80.5	-	-	-	80.5
Civil Works	-	1,202.2	6,645.4	5,165.4	13,013.0
Total Investment Costs	905.9	5,572.8	12,808.5	10,851.4	30,138.6
II. Recurrent Costs					
Salaries	257.8	234.8	214.8	193.2	900.6
Operation and Maintenance	58.9	59.8	60.7	61.7	241.1
Other Operation Costs	9.2	9.4	9.6	9.8	38.0
Total Recurrent Costs	325.9	304.0	285.1	264.7	1,179.7
Total PROJECT COSTS	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3

Detailed Cost Tables

Table 26: Component 1. Irrigation and Agricultural Value Chain Investment (US\$ '000)

Detailed Costs	Base Cost (US\$ '000)					Totals Including Contingencies (US\$ '000)				
	2015	2016	2017	2018	Total	2015	2016	2017	2018	Total
I. Investment Costs										
A. 1.1 Irrigation and VC infrastructure										
1. Irrigation										
Construction /a	-	1,103.0	5,515.0	3,860.5	10,478.5	-	1,202.2	6,162.7	4,423.0	11,787.9
2. Value chain infrastructure										
Construction /b	-	-	432.0	648.0	1,080.0	-	-	482.7	742.4	1,225.2
Subtotal	-	1,103.0	5,947.0	4,508.5	11,558.5	-	1,202.2	6,645.4	5,165.4	13,013.0
B. 1.2 Facilitating private investment in agricultural value chains										
1. Matching grants in VCs to:										
Window 1: Smallholders /c	500.0	1,250.0	1,500.0	1,750.0	5,000.0	506.0	1,295.4	1,592.0	1,902.3	5,295.7
Window 2: Agribusinesses /d	-	2,500.0	3,750.0	3,000.0	9,250.0	-	2,590.8	3,980.0	3,261.1	9,831.9
Subtotal	500.0	3,750.0	5,250.0	4,750.0	14,250.0	506.0	3,886.2	5,572.0	5,163.3	15,127.6
2. Grants Management										
Grant Administration - Window 1 (small grants)	-	80.0	160.0	160.0	400.0	-	80.0	160.0	160.0	400.0
Grant Administration - Window 2 (large grants - APMA)	-	28.5	34.2	37.1	99.8	-	28.5	34.2	37.1	99.8
Promotion, W1 advisory and follow-up - W1 & W2	10.0	30.0	30.0	20.0	90.0	10.2	31.4	32.3	22.2	96.0
Subtotal	10.0	138.5	224.2	217.1	589.8	10.2	139.9	226.5	219.2	595.8
Subtotal	510.0	3,888.5	5,474.2	4,967.1	14,839.8	516.2	4,026.1	5,798.5	5,382.6	15,723.3
Total Investment Costs	510.0	4,991.5	11,421.2	9,475.6	26,398.3	516.2	5,228.3	12,443.9	10,548.0	28,736.3
II. Recurrent Costs										
Senior Engineer	24.0	24.0	24.0	24.0	96.0	24.0	24.0	24.0	24.0	96.0
Engineer	18.0	18.0	18.0	18.0	72.0	18.0	18.0	18.0	18.0	72.0
Travel and logistics for engineering supervision	24.0	24.0	24.0	24.0	96.0	24.2	24.6	24.9	25.3	99.0
Total Recurrent Costs	66.0	66.0	66.0	66.0	264.0	66.2	66.6	66.9	67.3	267.0
Total	576.0	5,057.5	11,487.2	9,541.6	26,662.3	582.3	5,294.9	12,510.8	10,615.3	29,003.4

\a Including design and supervision.

\b Including design and supervision

\c Financing structure per one grant sub-project: IFAD Loan - 10%, GEF Grant - 30% and beneficiaries' contribution is 60%.

\d Financing structure per one grant sub-project: IFAD Loan - 35%, GEF Grant - 5% and beneficiaries' contribution is 60% .

Table 27: Component 2. Climate smart agricultural VC development (US\$ '000)

Detailed Costs	Base Cost (US\$ '000)					Totals Including Contingencies (US\$ '000)				
	2015	2016	2017	2018	Total	2015	2016	2017	2018	Total
I. Investment Costs										
A. Farmer training and technology plots										
1. CSA Farmer advisory support & training /a										
Trainer /b	-	12.8	12.8	10.2	35.7	-	13.3	13.7	11.3	38.4
Assistant Trainer /c	-	10.0	10.0	4.0	24.0	-	10.5	10.8	4.4	25.7
Transportation and lunches for trainees /d	-	13.5	13.5	10.8	37.8	-	14.0	14.4	11.8	40.3
Publications	-	15.0	15.0	15.0	45.0	-	16.0	16.2	16.3	48.5
Subtotal	-	51.3	51.3	40.0	142.5	-	53.8	55.1	43.9	152.8
2. CSA technology plots	120.0	180.0	180.0	120.0	600.0	120.0	180.0	180.0	120.0	600.0
Subtotal	120.0	231.3	231.3	160.0	742.5	120.0	233.8	235.1	163.9	752.8
B. Value chain assessment and CSA policy support										
1. CS Value Chain assessment and policy support	40.0	40.0	31.0	31.0	142.0	40.6	41.8	33.4	34.4	150.2
2. CSA Specialists	24.0	24.0	24.0	24.0	96.0	24.4	25.1	25.8	26.6	101.9
Subtotal	64.0	64.0	55.0	55.0	238.0	65.0	66.9	59.2	61.0	252.1
C. VC facilitation and multi-stakeholder processes /e	17.0	17.0	17.0	17.0	68.0	17.2	17.7	18.2	18.6	71.7
Total Investment Costs	201.0	312.3	303.3	232.0	1,048.5	202.2	318.4	312.5	243.6	1,076.6
II. Recurrent Costs										
A. Value Chain Coordinator / Deputy PM	24.0	24.0	24.0	24.0	96.0	24.0	24.0	24.0	24.0	96.0
B. Value chain & agribusiness specialists	21.6	43.2	43.2	21.6	129.6	21.6	43.2	43.2	21.6	129.6
C. GEF Coordinator	21.6	21.6	21.6	21.6	86.4	21.6	21.6	21.6	21.6	86.4
D. International Expert on VC development /f	58.0	20.0	-	-	78.0	58.0	20.0	-	-	78.0
E. Travel and logistics for value chain facilitation	17.1	17.1	17.1	17.1	68.4	18.1	18.4	18.7	18.9	74.0
Total Recurrent Costs	142.3	125.9	105.9	84.3	458.4	143.3	127.2	107.5	86.1	464.0
Total	343.3	438.1	409.1	316.3	1,506.9	345.5	445.6	419.9	329.7	1,540.7

\a In total 150 one-day practical training with field/orchard visits. About 20 trainees per one training.

\b 5 man-days per 1 training (preparation and conduct), including travel time

\c 5 man-days per 1 training (preparation and conduct), including travel time

\d Lunch - USD 17 per 1 trainee, transportation - USD 10 per 1 trainee. 1400 trainees in total.

\e Including travels, per diem, cost of workshops, etc.

\f 3 months in PY1 and 1 months in PY2. Fee - USD 600/day X 21 days per month; DSA - USD 180/day X 30 days per month; USD4,000 in PY1 and USD 2,000 in PY2 for travels to/from Georgia

Table 28: Project Management, (US\$ '000)

Detailed Costs												Totals Including Contingencies (US\$ '000)							
		Quantities					Unit Cost (US\$)	Base Cost (US\$ '000)											
		2015	2016	2017	2018	Total		2015	2016	2017	2018	Total	2015	2016	2017	2018	Total		
I. Investment Costs																			
A. Vehicles 4x4	no	2	-	-	-	2	40,000	80.0	-	-	-	80.0	80.5	-	-	-	-	80.5	
B. Office Equipment and Furniture																			
Desk Computer	unit	4	-	2	-	6	1,000	4.0	-	2.0	-	6.0	4.2	-	2.2	-	-	6.4	
Laptop	unit	3	-	1	-	4	1,500	4.5	-	1.5	-	6.0	4.7	-	1.6	-	-	6.4	
Printer	unit	2	-	-	-	2	500	1.0	-	-	-	1.0	1.1	-	-	-	-	1.1	
Photocopy Machine HD	unit	1	-	-	-	1	5,000	5.0	-	-	-	5.0	5.3	-	-	-	-	5.3	
Minor Equipment	lumpsum							5.0	-	-	-	5.0	5.3	-	-	-	-	5.3	
Subtotal								19.5	-	3.5	-	23.0	20.6	-	3.8	-	-	24.4	
C. IT Backup system	lumpsum							10.0	-	-	-	10.0	10.6	-	-	-	-	10.6	
D. Office furniture (desk, tables, chairs, shelves, safe)	lumpsum							20.0	-	-	-	20.0	21.1	-	-	-	-	21.1	
E. M&E and Audit																			
Survey - Baseline	lumpsum							25.0	-	-	-	25.0	25.4	-	-	-	-	25.4	
Mid-term Evaluation (incl. survey)	lumpsum							-	-	20.0	-	20.0	-	-	21.5	-	-	21.5	
Final Impact Assessment (incl. survey)	lumpsum							-	-	-	25.0	25.0	-	-	-	-	27.7	27.7	
Audit	lumpsum							20.0	20.0	20.0	20.0	80.0	20.3	20.9	21.5	22.2	-	84.9	
Subtotal								45.0	20.0	40.0	45.0	150.0	45.7	20.9	43.1	49.9	-	159.6	
F. Workshops and Training																			
Inception/Completion workshops	lumpsum							4.0	-	-	4.0	8.0	4.1	-	-	-	4.4	8.5	
Staff training	lumpsum							5.0	5.0	5.0	5.0	20.0	5.1	5.2	5.3	5.5	-	21.1	
Subtotal								9.0	5.0	5.0	9.0	28.0	9.1	5.2	5.3	9.9	-	29.6	
Total Investment Costs								183.5	25.0	48.5	54.0	311.0	187.5	26.1	52.2	59.8	-	325.7	
II. Recurrent Costs																			
A. Salaries /a																			
Project Manager	person-month	12	12	12	12	48	2,000	24.0	24.0	24.0	24.0	96.0	24.0	24.0	24.0	24.0	24.0	96.0	
Finance Manager	person-month	6	6	6	6	24	1,800	10.8	10.8	10.8	10.8	43.2	10.8	10.8	10.8	10.8	10.8	43.2	
Accountant	person-month	6	6	6	6	24	1,600	9.6	9.6	9.6	9.6	38.4	9.6	9.6	9.6	9.6	9.6	38.4	
Procurement & Contracts Officer	person-month	6	6	6	6	24	1,600	9.6	9.6	9.6	9.6	38.4	9.6	9.6	9.6	9.6	9.6	38.4	
Planning, M&E Officer	person-month	6	6	6	6	24	1,400	8.4	8.4	8.4	8.4	33.6	8.4	8.4	8.4	8.4	8.4	33.6	
Administration assistant	person-month	6	6	6	6	24	800	4.8	4.8	4.8	4.8	19.2	4.8	4.8	4.8	4.8	4.8	19.2	
Drivers	person-month	12	24	24	24	84	700	8.4	16.8	16.8	16.8	58.8	8.4	16.8	16.8	16.8	16.8	58.8	
Subtotal								75.6	84.0	84.0	84.0	327.6	75.6	84.0	84.0	84.0	-	327.6	
B. Technical Assistance																			
PIM Consultant /b	lumpsum							15.0	-	-	-	15.0	15.0	-	-	-	-	15.0	
C. Travel and per diem	per-annum							10.7	10.7	10.7	10.7	42.8	11.3	11.5	11.7	11.9	-	46.4	
D. Operation and Maintenance																			
Vehicles O&M	per-annum							5.0	5.0	5.0	5.0	20.0	5.3	5.4	5.5	5.5	-	21.7	
E. Other Operating Costs																			
Telecommunication	per-annum							3.0	3.0	3.0	3.0	12.0	3.2	3.3	3.3	3.4	-	13.2	
Utilities /c	per-annum							2.6	2.6	2.6	2.6	10.6	2.8	2.9	2.9	3.0	-	11.6	
Stationery	per-annum							1.5	1.5	1.5	1.5	6.0	1.6	1.6	1.7	1.7	-	6.6	
Other	per-annum							1.5	1.5	1.5	1.5	6.0	1.6	1.6	1.7	1.7	-	6.6	
Subtotal								8.6	8.6	8.6	8.6	34.6	9.2	9.4	9.6	9.8	-	38.0	
Total Recurrent Costs								114.9	108.3	108.3	108.3	440.0	116.4	110.3	110.7	111.2	-	448.6	
Total								298.4	133.3	156.8	162.3	751.0	303.9	136.4	162.9	171.1	-	774.3	

