Language: English

Original: English

AFRICAN DEVELOPMENT BANK GROUP

PROJECT: Small Scale Irrigation and Value Addition Project (SIVAP)

COUNTRY: Kenya

PROJECT APPRAISAL REPORT

Date: October 2015

Appraisal Team	Team Leader: Sheikh Javed. Ahmed, Chief Water Resources Engineer, EARC Team Members: Edson Mpyisi, Principal Agricultural Economist, EARC Onesmus Maina, Senior Agricultural Expert, EARC David Mutuku, Principal FFM Officer, EARC Patrick Owuori, Senior Procurement Officer, EARC Sector Manager: Mrs. J. Mwangi, OSAN.1 Sector Director: Mr. C. Ojukwu, OSAN Regional Director: Mr. G. Negatu, EARC

Peer Reviewers	Samuel Kamara, CPO-Kenya, EARC Joseph Coompson, Chief Agricultural Economist, SARC Mamadou Kane, Rural Infrastructure Engineer, OSAN.1 John Sifuma, Senior Water and Sanitation Engineer, EARC Nathalie Gahunga, Chief Gender Officer, OSAN.3 Legesse, Eshetu Yimer, Chief Regional FM Coordinator, ORPF.2 Clement Ahossi, Chief Regional Procurement Coordinator, ORFP.1

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Currency Equivalents

As of July 2015

1 UA	=	1.40639 USD
1 UA	=	135.96448 KES
1 USD	=	96.67623 KES

Fiscal Year

1 July – 30 June

Weights and Measures

1 metric ton	=	2204 pounds (lbs)
1 kilogram (kg)	=	2.200 lbs.
1 meter (m)	=	3.28 feet (ft.)
1 millimeter (mm)	=	0.03937 inch (“)
1 kilometer (km)	=	0.62 mile
1 hectare (ha)	=	2.471 acres

Acronyms and Abbreviations

LIST OF ABBREVIATIONS	
ADF	African Development Fund
AfDB	African Development Bank
ASAL	Arid and Semi-Arid Lands
ASDS	Agricultural Sector Development Strategy
CCUs	County Coordination Units
CSP	Country Strategy Paper
EARC	Eastern Africa Resource Centre
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FIRR	Financial Internal Rate of Return
FAO	Food and Agriculture Organization of the United Nations
FNSP	Food and Nutrition Security Policy
Fos	Farmers Organizations
GAFSP	Global Agriculture and Food Security Program
GEF	Global Environmental Facility
GFMA	Government Financial Management Act
GDP	Gross Domestic Product
GoK	Government of Kenya
IFMIS	Integrated Financial Management Information System
IGA	Income Generating Activities/Groups
IPSAS	International Public Sector Accounting Standards
IWUAs	Irrigation Water Users Associations
KALRO	Kenya Agricultural and Livestock Research Organization
KES	Kenya Shillings
MTP	Medium Term Plan
MTIP	Medium Term Investment Plan
MTR	Mid Term Review
MoALF	Ministry of Agriculture, Livestock and Fisheries
NEMA	National Environmental Management Authority
PPOA	Public Procurement Oversight Authority
PSC	Project Steering Committee