^a The positions of Finance Manager, Accountant, Procurement&Contracts Officer, Planning/M&E Officer and Administration Assistant will be cost-shared with a WB project at 50%.

^b PIM - Project Implementation Manual

^c Includes water and electricity.

Summary of Costs and Financing

Table 29: Component Project cost summary

	(Local '000)			(US\$ '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
Component 1. Irrigation and Agricultural Value Chain Investment	35,031.4	11,627.5	46,658.9	20,018.0	6,644.3	26,662.3	25	92
Component 2. Climate smart agricultural and value chain development	2,159.4	477.5	2,637.0	1,234.0	272.9	1,506.9	18	5
Project Management	1,048.4	265.7	1,314.2	599.1	151.8	751.0	20	3
Total BASELINE COSTS	38,239.3	12,370.8	50,610.1	21,851.0	7,069.0	28,920.1	24	100
Physical Contingencies	817.5	216.9	1,034.4	467.2	124.0	591.1	21	2
Price Contingencies	2,845.0	317.4	3,162.5	1,625.7	181.4	1,807.1	10	6
Total PROJECT COSTS	41,901.8	12,905.2	54,807.0	23,943.9	7,374.4	31,318.3	24	108

Table 30: Disbursement Accounts by Financiers (USD '000)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Training	-	-	114.5	65.1	44.7	25.4	-	-	16.8	9.5	176.0	0.6
2. Equipment and Goods	26.0	24.8	-	-	59.7	57.2	-	-	18.8	18.0	104.5	0.3
4. Grants	4,019.9	25.6	324.0	2.1	2,307.1	14.7	9,076.5	57.7	0.0	-	15,727.6	50.2
5. Works	8,524.1	65.5	-	-	1,462.3	11.2	684.2	5.3	2,342.3	18.0	13,013.0	41.6
6. Vehicles	-	-	-	-	66.0	82.0	-	-	14.5	18.0	80.5	0.3
7. Technical Assistance	87.6	8.4	-	-	931.0	89.8	-	-	18.4	1.8	1,037.0	3.3
8. Recurrent Costs	131.9	47.3	61.5	22.0	39.1	14.0	-	-	46.7	16.7	279.1	0.9
9. Salaries	510.6	56.7	-	-	390.0	43.3	-	-	-	-	900.6	2.9
Total PROJECT COSTS	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Table 31: Expenditure Accounts by Financiers (USD '000)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Investment Costs												
Training	17.9	13.5	69.7	52.4	25.5	19.2	-	-	20.0	15.0	133.1	0.4
Equipments and goods	26.0	24.8	-	-	59.7	57.2	-	-	18.8	18.0	104.5	0.3
Grants	4,019.9	25.6	324.0	2.1	2,307.1	14.7	9,076.5	57.7	0.0	-	15,727.6	50.2
National and International TA	69.6	6.4	44.8	4.2	950.2	88.0	-	-	15.3	1.4	1,079.9	3.4
Vehicles	-	-	-	-	66.0	82.0	-	-	14.5	18.0	80.5	0.3
Civil Works	8,524.1	65.5	-	-	1,462.3	11.2	684.2	5.3	2,342.3	18.0	13,013.0	41.6
Total Investment Costs	12,657.5	42.0	438.5	1.5	4,870.9	16.2	9,760.8	32.4	2,410.9	8.0	30,138.6	96.2
II. Recurrent Costs												
Salaries	510.6	56.7	-	-	390.0	43.3	-	-	-	-	900.6	2.9
Operation and Maintenance	120.7	50.1	61.5	25.5	18.0	7.5	-	-	41.0	17.0	241.1	0.8
Other Operation Costs	11.2	29.5	-	-	21.1	55.5	-	-	5.7	15.0	38.0	0.1
Total Recurrent Costs	642.5	54.5	61.5	5.2	429.1	36.4	-	-	46.7	4.0	1,179.7	3.8
Total PROJECT COSTS	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Costs by component

Table 32: Components by Financiers (USD '000)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Component 1. Irrigation and Agricultural Value Chain Investment	12,794.2	44.1	-	-	4,089.2	14.1	9,760.8	33.7	2,359.2	8.1	29,003.4	92.6
Component 2. Climate smart agricultural and value chain development	-	-	500.0	32.5	1,002.6	65.1	-	-	38.1	2.5	1,540.7	4.9
Project Management	505.8	65.3	-	-	208.2	26.9	-	-	60.3	7.8	774.3	2.5
Total PROJECT COSTS	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Table 33: Expenditure Accounts Project Cost Summary

	(Local '000)			(US\$ '000)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
I. Investment Costs								
Training	187.1	33.0	220.2	106.9	18.9	125.8	15	-
Equipments and goods	34.3	137.2	171.5	19.6	78.4	98.0	80	-
Grants	18,191.3	7,796.3	25,987.5	10,395.0	4,455.0	14,850.0	30	51
National and International TA	1,829.5	-	1,829.5	1,045.5	-	1,045.5	-	4
Vehicles	37.8	102.2	140.0	21.6	58.4	80.0	73	-
Civil Works	16,181.9	4,045.5	20,227.4	9,246.8	2,311.7	11,558.5	20	40
Total Investment Costs	36,461.9	12,114.1	48,576.1	20,835.4	6,922.4	27,757.8	25	96
II. Recurrent Costs								
Salaries	1,576.1	-	1,576.1	900.6	-	900.6	-	3
Operation and Maintenance	159.0	238.5	397.5	90.9	136.3	227.2	60	1
Other Operation Costs	42.3	18.1	60.5	24.2	10.4	34.6	30	-
Total Recurrent Costs	1,777.4	256.7	2,034.0	1,015.7	146.7	1,162.3	13	4
Total BASELINE COSTS	38,239.3	12,370.8	50,610.1	21,851.0	7,069.0	28,920.1	24	100
Physical Contingencies	817.5	216.9	1,034.4	467.2	124.0	591.1	21	2
Price Contingencies	2,845.0	317.4	3,162.5	1,625.7	181.4	1,807.1	10	6
Total PROJECT COSTS	41,901.8	12,905.2	54,807.0	23,943.9	7,374.4	31,318.3	24	108

Table 34: Detailed Cost Estimate by Expenditure Category

	(Local '000)			(US\$ '000)			%	% Total
	Foreign	Local	Total	Foreign	Local	Total	Foreign Exchange	Base Costs
A. Investment Costs								
Training	33.0	154.1	187.1	18.9	88.1	106.9	18	-
Equipments and goods	137.2	3.4	140.6	78.4	2.0	80.4	98	-
Grants	7,796.3	18,191.3	25,987.5	4,455.0	10,395.0	14,850.0	30	51
National and International TA	-	1,804.3	1,804.3	-	1,031.1	1,031.1	-	4
Vehicles	102.2	12.6	114.8	58.4	7.2	65.6	89	-
Civil Works	4,045.5	12,541.0	16,586.4	2,311.7	7,166.3	9,478.0	24	33
Duties & Taxes	-	3,755.2	3,755.2	-	2,145.8	2,145.8	-	7
Total Investment Costs	12,114.1	36,461.9	48,576.1	6,922.4	20,835.4	27,757.8	25	96
B. Recurrent Costs								
Salaries	-	1,576.1	1,576.1	-	900.6	900.6	-	3
Operation and Maintenance	238.5	91.4	329.9	136.3	52.2	188.5	72	1
Other Operation Costs	18.1	33.3	51.4	10.4	19.0	29.4	35	-
Duties & Taxes	-	76.6	76.6	-	43.8	43.8	-	-
Total Recurrent Costs	256.7	1,777.4	2,034.0	146.7	1,015.7	1,162.3	13	4
Total BASELINE COSTS	12,370.8	38,239.3	50,610.1	7,069.0	21,851.0	28,920.1	24	100
Physical Contingencies	216.9	817.5	1,034.4	124.0	467.2	591.1	21	2
Price Contingencies	317.4	2,845.0	3,162.5	181.4	1,625.7	1,807.1	10	6
Total PROJECT COSTS	12,905.2	41,901.8	54,807.0	7,374.4	23,943.9	31,318.3	24	108

Table 35: Expenditure Accounts by Components - Base Costs (USD '000)

	Component 1. Value Chain Enhancing Infrastructure	Component 2. Climate smart agricultural value chain development	Project Management	Total	Physical Contingencies	
					%	Amount
I. Investment Costs						
Training	-	105.8	20.0	125.8	-	-
Equipments and goods	-	45.0	53.0	98.0	5.0	4.9
Grants	14,250.0	600.0	-	14,850.0	-	-
National and International TA	589.8	297.7	158.0	1,045.5	-	-
Vehicles	-	-	80.0	80.0	-	-
Civil Works	11,558.5	-	-	11,558.5	5.0	577.9
Total Investment Costs	26,398.3	1,048.5	311.0	27,757.8	2.1	582.8
II. Recurrent Costs						
Salaries	168.0	390.0	342.6	900.6	-	-
Operation and Maintenance	96.0	68.4	62.8	227.2	2.9	6.6
Other Operation Costs	-	-	34.6	34.6	5.0	1.7
Total Recurrent Costs	264.0	458.4	440.0	1,162.3	0.7	8.3
Total BASELINE COSTS	26,662.3	1,506.9	751.0	28,920.1	2.0	591.1
Physical Contingencies	577.9	5.7	7.5	591.1	-	-
Price Contingencies						
Inflation						
Local	1,585.6	26.0	14.1	1,625.7	-	-
Foreign	177.6	2.2	1.7	181.4	-	-
Subtotal Inflation	1,763.2	28.1	15.8	1,807.1	-	-
Devaluation	-	-	-	-	-	-
Subtotal Price Contingencies	1,763.2	28.1	15.8	1,807.1	2.3	42.1
Total PROJECT COSTS	29,003.4	1,540.7	774.3	31,318.3	2.0	633.2
Taxes	2,359.2	38.1	60.3	2,457.6	4.6	113.9
Foreign Exchange	6,937.5	278.9	158.0	7,374.4	1.7	127.4

Table 36: Expenditure Accounts by Components - Totals Including Contingencies (USD '000)

	Component 1. Value Chain Enhancing Infrastructure	Component 2. Climate smart agricultural value chain development	Project Management	Total
I. Investment Costs				
Training	-	112.0	21.1	133.1
Equipments and goods	-	48.5	56.0	104.5
Grants	15,127.6	600.0	-	15,727.6
National and International TA	595.8	316.1	168.1	1,079.9
Vehicles	-	-	80.5	80.5
Civil Works	13,013.0	-	-	13,013.0
Total Investment Costs	28,736.3	1,076.6	325.7	30,138.6
II. Recurrent Costs				
Salaries	168.0	390.0	342.6	900.6
Operation and Maintenance	99.0	74.0	68.0	241.1
Other Operation Costs	-	-	38.0	38.0
Total Recurrent Costs	267.0	464.0	448.6	1,179.7
Total PROJECT COSTS	29,003.4	1,540.7	774.3	31,318.3
Taxes	2,359.2	38.1	60.3	2,457.6
Foreign Exchange	6,937.5	278.9	158.0	7,374.4

Table 37: Project Components by Year -- Base Costs (USD '000)

	Base Cost (US\$ '000)				
	2015	2016	2017	2018	Total
Component 1. Irrigation and Agricultural Value Chain Investment	576.0	5,057.5	11,487.2	9,541.6	26,662.3
Component 2. Climate smart agricultural and value chain development	343.3	438.1	409.1	316.3	1,506.9
Project Management	298.4	133.3	156.8	162.3	751.0
Total BASELINE COSTS	1,217.7	5,629.0	12,053.2	10,020.2	28,920.1
Physical Contingencies	4.5	58.0	300.3	228.2	591.1
Price Contingencies					
Inflation					
Local	8.0	168.6	667.5	781.6	1,625.7
Foreign	1.5	21.3	72.6	86.0	181.4
Subtotal Inflation	9.5	189.9	740.1	867.7	1,807.1
Devaluation	-	-	-	-	-
Subtotal Price Contingencies	9.5	189.9	740.1	867.7	1,807.1
Total PROJECT COSTS	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3
Taxes	42.3	240.2	1,221.1	954.1	2,457.6
Foreign Exchange	328.5	1,487.6	3,009.2	2,549.1	7,374.4

Table 38: Project Components by Year -- Totals Including Contingencies (USD '000)

	Totals Including Contingencies (Local '000)					Totals Including Contingencies (US\$ '000)				
	2015	2016	2017	2018	Total	2015	2016	2017	2018	Total
Component 1. Irrigation and Agricultural Value Chain Investment	1,019.1	9,266.0	21,893.9	18,576.8	50,755.9	582.3	5,294.9	12,510.8	10,615.3	29,003.4
Component 2. Climate smart agricultural and value chain development	604.6	779.8	734.8	577.0	2,696.1	345.5	445.6	419.9	329.7	1,540.7
Project Management	531.9	238.6	285.1	299.4	1,355.0	303.9	136.4	162.9	171.1	774.3
Total PROJECT COSTS	2,155.5	10,284.4	22,913.9	19,453.2	54,807.0	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3

Table 39: Project Components by Year -- Investment/Recurrent Costs (USD '000)

	Totals Including Contingencies (US\$ '000)				
	2015	2016	2017	2018	Total
Component 1. Irrigation and Agricultural Value Chain Investment					
Investment Costs	516.2	5,228.3	12,443.9	10,548.0	28,736.3
Recurrent Costs	66.2	66.6	66.9	67.3	267.0
Subtotal	582.3	5,294.9	12,510.8	10,615.3	29,003.4
Component 2. Climate smart agricultural and value chain development					
Investment Costs	202.2	318.4	312.5	243.6	1,076.6
Recurrent Costs	143.3	127.2	107.5	86.1	464.0
Subtotal	345.5	445.6	419.9	329.7	1,540.7
Project Management					
Investment Costs	187.5	26.1	52.2	59.8	325.7
Recurrent Costs	116.4	110.3	110.7	111.2	448.6
Subtotal	303.9	136.4	162.9	171.1	774.3
Total PROJECT COSTS	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3
Total Investment Costs	905.9	5,572.8	12,808.5	10,851.4	30,138.6
Total Recurrent Costs	325.9	304.0	285.1	264.7	1,179.7

Table 40: Expenditure Accounts by Years -- Base Costs (USD '000)

	Base Cost				Foreign Exchange	
	2015	2016	2017	2018	Total	% Amount
I. Investment Costs						
Training	22.0	35.5	35.5	32.8	125.8	15.0 18.9
Equipments and goods	49.5	15.0	18.5	15.0	98.0	80.0 78.4
Grants	620.0	3,930.0	5,430.0	4,870.0	14,850.0	30.0 4,455.0
National and International TA	123.0	245.3	342.0	335.3	1,045.5	- -
Vehicles	80.0	-	-	-	80.0	73.0 58.4
Civil Works	-	1,103.0	5,947.0	4,508.5	11,558.5	20.0 2,311.7
Total Investment Costs	894.5	5,328.8	11,773.0	9,761.6	27,757.8	24.9 6,922.4
II. Recurrent Costs						
Salaries	257.8	234.8	214.8	193.2	900.6	- -
Operation and Maintenance	56.8	56.8	56.8	56.8	227.2	60.0 136.3
Other Operation Costs	8.6	8.6	8.6	8.6	34.6	30.0 10.4
Total Recurrent Costs	323.2	300.2	280.2	258.6	1,162.3	12.6 146.7
Total BASELINE COSTS	1,217.7	5,629.0	12,053.2	10,020.2	28,920.1	24.4 7,069.0
Physical Contingencies	4.5	58.0	300.3	228.2	591.1	21.0 124.0
Price Contingencies						
Inflation						
Local	8.0	168.6	667.5	781.6	1,625.7	- -
Foreign	1.5	21.3	72.6	86.0	181.4	100.0 181.4
Subtotal Inflation	9.5	189.9	740.1	867.7	1,807.1	10.0 181.4
Devaluation	-	-	-	-	-	- -
Subtotal Price Contingencies	9.5	189.9	740.1	867.7	1,807.1	10.0 181.4
Total PROJECT COSTS	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3	23.5 7,374.4
Taxes	42.3	240.2	1,221.1	954.1	2,457.6	- -
Foreign Exchange	328.5	1,487.6	3,009.2	2,549.1	7,374.4	- -

Table 41: Expenditure Accounts by Years -- Totals Including Contingencies (USD '000)

	Totals Including Contingencies				Total
	2015	2016	2017	2018	
I. Investment Costs					
Training	22.3	36.9	37.9	36.0	133.1
Equipments and goods	52.2	16.0	19.9	16.3	104.5
Grants	626.0	4,066.2	5,752.0	5,283.3	15,727.6
National and International TA	124.8	251.5	353.3	350.3	1,079.9
Vehicles	80.5	-	-	-	80.5
Civil Works	-	1,202.2	6,645.4	5,165.4	13,013.0
Total Investment Costs	905.9	5,572.8	12,808.5	10,851.4	30,138.6
II. Recurrent Costs					
Salaries	257.8	234.8	214.8	193.2	900.6
Operation and Maintenance	58.9	59.8	60.7	61.7	241.1
Other Operation Costs	9.2	9.4	9.6	9.8	38.0
Total Recurrent Costs	325.9	304.0	285.1	264.7	1,179.7
Total PROJECT COSTS	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3

Table 42: Expenditure Accounts Breakdown (USD '000)

	Base Cost				Physical Contingencies				Price Contingencies				Total Incl. Cont.			
	Local		Duties & Taxes	Total	Local		Duties & Taxes	Total	Local		Duties & Taxes	Total	Local		Duties & Taxes	Total
	For. Exch.	(Excl. Taxes)			For. Exch.	(Excl. Taxes)			For. Exch.	(Excl. Taxes)			For. Exch.	(Excl. Taxes)		
I. Investment Costs																
Training	18.9	88.1	18.9	125.8	-	-	-	-	0.4	5.8	1.1	7.3	19.3	93.8	20.0	133.1
Equipments and goods	78.4	2.0	17.6	98.0	3.9	0.1	0.9	4.9	1.2	0.1	0.3	1.6	83.6	2.2	18.8	104.5
Grants	4,455.0	10,395.0	-	14,850.0	-	-	-	-	107.9	769.7	-	877.6	4,562.9	11,164.7	-	15,727.6
National and International TA	-	1,031.1	14.4	1,045.5	-	-	-	-	-	33.6	0.9	34.5	-	1,064.7	15.3	1,079.9
Vehicles	58.4	7.2	14.4	80.0	-	-	-	-	0.3	0.1	0.1	0.5	58.7	7.3	14.5	80.5
Civil Works	2,311.7	7,166.3	2,080.5	11,558.5	115.6	358.3	104.0	577.9	68.5	650.3	157.8	876.6	2,495.8	8,174.9	2,342.3	13,013.0
Total Investment Costs	6,922.4	18,689.5	2,145.8	27,757.8	119.5	358.4	104.9	582.8	178.3	1,459.5	160.1	1,798.0	7,220.2	20,507.5	2,410.9	30,138.6
II. Recurrent Costs																
Salaries	-	900.6	-	900.6	-	-	-	-	-	-	-	-	-	900.6	-	900.6
Operation and Maintenance	136.3	52.2	38.6	227.2	3.9	1.5	1.1	6.6	2.8	3.3	1.3	7.4	143.1	57.1	41.0	241.1
Other Operation Costs	10.4	19.0	5.2	34.6	0.5	1.0	0.3	1.7	0.2	1.2	0.3	1.7	11.1	21.2	5.7	38.0
Total Recurrent Costs	146.7	971.9	43.8	1,162.3	4.5	2.5	1.4	8.3	3.0	4.5	1.5	9.1	154.2	978.9	46.7	1,179.7
Total	7,069.0	19,661.4	2,189.6	28,920.1	124.0	360.9	106.3	591.1	181.4	1,464.1	161.7	1,807.1	7,374.4	21,486.3	2,457.6	31,318.3

Table 43: Local/Foreign/Taxes by Financiers (USD '000)

	IFAD Loan		IFAD Grant		GEF Grant		Beneficiaries		GoG		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
I. Foreign	3,276.6	44.4	153.0	2.1	1,155.1	15.7	2,789.6	37.8	-0.0	-0.0	7,374.4	23.5
II. Local (Excl. Taxes)	10,023.4	46.6	347.0	1.6	4,144.9	19.3	6,971.1	32.4	0.0	-	21,486.3	68.6
III. Taxes	-	-	-	-	-	-	-	-	2,457.6	100.0	2,457.6	7.8
Total Project	13,300.0	42.5	500.0	1.6	5,300.0	16.9	9,760.8	31.2	2,457.6	7.8	31,318.3	100.0

Table 44: Financing Plan (USD '000)

	Foreign	Local	Total	Percent
IFAD Loan	3,276.6	10,023.4	13,300.0	42.5
IFAD Grant	153.0	347.0	500.0	1.6
GEF Grant	1,155.1	4,144.9	5,300.0	16.9
Beneficiaries	2,789.6	6,971.1	9,760.8	31.2
GoG	-0.0	2,457.6	2,457.6	7.8
Total	7,374.4	23,943.9	31,318.3	100.0

Table 45: Financing of Investment/Recurrent Costs (USD '000)

	Financing				
	2015	2016	2017	2018	Total
I. Investment Costs					
IFAD Loan	97.5	1,878.7	5,973.0	4,708.2	12,657.5
IFAD Grant	75.8	133.5	134.5	94.7	438.5
GEF Grant	398.1	951.0	1,816.6	1,705.2	4,870.9
Beneficiaries	303.6	2,381.0	3,675.0	3,401.1	9,760.8
GoG	30.9	228.6	1,209.3	942.1	2,410.9
Total Investment Costs	905.9	5,572.8	12,808.5	10,851.4	30,138.6
II. Recurrent Costs					
IFAD Loan	164.8	158.7	159.2	159.8	642.5
IFAD Grant	15.0	15.2	15.5	15.7	61.5
GEF Grant	134.7	118.5	98.7	77.3	429.1
Beneficiaries	-	-	-	-	-
GoG	11.4	11.6	11.8	12.0	46.7
Total Recurrent Costs	325.9	304.0	285.1	264.7	1,179.7
Total Financing of Costs	1,231.7	5,876.8	13,093.7	11,116.1	31,318.3

Appendix 10: Economic and Financial Analysis

Project Benefits

1. The Project is expected to increase incomes and strengthen resilience of smallholder farmers in selected project areas. It is also envisaged that the project would sustainably reduce poverty of the rural population. Benefits would derive from: (i) crop intensification and increased production due to rehabilitation of a number of small irrigation systems and value chain infrastructures; (ii) increased crop production, improved soil condition and cost savings through introduction of CSA (conservation agriculture); and (iii) improved value chains due to regular access to productive infrastructure and financial services and to better commercial relationship between smallholders and wholesalers, exporters and processors.
2. *Unquantifiable benefits.* The project will also support the development of partnerships and collaborations with established financial service providers for credit and financial services. It will leverage deeper VC networks and wider support to the VC to facilitate the partner financial institutions to expand and/or pilot provision of financial services to VC actors in a lower credit risk environment. The project will also support the partner financial institutions to develop their understanding of specific VCs and business models to be able to better assess credit risks and design and test appropriate financial products.
3. Increased access to finance and improved irrigation and VC infrastructures is expected to boost economic activities including trade and employment. However, principal increases in incomes would be largely dependent on small holders' willingness to move towards commercially viable agriculture by adopting CSA practices, improving their market access and supporting marketing linkages.
4. The project will also support value chain assessments and policy support, including identification of credible market opportunities, analysis of competitiveness potential against market requirements, potential VC scale and coverage, identification of main constraints in the value chain and production clusters, determination of indicative typical ROI (return on investment) for farmers and agribusinesses, etc. All these activities will produce unquantifiable benefits as well.

Financial Analysis

Irrigation and VC infrastructure models

5. The project will invest in demand-driven public and value chain infrastructure in target value chain cluster areas. Investments are expected to primarily include rehabilitation works including irrigation (tertiary and off-farm/ quaternary) and a smaller number of value chain-related infrastructure (such as rentable wholesale facilities, certified testing facilities etc.).
6. In identification of the benefits deriving from improved irrigation it is assumed that the irrigation schemes already exist and provide some irrigation to the farmers' fields, but the project will help to rehabilitate and improve them, so they can provide more stable water supply. Therefore, the difference between WOP and WP situations do not refer to the difference between rainfed and irrigated fields, but rather to difference between bad irrigation and improved irrigation. In the table below, there are some yield assumptions that were developed based on the experience of the previous projects (including WB project). As it can be seen from the table, the differences in yields of irrigated crops of WOP and WP situations are not that significant as it could be if to compare rainfed and irrigated crops.

Table 46: Crop yields assumptions, kg/ha

Crop	WOP	WP	Incremental
Wheat (rainfed)	1400		
Wheat (irrigated)	1900	2850	50%
Maize (rainfed)	1900		
Maize (irrigated)	2200	3300	50%
Vineyard	2600	3850	48%
Fruits (apple)	3500	5000	43%
Fruits (plum)	4700	7000	49%
Melons and berries	9500	13000	37%
Potatoes	9800	15000	53%
Forage crops (lucerne)	3300	4800	45%
Sunflower	1500	2200	47%
Haricot beans	1000	1400	40%
Nuts		2000	
Vegetables (tomato)	10000	14000	40%
Vegetables (cucumber)		13000	

7. Although, in some cases it will be a construction of new irrigation schemes or rehabilitation of very obsolete ones. In those cases of course the difference between WOP and WP situations will be rather significant and it would increase per ha income dramatically, and consequently would increase the economic return of the project. However, it was assumed that most likely the project will be aimed to improve existing irrigation schemes, rather than construct new schemes.

8. The **irrigation model** illustrates the possible incremental benefits that would derive from the rehabilitation of an irrigation scheme of 12 ha of arable lands that belong to 10 smallholder farms and households (about 1.2 ha per each of farm on average). The irrigated arable lands are cultivated for cereals, orchards and vegetables, currently lacking reliable water supply due to depreciation of the irrigation scheme. They are cultivated with high value crops with low yields because of lack of good irrigation.

9. The anticipated main benefit would occur from keeping of the existing production and in yield increase as a result of increasing irrigation supply. It was assumed that cropping pattern consists of 6 ha of wheat, 1.2 ha of plum orchards and 4.8 ha of potato generating a net annual benefit of around GEL 2,248 (USD 1,284) in the without project situation. For the with-project situation a 50% increase in yields on average³¹ was assumed. The investment costs are estimated at about GEL 55,650³² (USD 31,800 in total, USD 2,650 per one ha) with the complete rehabilitation of the irrigation scheme, out of which about 5% is the households' contribution. Annual operation and maintenance cost is estimated at about 8% of investment cost for tertiary irrigation and higher level canals and at about 5% of investment cost for on-farm equipment. The model records an NPV of GEL 27,896 (USD 15,940) over a twenty-year period and an IRR of 17.2% which is well above the opportunity cost (10%).

10. The model shows that each of the participating smallholder farm or household would increase annual income by more than GEL 1,000 or about 14% of their annual income only because of the improvement of small irrigation systems (resulting in about 20-25% of attributable income increase after the project completion). It is estimated that in total around 7,700 households will benefit from the rehabilitation of small scale infrastructure systems supported by the project.

³¹ Particularly for irrigated wheat the yield will increase from 1,900kg to 2,850 kg per one ha (50% increase), for irrigated plum – from 4,700 to 7,000 kg per one ha (49%) and for irrigated potato – from 9,800 to 15,000 kg per one ha (53%).

³² Including investments in improvement of tertiary irrigation and higher level canals, and in on-farm equipment.

11. Quantification of the benefits deriving from the improvement of **value chain-related infrastructure** such as rentable wholesale facilities and certified testing facilities suggested that it will result in about USD 735,000 of incremental annual benefits in total. The investment costs estimation is about USD 1.2 million over the project implementation period, including 20% of the beneficiaries' contribution. Approximately 1,200 smallholder farms and households will be benefiting from the improvement of the value chain-related infrastructures with increase of their annual income from 1.5% to 5% in 20-year perspective.

Matching Grant Models

12. Matching grants will support private investments that tackle identified value chain constraints and/or demonstrate replicable innovations aligned with each value chain strategy and action plan jointly developed with the value chain stakeholders. The total cost of the grant scheme will be equivalent to USD 6.1 million which is expected to leverage approximately an additional USD 9.1 million in private investment. In total it will be almost 50% of the project investments.

13. The project will provide two types of matching grants: (i) smallholder producer grants (for primary production related investments, especially for CSA practices) and (ii) agribusiness grants (for non-primary production related investments).

14. Most smallholders grow cereals, fruit and vegetables in small plots of land (0.6-0.7 hectare on average) using conventional technologies with low crop productivity. Several models were prepared to analyze the financial and economic impact of the introduction of the CSA technologies for smallholders. The analysis is based on the illustrative models of the **small grant subprojects** likely to be implemented by smallholders, particularly, the production of legume grains, off-season vegetables, fodder crops and wheat. In addition, one of the small grant models presents financial results for a beekeeping business.

15. **Legume grains.** Production of legume grains (chickpea, lentil, faba bean, etc.) is one of those grant activities that will be most likely selected by small farmers. The model presents production of legume grain by a small farm on 2 ha of arable land. The model is generating a net benefit of GEL 948 per year. The investment costs estimation is about GEL 1,225 (USD 700) which will be mainly spent for training and equipment. The model records an NPV of GEL 3,804 over a ten-year period and an IRR of 74%.

16. Another model for small grant financing shows how attractive the production of **offseason vegetables** can be for small farmers. Particularly it presents investment in a small tunnel greenhouse on 0.2 ha which can be established by a small farmer on his/her own land plot. Total investment in the first year is estimated at about GEL 8,569 (USD 3,428). The model records a financial NPV of GEL 17,885 thousand over a ten-year period and a very high financial IRR of 103% as the result of a very good return of such investment.

17. Next model presents introduction of a **crop rotation** on 1.5 ha of rainfed wheat that belongs to 1 or 2 households. The presented crop rotation is rather simple and easy for implementation. It includes cultivation of legumes crops (bean) in the first year followed by two years of wheat. The main benefit will be from the increased yield of wheat (15-20%) and an additional revenue coming from the production of legume grain. The model is generating a net benefit of from GEL 176 to GEL 629 per year. The investment costs estimation is about GEL 1,750 (USD 1,000) which will be mainly spent for training. About 30% of the cost is the beneficiaries' contribution. The model records an NPV of GEL 475 over a ten-year period and an IRR of 22.2%. It is estimated that implementation of these grants will increase incomes of about 5,000 smallholders by about 1-2%.

18. **Beekeeping model.** This model demonstrates the likely returns from an investment in 15 beehives and one-year operational costs amounting to about GEL 2,739 (USD 1,565). The investment would result in production of 330 kg of honey and 100 kg of wax per year. The model indicates that the household benefits would be improved by at least GEL 2,111 (USD 1,206) with project per year.

19. Next two models illustrate **agricultural businesses** likely to be implemented by farmer groups, cooperatives and associations:

20. **Cold storage.** The model presents establishing of a cold storage facility with capacity of about 48 tons of fresh fruits/table grapes per year. It is assumed that the total investment in the first year would be GEL 107,268 (USD 61,296). The IRR on the incremental net benefits is 72%, which is well above the 10% opportunity cost of capital. The business of the cold store is to fetch higher prices during the off-pick season and to reduce losses. At the same time it will provide the smallholder farmers with market for their increased horticultural production.

21. **Fruits/vegetables dryer.** Fruit drying is a good means for adding value to fruit production. This is an important marketing tool especially considering the short period of harvesting and the volatility of the local and export markets for local fresh produce. There is a big market for Georgian dried fruits, and the local production is not even sufficient to cover local market needs. It is assumed that the total investment in the first year would be GEL 341,250 (USD 195,000). The model records an NPV of GEL 360,876 over a fifteen-year period and an IRR of 34.3%.

Economic Analysis

ERR =25.7% NPV =USD9.5 mln;

22. The period of analysis is 20 years to account for the phasing and gestation period of the proposed interventions. The scenario presented in the economic analysis is conservative; the analysis that appears below is indicative and demonstrates the scope of profitability originated from the conditions prevailing at the time of the preparation. The analysis attempts to identify quantifiable benefits that directly relate to the activities undertaken following the implementation of the components, or that can be attributed to the project's implementation.

23. The illustrative models described above have been used for the calculation of the overall benefit stream, on the basis of economic prices.

24. Considering the illustrative examples as a reasonable assumption of the investments likely to be implemented, an estimated average incremental annual net benefit per 1 USD of investments is used. The incremental net benefits were calculated by multiplying this indicator by the amount of estimated investments, but considering the gradual increase of such benefits over the period of five years.

Table 47: Estimated economic returns to smallholders grant sub-projects

Incremental annual net income per 1 GEL of investment:

Production of grain legumes (chickpea, lentil, faba bean)	0.24									
Off-season vegetables production	0.14									
Crops rotation	0.14									
Beekeeping	0.11									
Average	0.16									
	Project Years									
	Unit	1	2	3	4	5	6	7	8	9 10-20
Phasing of benefits, %		60%	80%	100%	100%	100%	100%	100%	100%	100%
Composite factor		0.09	0.12	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Economic investment costs of smallholders grants	USD mln	0.5	1.3	1.5	1.8					
Incremental net benefits of PY1	USD mln	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Incremental net benefits of PY2	USD mln		0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Incremental net benefits of PY3	USD mln			0.1	0.2	0.2	0.2	0.2	0.2	0.2
Incremental net benefits of PY4	USD mln				0.2	0.2	0.3	0.3	0.3	0.3
Incremental net benefits of PY5	USD mln					0.0	0.0	0.0	0.0	0.0
Total incremental net benefits deriving from grant sub-projects	USD mln	0.0	0.1	0.3	0.5	0.6	0.6	0.6	0.6	0.6

25. No financing flows have been undertaken in the calculations as they are already reflected in the project costs or represent transfer payments (loans and taxes). The incremental economic costs have been calculated by the removal of price contingencies and taxes/duties. The total economic cost of the Project for 4 years implementation period amounts to about USD 27.2 million.

Table 48: Project Economic Costs (COSTAB estimated)

	2015	2016	2017	2018	Total
Component 1. Irrigation and Agricultural Value Chain Investment	571.9	4 900.1	10 656.5	8 910.8	25 039.3
Component 2. Climate smart agricultural and value chain development	338.5	429.3	400.3	307.8	1 475.9
Project Management	269.9	126.0	149.1	155.0	700.0
Total	1 180.3	5 455.4	11 205.8	9 373.7	27 215.3

26. Given the above benefit and cost streams, the base case Economic Rate of Return (ERR) is estimated at 25.7%. The base case net present value of the project's net benefit stream, discounted at 10%, is USD 9.5 million.

Table 49: Summary Table of Project Economic Analysis

Item	Unit	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10-20
Adjusted Project Economic costs	USD mln.	0.7	0.8	0.8	0.7						
Incremental Gross Incomes streams											
Irrigation and VC infrastructure	USD mln.	-	0.92	4.51	2.6	1.25	1.53	1.53	1.53	1.53	1.53
Smallholders grants	USD mln.	0.04	0.14	0.30	0.50	0.58	0.62	0.62	0.62	0.62	0.62
Agribusiness grants	USD mln.	-	0.15	0.43	0.74	0.88	0.94	0.94	0.94	0.94	0.94
Incremental Gross Incomes, total	USD mln.	0.04	0.63	3.78	1.40	2.70	3.09	3.09	3.09	3.09	3.09
Project Incremental Gross Income	USD mln.	-	0.64	1.38	4.61	2.14	2.70	3.09	3.09	3.09	3.09
ENPV @10% (USD mln)											
ERR											

27. **Sensitivity Analysis.** Economic returns were tested against changes in benefits and costs and for various lags in the realisation of benefits. In relative terms, the ERR is equally sensitive to changes in costs and in benefits. In absolute terms, these changes do not have a significant impact on the ERR, and the economic viability is not threatened by either a 20% decline in benefits or by a 20% increase in costs. An increase in total project costs by 20% would reduce the base ERR to about 24.1%. A one-year delay in project benefits reduces the ERR to 23.7%. The results are presented in the following table:

Table 50: Project Sensitivity Analysis

Sensitivity Analysis (20-year period)	Base case	Costs Increase			Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+50%	-10%	-20%	- 30%	1 year	2 years
ERR	25.7%	24.9%	24.1%	22.1%	24.8%	23.7%	22.5%	23.7%	21.8%
ENPV (USD mln)	9.5	9.3	9.1	8.3	8.3	7.1	6.0	8.0	6.7

Financial and Economic Prices

		Financial	Economic	
	Unit	GEL	GEL	CF
Outputs				
Field Crops				
Wheat	kg	0.50	0.69	1.37
Wheat Straw	kg	0.15	0.13	0.87
Alfalfa (5GEL/bale =15kg)	kg	0.40	0.35	0.87
Onion	kg	0.80	0.70	0.87
Tomato	kg	0.65	0.57	0.87
Potato	kg	0.60	0.52	0.87
Cucumber	kg	0.50	0.43	0.87
Maize	kg	0.60	0.52	0.87
Melon	kg	0.20	0.20	1.00
Haricot beans	kg	2.00	2.00	1.00
Grain legumes	kg	1.00	1.00	1.00
Sunflower	kg	0.70	0.61	0.87
Fruit				
Apple	kg	0.80	0.70	0.87
Plum	kg	0.30	0.26	0.87
Peach	kg	0.50	0.43	0.87
Grapes	kg	0.90	0.78	0.87
Nuts	kg	1.40	1.22	0.87
Investments				
Agricultural machinery				
Small tractor 18 HP	each	6 600	5 739	0.87
Tractor 25 HP	each	14 850	12 913	0.87
Tractor 40 HP	each	19 800	17 217	0.87
Tractor 85 HP	each	41 250	35 870	0.87
Implements:				
Plougher (small)	each	990	861	0.87
Plougher (large)	each	4 125	3 587	0.87
Cultivator (small)	each	1 155	1 004	0.87
Cultivator (large)	each	4 125	3 587	0.87
Mower	each	2 475	2 152	0.87
Harrower	each	1 650	1 435	0.87
Trailer (3 ton)	each	4 125	3 587	0.87
Sprayer	each	1 650	1 435	0.87
Potato Seeder	each	2 145	1 865	0.87
Wheat Seeder	each	2 475	2 152	0.87
Potato Collector	each	1 815	1 578	0.87
Cutter	each	2 310	2 009	0.87

		Financial	Economic	
	Unit	GEL	GEL	CF
Machinery Services				
Horticulture crop				
Ploughing	ha	100	87	0.87
Cultivation	ha	70	61	0.87
Spraying	ha	35	30	0.87
Seeding	ha	50	43	0.87
Cereals				
Ploughing (cereals and vineyard)	ha	120	104	0.87
Spraying (cereals and vineyards)	ha	45	39	0.87
Cultivation	ha	70	61	0.87
Harvesting	ha	170	148	0.87
pressing and binding	ha	180	157	0.87
Baling	ha	0.3	0.2	0.87
Inputs				
Fertilizers, Pesticides, etc.				
Ammonium nitrate	kg	0.9	0.6	0.72
Fertilizer (NPK)	kg	1.2	1.0	0.87
Fertilizer (SP)	kg	0.9	0.8	0.90
Compost (50kg/bag)	bag	55	48	0.87
Pesticides	litre	40	35	0.87
Herbicides	kg	90	78	0.87
Fungicide	kg	120	104	0.87
Inputs				
Seed				
Seed - local wheat	kg	0.8	0.7	0.87
Seed - improved wheat /a	kg	1.7	2.3	1.37
Seed-potato	kg	1.5	1.3	0.87
Seed - local maize	kg	1.0	0.9	0.87
Seed - improved maize /a		1.7	1.5	0.87
Seed -alfalfa	kg	15.0	13.0	0.87
Seed-onion	kg	300	261	0.87
Seedlings - tomato (0.5kg/ha)	ha	1 600	1 391	0.87
Seedlings - cucumber (4kg/ha)	ha	200.00	173.9	0.87
Seedlings-Apple	unit	5.0	4.3	0.87
Seed - harricot beans	kg	5.0	4.3	0.87
Other Costs				
Diesel	litre	2.2	1.9	0.87
Transportation	ton	10.0	8.7	0.87
Bags	each	0.3	0.2	0.87
Boxes	each	0.5	0.4	0.87
Irrigation rehabilitation	ha	2 625.0	2 282.6	0.87
Labour				
Hired labour	day	20.0	16.0	0.80

Small Irrigation Scheme Rehabilitation

Estimated Returns to Irrigation Works, GEL

Estimated Returns to Irrigation Works, GEL				12 ha		Irrigation water, 1000m3/ha		Total irrigation water, 1000m3						
Crop	Cropping pattern		Net incremental benefits per ha	Total net incremental benefits	WOP	WP	WOP	WP	Incremental	WOP				
	%	ha												
Wheat	50	6.0	436	2 619	0.5	2.5	3.0	15.0		210	249.4			
Plums	10	1.2	433	519	1.0	4.0	1.2	4.8		286	247.2			
Potato	40	4.8	3 186	15 292	1.0	5.0	4.8	24.0		1752	1820.5			
Total	100	12		18 430			9.0	43.8	34.8	2248				
Cropping Intensity	100													
Total incremental net benefits (GEL)			18 430											
Incremental net benefits of irrigation improvements (GEL)			Development year		1	2	3	4	5	6	7	8	9	10-20
					0	9 215	14 744	18 430	18 430	18 430	18 430	18 430	18 430	18 430
Rehabilitation of existing irrigation scheme per 1 ha														
Improvement of tertiary irrigation /a			GEL	2 625										
Higher level canals improvement /b			GEL	263										
On-farm equipment /c			GEL	1 750										
Total investment			GEL	4 638										
O&M per 1 ha														
O&M of tertiary and higher level canals improvement			GEL	8%		231	231	231	231	231	231	231	231	231
O&M of on-farm equipment			GEL	5%		88	88	88	88	88	88	88	88	88
Total O\$M						319	319	319	319	319	319	319	319	319
Total costs per 1 ha			GEL		4 638	319	319	319	319	319	319	319	319	319
			Development year		1	2	3	4	5	6	7	8	9	10
Financial Budget (GEL)					0	9 215	14 744	14 744	14 744	14 744	14 744	14 744	14 744	14 744
Incremental Benefits														
Total costs per 12 ha			GEL		55 650	3 822	3 822	3 822	3 822	3 822	3 822	3 822	3 822	3 822
Total Net Benefits					-55 650	5 393	10 922	10 922	10 922	10 922	10 922	10 922	10 922	10 922
			IRR		17.2%									
			NPV @10% (GEL)		27 896									

a/ Estimated cost of irrigation per 1 ha is USD 1,500. Beneficiary contribution is 5%.

b/ USD 150 per ha

c/ USD 1,000 for on-farm equipment

Small Grant: Production of grain legumes (chickpea, lentil, faba bean)

Cultivated area, ha		2										
Item	Unit	Unit Cost, GEL	With Project									
			1	2	3	4	5	6	7	8	9	10
Main Production												
Grain legumes	kg	1.0	2000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Investment Cost												
Training	lumpsum		525									
Equipment for grain cleaning and drying	lumpsum		700									
Production Cost												
Seeds	kg	1.3	160	160	160	160	160	160	160	160	160	160
Cultivations	GEL/ha	572	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144
Irrigation	GEL/ha	150	300	300	300	300	300	300	300	300	300	300
Labour Inputs	days	20	20	20	20	20	20	20	20	20	20	20
FINANCIAL BUDGET, GEL												
Revenues												
Grain legumes			2 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000
Total Revenues			2 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000
Investment Costs												
Training			525									
Equipment for grain cleaning and drying			700									
Investment Costs, Total			1 225									
Operational Inputs												
Seeds			208	208	208	208	208	208	208	208	208	208
Cultivations			1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144
Irrigation			300	300	300	300	300	300	300	300	300	300
Labour Inputs			400	400	400	400	400	400	400	400	400	400
Total Operational Inputs			2 052	2 052	2 052	2 052	2 052	2 052	2 052	2 052	2 052	2 052
Gross Income			- 1 277	948	948	948	948	948	948	948	948	948
Incremental Gross Income			- 1 277	948	948	948	948	948	948	948	948	948
IRR		74%										
NPV @ 10% (GEL)		3 804										

Small Grant: Off-Season vegetables production: Tunnel Greenhouse/Hot-Frame (0.2ha)

YIELDS AND INPUTS

			Without	With Project									
Production and inputs	Unit	Unit Cost	Project	1	2	3	4	5	6	7	8	9	10-15
Main Production													
Off-season vegetables	kg	0.98	2 600.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0
	Sub-total		2 600.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0	6 000.0
Inputs													
Investment b/													
Plastic film	sq.m	2.0	0	2 000	0	0	0	0	0	0	0	0	0
Wooden framing	sq.m	1.0	0	2 000	0	0	0	0	0	0	0	0	0
Recurrent													
Seed	gr	1.5	120	195	195	195	195	195	195	195	195	195	195
Ammonium nitrate	kg	0.90	15	30	30	30	30	30	30	30	30	30	30
SP	kg	0.90	12	18	18	18	18	18	18	18	18	18	18
Manure	ton	50.0	6	12	12	12	12	12	12	12	12	12	12
Land prep. and cultivation (manual)	per day	20.0	6	6	6	6	6	6	6	6	6	6	6
Firewood	m3	60.0		15	15	15	15	15	15	15	15	15	15
Water	m3	0.05	150	270	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00
Labour													
	per day	20.0	20	30	30	30	30	30	30	30	30	30	30

FINANCIAL BUDGET		Without Project	With Project									
			1	2	3	4	5	6	7	8	9	10-20
Revenue												
Off-season vegetables		1 268	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850
	Sub-total Revenue	1 268	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850	5 850
Cost												
Investment b/												
Plastic film		-	4 000	-	-	-	-	-	-	-	-	-
Wooden framing		-	2 000	-	-	-	-	-	-	-	-	-
Subtotal Investment cost		-	6 000	-	-	-	-	-	-	-	-	-
Recurrent												
Seed		180	293	293	293	293	293	293	293	293	293	293
Ammonium nitrate		14	27	27	27	27	27	27	27	27	27	27
SP		11	16	16	16	16	16	16	16	16	16	16
Manure		300	600	600	600	600	600	600	600	600	600	600
Land prep. and cultivation (manual)		120	120	120	120	120	120	120	120	120	120	120
Firewood		-	900	900	900	900	900	900	900	900	900	900
Water		8	14	14	14	14	14	14	14	14	14	14
		632	1 969	1 969	1 969	1 969	1 969	1 969	1 969	1 969	1 969	1 969
Labour		400	600	600	600	600	600	600	600	600	600	600
Subtotal Recurrent cost		1 032	2 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569
Total Costs		1 032	8 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569	2 569
Gross Income												
		236	- 2 719	3 281	3 281	3 281	3 281	3 281	3 281	3 281	3 281	3 281
Incremental Gross Income		-	2 955	3 045	3 045	3 045	3 045	3 045	3 045	3 045	3 045	3 045
	NPV @10% (GEL)	17 882										
	IRR	103%										
	Incr. annual net benefits per GEL1 of investment (GEL)	0.17										

a\ WOP - 2 harvests; WP - 3 harvests

b\ investment (plastic films and wooden frames) should be repeated every 4-5 years, however it is assumed that it will be done using farmer's own resources

Small Grant: Beekeeping Model

Parameters

Number of beehives per HH, no	15
Quantity of honey produced in 1 beehive, kg	22

Item	Unit	Unit Cost, GEL	With Project									
			1	2	3	4	5	6	7	8	9	10
Main Production												
Honey	kg	12	330	330	330	330	330	330	330	330	330	330
Wax	kg	10	99	99	99	99	99	99	99	99	99	99
Investment Cost												
Hive: brood chamber	no	200	15									
Hive: swarm	per hive	200	15									
Hive: frame	no	10	180									
Production Cost												
Sugar	kg	1.2	75	75	75	75	75	75	75	75	75	75
Replacement frame	no	10	18	18	18	18	18	18	18	18	18	18
Containers (25 l)	no	20	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Wax foundation	kg	10	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Queen replacement	per hive	10	15	15	15	15	15	15	15	15	15	15
Medicine	per hive	17	15	15	15	15	15	15	15	15	15	15
Transportation	per hive	15	15	15	15	15	15	15	15	15	15	15
Labour Inputs	days	20	75	75	75	75	75	75	75	75	75	75

FINANCIAL BUDGET, GEL

Revenues

Honey	3 960	3 960	3 960	3 960	3 960	3 960	3 960	3 960	3 960	3 960
Wax	990	990	990	990	990	990	990	990	990	990
Total Revenues	4 950	4 950	4 950	4 950	4 950	4 950	4 950	4 950	4 950	4 950

Investment Costs

Hive: brood chamber	3 000
Hive: swarm	3 000
Hive: frame	1 800

Investment Costs, Total

7 800

Operational Inputs

Sugar	90	90	90	90	90	90	90	90	90	90
Replacement frame	180	180	180	180	180	180	180	180	180	180
Containers (25 l)	264	264	264	264	264	264	264	264	264	264
Wax foundation	75	75	75	75	75	75	75	75	75	75
Queen replacement	150	150	150	150	150	150	150	150	150	150
Medicine	255	255	255	255	255	255	255	255	255	255
Transportation	225	225	225	225	225	225	225	225	225	225
Labour Inputs	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500	1 500
Total Operational Inputs	2 739	2 739	2 739	2 739	2 739	2 739	2 739	2 739	2 739	2 739

Gross Income

- 5 589 2 211 2 211 2 211 2 211 2 211 2 211 2 211 2 211 2 211

Incremental Gross Income

- 5 589 2 211 2 211 2 211 2 211 2 211 2 211 2 211 2 211 2 211

IRR 37%
NPV @ 10% (GEL) 6 495

Agribusiness Grant: Cold Storage for Fruits/Table Grapes

Capacity to keep 48 tonnes of table grapes.

\$1=		1.75	GEL																
Item	Unit	Unit Price, GEL	Without Project	With Project															
				1	2	3	4	5	6	7	8	9	10-15	11	12	13	14	15	
Main Service																			
Grapes - off season	kg	1.8		33600	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000
Inputs																			
Investments																			
Warehouse building	building	35 000		1															
Refrigerator equipment	set	26 250		1															
Wooden Boxes	lumpsum	7 000		1															
Minor Equipment	set	8 750		1															
Operating																			
Grape-pick season	kg	0.9		24000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000
Cost of storage a/	lump sum	0.05	0	33600	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000	48000
O&M of building b/	%	5																	
O&M of equipment c/	%	10																	
Labour																			
Hired Labour d/	person/year	2 400	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

a/ includes all storage costs (electricity, water, cleaning, etc)

b/ 5 percent of the investment costs

c/ 10 percent of the investment costs

d/ 6 months of operation

[illegible]

Agribusiness Grant: Fruits and Vegetable Drying

Capacity: 5 tonnes/day 6 months per year
\$1= 1.75 GEL

Item	Unit	Unit Price, GEL	Without Project	With Project									
				1	2	3	4	5	6	7	8	9	10-15
Main Service													
Dried fruits and vegetables	tonne	5 775.0		90	90	90	90	90	90	90	90	90	90
Inputs													
Investments													
Building	building	26 250		1									
Fruit and Vegetable Drying Machine	set	262 500		1									
Packing machine	set	35 000		1									
Minor Equipment	set	17 500		1									
Operating													
Fresh fruits and vegetables (pick season)	tonne	533.3		600	600	600	600	600	600	600	600	600	600
Packing materials	%	3											
Cost of production a/	%	15											
O&M of building b/	%	5											
O&M of equipment c/	%	3											
Labour													
Hired Labour d/	person/year	2 400		3	3	3	3	3	3	3	3	3	3

a/ % of revenue, includes all costs (electricity, labor, etc)

b/ 5 percent of the investment costs

c/ 10 percent of the investment costs

d/ 3 staffs, 6 months of operation

Financial Budget (GEL)

	Without Project	With Project									
		1	2	3	4	5	6	7	8	9	10-20
Main Production											
Dried fruits and vegetables		519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750
Sub-total Revenues		519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750	519 750
Inputs											
Investments											
Building		26 250									
Fruit and Vegetable Drying Machine		262 500									
Packing machine		35 000									
Minor Equipment		17 500									
Sub-total		341 250									
Operating											
Fresh fruits and vegetables (pick season)		320 000	320 000	320 000	320 000	320 000	320 000	320 000	320 000	320 000	320 000
Packing materials		15 593	15 593	15 593	15 593	15 593	15 593	15 593	15 593	15 593	15 593
Cost of production a/		77 963	77 963	77 963	77 963	77 963	77 963	77 963	77 963	77 963	77 963
O&M of building b/		1 313	1 313	1 313	1 313	1 313	1 313	1 313	1 313	1 313	1 313
O&M of equipment c/		9 450	9 450	9 450	9 450	9 450	9 450	9 450	9 450	9 450	9 450
Hired Labour d/		7 200	7 200	7 200	7 200	7 200	7 200	7 200	7 200	7 200	7 200
Sub-total Operating Costs		431 518	431 518	431 518	431 518	431 518	431 518	431 518	431 518	431 518	431 518
Total Production Costs		772 768	431 518	431 518	431 518	431 518	431 518	431 518	431 518	431 518	431 518
Net Income		-253 018	88 232	88 232	88 232	88 232	88 232	88 232	88 232	88 232	88 232
Incremental Net Income		-253 018	88 232	88 232	88 232	88 232	88 232	88 232	88 232	88 232	88 232
	IRR										34.3%
	NPV @10% (GEL)										360 876

Appendix 11: Draft project implementation manual

Introduction

A draft version of the Project Implementation Manual (PIM) was originally prepared at design stage. The content's outline is given below:

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Currency Equivalents

Weights and Measures

Abbreviations and Acronyms

Map: Location of AMMAR Project Area

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- II. PROJECT FRAMEWORK
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 - B. Organizational Set Up
 - C. Project Cost and Financing
- III. PROJECT MANAGEMENT
 - A. Duties and Responsibilities
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- I. IMPLEMENTATION ARRANGEMENTS
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PART C: REPORTING, MONITORING, SUPERVISION AND EVALUATION

- A. Progress Reporting
- B. Monitoring, Evaluation and Knowledge Management
- C. Knowledge Management Products and Learning Processes
- D. Supervision
- E. Mid-term Review
- F. Project Completion Report
- G. Sustainability

Preface

The Project Implementation Manual (PIM) describes the modalities and procedures to be used for implementation of the Agriculture Modernization, Market Access and Resilience (AMMAR) Project. The Manual provides a checklist of procedures and tasks to be executed during routine loan administration and project implementation activities. In particular, the PIM clarifies procedures and requirements regarding, project implementation, loan administration and flow of funds, reporting, accounting and participatory implementation procedures. The PIM aims to provide the project management and implementing partners with procedural guidance to implement the Project. The PIM

is intended to be a functional document to be adapted and amended as necessary to incorporate the lessons learned from implementation experience.

The Manual is prepared two volumes. The first volume comprises three parts. The first part presents a general description of the project planning and design, its implementing partners, organizational arrangement, staffing, and their responsibilities. The second part presents implementation guidelines and procedures for implementation of each project component and preparation of Annual Work Plan and Budget. The third part presents procedures for reporting, monitoring and evaluation and supervision. The second volume presents guidelines for financing project expenditures.

Preparation and submittal of the draft Project Implementation Manual (PIM) for IFAD review and “No Objection” is a key condition for the project to enter-into-force. While the Project Steering Committee will adopt the PIM substantially in the form approved by IFAD, it does not replace the definitive Project Documents. Where there are inconsistencies with any provision of the Financing Agreement, the provision of the Agreement shall govern.

Appendix 12: Compliance with IFAD policies

The project approach of AMMAR and its implementation modalities are fully consistent with IFAD strategies and specific policies on rural finance, climate change, gender, targeting and private sector. Specifically, it supports the following:

1. **Fiduciary Compliance** is noted in the preceding Appendices 7 (financial management) and 8 (Procurement).
2. **IFAD Strategic Framework (2011-2015)**: from among the six-stated policy goals at the programme and project level, AMMAR would meet the first 5 of these.
3. **IFAD Rural Finance Policy**: focus of AMMAR is on developing participatory and inclusive rural financial services to increase demand and the availability and use of credit from mainstream financial institutions. The project aims to enhance awareness for agricultural lending and to foster relationships between financial institutions and smallholder farmers and agribusinesses. The project will build on the demand of the target groups, geared at enhancing the capacity of potential borrowers and partner financing institutions.
4. **Technical Note on Matching Grants**: Despite the fact that financial services and rural finance investment is growing in Georgia, they are currently not reaching the smallholder farmers and producers, in particular those engaged in climate smart agriculture and adoption of new technologies. As defined in the Technical Note on matching grants, this facility of providing matching grant *“can compensate for the absence of suitable term and investment finance and to stimulate investment and business activity, where the intended beneficiaries operate under severe constraints or where the innovations have higher risk or unpredictable profit.”* AMMAR will aim to injecting matching grants to stimulate commercially viable agricultural related borrowing.
5. **IFAD Climate Change Strategy**: AMMAR climate smart interventions is IFAD’s first deliberate attempt in Georgia to maximize impact on rural poverty in a changing climate, through: (i) supporting innovative approaches to helping smallholder producers – both women and men – build their resilience to climate change; (ii) helping smallholder farmers take advantage of available incentives and funding to shift to climate-resilient production systems; and (iii) informing a more coherent dialogue on climate change, rural development, agriculture and food security. Innovation will be promoted by supporting investment in developing climate-sensitive plans and introduction of efficient irrigation technologies. The project will have a primary focus on identifying and piloting adaptive management practices and technologies for agriculture production and raise awareness of farmers and village communities to learn and incorporate planning and management of agricultural practices to better respond to climate variability and changes. Significant funding to build the capacity of farmers on CC adaptation management systems and technologies will be provided. Lessons learned from the project will be published and disseminated beyond the project scope in the form of guidelines and procedures for efficient on-farm irrigation and sustainable agronomic practices. The project will undertake a policy review to analyse coordination mechanisms and institutional capacities across national, regional and local agriculture public institutions, and will formulate recommendations to mainstream CC adaptation into agriculture development, enhance climate-related knowledge management between institutions, donors and practitioners at the national level, and for informing key policy decision makers.
6. **An Environmental and Social Review Note** is presented in Appendix 12.1 providing more information on AMMAR’s compliance with environmental policies.
7. **Private Sector**: The project will aim to deepen engagement with the private sector, in particular with small to medium sized farmers, agribusinesses, young entrepreneurs, processors, buyers, and financing institutions. In doing so, it will assist in improving these economic actors’ access

to inputs, services and know-how. In accordance with the strategy, AMMAR aims to strengthen the business capacity of the rural poor and their organisations; improve access of these poor to private technical/ advisory services; and support the effective linkage of private sector businesses with rural poor. This engagement is expected to leverage significantly more investments from other resources, as farmers, processors and young entrepreneurs gain more confidence and become more integrated into the value chain. Given the limited experience of partnerships with private sector in Rural Georgia, the project will offer a unique opportunity to draw lessons and engage in policy dialogue.

8. **IFAD Policy for Gender Equality and Women's Empowerment:** While gender equality is not at present a major area of concern in Georgia, AMMAR will aim to achieve Economic Empowerment (SO1), Equal Voice and Decision-Making (SO2), and to Reduce Workloads (SO3) through direct targeting mechanisms and mass media communication that will allow women to voice their priorities and to offer them equal decision making opportunities.
9. **IFAD Targeting Policy:** the IFAD mandate defines its target group as "rural people living in poverty and experiencing food insecurity in developing countries. Within this broad group, IFAD proactively strives to reach extremely poor people who have the potential to take advantage of improved access to assets and opportunities for agricultural production and rural income generating activities". This corresponds with the overall target group of AMMAR. In the target group, there is significant variety in the capital assets owned (land, physical assets, income, education), the livelihood options available as a result, and the strategies that are actually pursued. While underlying AMMAR's targeting strategy is a participatory and consultative approach, it will focus on 1) the commercially-active poor 2), the economically active poor and 3), very poor. Another cross-cutting target group will also be the young entrepreneurs and women

Appendix 12.1: Environmental and Social Review Note

Introduction

1. The Environmental and Social Review Note (ESRN) for the Agriculture Modernization, Market Access and Resilience (AMMAR) project was prepared in accordance with IFAD's new Environmental and Social Assessment Procedures on the basis of information gathered by various mission members in the course of the field work and design. This ESRN covers environmental, social and climate change aspects related to project interventions.

Description of the Programme

2. The AMMAR project of the Government of Georgia, with IFAD funding, aims to raise incomes of smallholder farmers through public and private investments in upgrading productive infrastructure, enterprises and smallholder farmer production in support of inclusive growth of climate smart agricultural value chains. AMMAR is part of the MOA's substantial ongoing investments to modernize agriculture in Georgia and is fully aligned to the Agriculture Development Strategy 2012-2022 and supporting action plan.

3. AMMAR will mainstream a climate smart approach throughout its activities, with support of the GEF grant. This will include: screening and prioritization of product value chains that are expected to have sustainable comparative advantages under future climate change scenarios, especially at the primary production level; promoting investment in efficient irrigation technologies and targeted landscape restoration alongside rehabilitated irrigation schemes to create sustainable improvements in water-efficient irrigated production, and; promoting the widespread adoption of climate smart GAPs and technologies at the farm level.

4. While driven by farmer demand, the climate smart agricultural technologies expected to be most relevant will likely be for improved water, soil and nutrition management. At the village level, the approach to technology transfer and promotion will be through a combination of practical CSA technology plots, promotion events, short and longer duration practical field training (for example through a series of half day practical field training session at critical points in the production cycle) and systematic follow-up with farmers by the local service providers delivering the training. CSA technology plots will act as sites for farmers to directly access know-how, training and networks of services and credit providers to facilitate easier adoption of the promoted technologies. They will also create the opportunity for interested farmers to get an objective farmer-to-farmer perspective on the technologies from the progressive farmers on whose land the CSA technology plots are established.

Environment and Natural Resource Management Policy

5. The goal of IFAD's ENRM policy is: to enable poor rural people to escape from and remain out of poverty through more-productive and resilient livelihoods and ecosystems. The purpose is to integrate the sustainable management of natural assets across the activities of IFAD and its partners. The ten core principles of the ENRM policy and the extent to which they are addressed by AMMAR is illustrated below.

Core Principles of IFAD ENRM Policy	AMMAR Response
Scaled-up investment in multiple-benefit approaches for sustainable agricultural intensification	This forms the basis of the AMMAR design. All planned activities provide multiple benefits in terms of improved climate resilience, increased incomes, and reduced risk.
Recognition and greater awareness of the economic, social and cultural value of natural assets	The inclusion of users in the design and implementation, and basing implementation upon resilient agricultural systems, risk reduction and restoration of natural assets – all coupled with extensive training will link natural assets to economic and social growth.
'Climate-smart' approaches to rural development	The project design and targeting is driven by the outcomes of studies on climate risk to ensure climate risks and opportunities are considered. The GEF SCCF grant is completely mainstreamed in the design for that purpose

Core Principles of IFAD ENRM Policy	AMMAR Response
Greater attention to risk and resilience in order to manage environment- and natural-resource related-shocks	Increased climate resilience is a key part of the goal ensuring that it will be a focus of decision makers throughout implementation.
Engagement in value chains to drive green growth	This is one main component of the project, and the SCCF funding is mainstreamed to ensure that the value chains selected are climate proofed and contribute to sustainable socio-economic growth.
Improved governance of natural assets for poor rural people by strengthening land tenure and community-led empowerment	The project will support the establishment of effective user associations for natural assets exploited by the target groups.
Livelihood diversification to reduce vulnerability and build resilience for sustainable natural resource management	The project supports income diversification as an explicit part of its strategy to reduce vulnerability and build resilience.
Equality and empowerment for women and indigenous peoples in managing natural resources	Women will be included as main beneficiaries within the project, both as part of the value chain development activities, financial services and restoration of natural assets.
Increased access by poor rural communities to environment and climate finance	Through the project, the targeted poor rural communities will benefit from environment and climate finance a broad array of financial services, training and demonstrations.
Environmental commitment through changing its own behavior	N/A

Climate Change and Natural Assets

6. Climate change is already having a significant impact on nature and people in Georgia, through increasing temperatures, shrinking glaciers, decreasing snowfall and an upward shift of the snowline, redistribution of river flows, and sea level rise. In the last decade, Georgia has suffered from increasingly frequent extreme weather events, leading to serious drought, flooding, landslides, forest fires and coastal erosion with significant economic losses and human casualties. The share of snow alimantation has rapidly decreased and the seasonal snow line has risen from 1,300-1,500 meters to 1,800-2,000 meters. A recent study shows that the Greater Caucasus glaciers have declined by 50%, with a current retreat by 5 to 10 metres per year, and a maximum value of 25 m/year.

7. Torrential rainfall and floods: Rainfall has shown a far more recurrent pattern with heavy downpour, with frequent flooding and large economic losses. Over the past 30 years, major floods have hit Georgia. After the latest flash floods in July 2012, the Georgian Government approached IFAD for support, and the mobilisation of the SCCF funds was undertaken.

8. Drought: The severity of drought has markedly increased in the past 50 years, especially in the regions of East Georgia. Its average duration has extended from 54 to 72 days and the frequency of occurrence has risen twice. The frequency of high-speed winds (>30 m/s) has multiplied fivefold since the beginning of 1980s. In 2000, drought impacted 696,000 people and caused USD 200 million in losses and damage. In the period 1980-2007 the average duration of drought increased by 22% in Dedoplistskaro region. The annual frequency of high winds for the period of 1963-2006 has risen from 0.28/yr to 1.44/yr. In Kvemo Svaneti, the average number of days with drought increased from 34 (period 1956-1972) to 47 (period 1991-2006), corresponding to a rise of 38%.

9. The combined effect of heat weaves, uncontrolled pasture and stubble burning and absence of a fire prevention and fighting capacity led to an increased impact of forest fires: 1,586 and 688 ha of forests burned in 2006 and 2007, respectively.

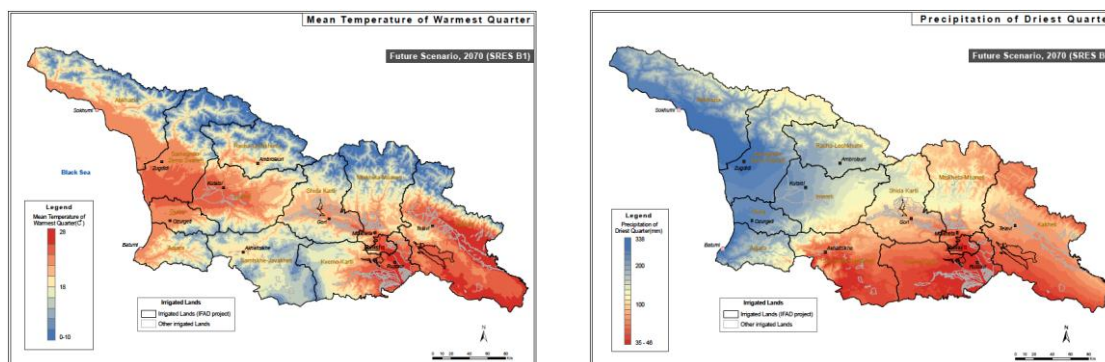
10. Based on the climate vulnerability assessment undertaken by IFAD, all available scenarios predict a gradual increase of temperatures from the current baseline, following a trend that is consistent with the historical data. Although there remains uncertainty on the actual degree of warming, average warming for the next 50 years for the Medium Impact Scenario is of about 2.3 °C. According to the SNC, if the climate change scenarios obtained under all available methodologies are compared with the baseline period 1961-1990, both in Western and Eastern Georgia, by the year

2100 the mean annual temperature will increase 3-5 °C and the precipitation will decrease by 9-15 %. This process will be especially sharp in summer, when both the temperature increase and precipitation decrease trends are higher, causing a major impact on the evapotranspiration and hydrological regime.

11. When it comes to precipitation, all scenarios indicate uncertainty in the direction of effects as well as magnitude of the changes. The range of precipitation outcomes across the Low and High Impact scenarios is large, from a modest increase under the Low Impact scenario to a 24% decline under the High Impact scenario.

12. By 2070, the mean temperature of the warmest quarter will increase up to 2.3 °C in/around the lower areas of Eastern Georgia, especially in the region of Kakheti, Kvemo Kartli, and the south-eastern extreme of Sida Kartli, which also happen to be the areas where most irrigation schemes are located (Figure 1). The precipitation of the driest quarter will reduce by half or one third in almost all the territory of the Kakheti, Kvemo Kartli and Samchke Javakheti regions, and in significant part of the lower parts of Sida Kartli, and Mtskheta Mtianeti (Figure 1). Increased temperatures and evaporation will contribute to exacerbate the water deficit for crops.

Figure 3: Predicted mean temperature and precipitation for the warmest and driest quarter in Georgia



13. CC predictions on agriculture: The agricultural sector is highly climate sensitive and potential adverse changes in temperature, precipitation and the frequency of extreme events - e.g. droughts, heat waves, floods, forest fires - are likely to increase the vulnerability of poor rural communities.

14. The yields of most crops, both irrigated and rainfed are expected to decrease in the eastern and western lowlands of Georgia. The effect of climate change on crop yields in the 2040-2050 period under medium climate forecast scenarios predict yield reductions of -4% for corn and between -5% and -6% for wheat, grapes and mandarin under both irrigated and rainfed; between -5% (irrigated) and -10% (rainfed) for potatoes; and between -6% (irrigated) and -11% (rainfed) for tomatoes.

Social Aspects and Targeting

15. AMMAR will target all stakeholders who play a major role in the agriculture sector:

- Asset-poor, food-insecure and labour deficient farm households. These actors will be the most severely affected by climate-induced risks. Climate change risks could lead to the loss of their critical means of survival and would compromise their ability to invest in next season's production and animal feed in order to sustain their livelihoods, with very limited chances to access bank credits.
- Small- to medium-scale local entrepreneurs who have invested important resources to cultivate large areas, including leading farmers and farmers' organizations who provide employment opportunities and are willing to adopt innovation and a business-oriented approaches.
- Central and municipal level governmental agents, including policy makers, rural planners, UASCG staff, and rural extension' agents.

- Researchers and academic staff from agronomic and environmental research and educational centres, agro-environmental and social NGOs, and private extension organizations.
- The financial sector (financial service institutions, insurance companies).

16. The project will provide the additional support needed to increase awareness, build capacity to reduce CC-risks affecting farmers' production systems and livelihoods, climate proof value chains and adopt/invest in agriculture adaptation technologies and management practices. Leader entrepreneurs, research institutions, public and private extension organizations, farm and machinery service centres, farmers' organizations, and NGOs, will play a major role in the provision of services and on-farm learning opportunities. This will facilitate a participatory process through which target farmers will use their own best practices and the available scientific knowledge to jointly identify and apply climate change adaptation measures in the selection of value chains, crop varieties and production techniques, and the soil and water management practices that suit best the different agro-climatic conditions of the country.

17. Target villages and farmers will be selected in a participatory way at the project start-up. Women and unemployed youth will be the primary beneficiaries of AMMAR project because of their higher vulnerability. The project will strengthen women's involvement in capacity development activities – i.e. through the identification of women farmer leaders to support demonstration trials in their farm plots; the definition of gender criteria for the selection of participants to training activities and women's access to climate resilient investments and post-harvesting and marketing support. The promotion of labour saving conservation agriculture technologies will help reduce women's workload and allow them to engage in new income generating activities.

Environment Category

18. The AMMAR project areas have been selected based on a detailed climate vulnerability assessment to make sure that project design and implementation contribute to vulnerability reduction of target communities. The project does not have any major infrastructure investment activities, and the work to be undertaken is limited to small-scale irrigation, value chain development, rural finance, disaster risk reduction and restoration of natural assets. These activities are expected to positively contribute to the environmental and social well-being of the communities involved.

19. As AMMAR is not expected to have any significant negative environmental impact, and hence is considered under environmental classification of Category B. For any potential impacts during programme implementation, the project will be responsible for ensuring that the requirements of the environmental legislation of Georgia are adhered to in order to avoid negative impacts, and, when and if necessary, introduce appropriate mitigation measures.

20. The GEF/SCCF grant of USD 5.3 million has been designed along with the IFAD investment and has been completely mainstreamed to ensure that the whole project will be climate-proofed.

Innovation

21. The project will identify and support innovation-oriented leader farmers and farmers' organizations who are willing to transform maladaptive practices and obsolete production systems into modern and more efficient ones. These champions will play a critical role in overcoming cultural barriers and convincing others to shift to sustainable agronomic practices, as farmers tend to trust their peers more than other formal advisers. The project will also tackle farmers' mistrust and complaints about irrigation services and conditions, following a community-based participatory approach to address local cultural, socioeconomic and ecological concerns and reach consensus about project interventions.

Monitoring Aspects

22. Monitoring of the work to be undertaken is embedded within the programme's M&E system. The project will be responsible for ensuring that the requirements of the environmental legislation of

Georgia and IFAD Guidelines on Environmental Assessment are adhered to in order to avoid any negative impacts, and, when and if necessary, introduce appropriate mitigation measures.

23. In the course of its supervision missions, IFAD will regularly review the relevant Environmental Assessment documents and implementation of recommended measures for randomly selected activities.

Appendix 13: Contents of the Project Life File

AMMAR - Concept Note

AMMAR - OSC Issues Paper

AMMAR - OSC Minutes

AMMAR - Detailed Design (main report and appendices)

AMMAR - QE Panel report

AMMAR - Design Completion Terms of Reference

AMMAR - Project Implementation Manual (PIM)

GILMD - Concept Note

GILMD - OSC Issue Paper

GILMD - OSC Minutes

Irrigation and Land Market Development Project (GILMD) - Project Appraisal Document (World Bank PAD)

GILMD - QE Panel report

GILMD - QA Minutes

Enhancing Resilience of Agriculture Sector in Georgia (ERASIG) - Project Document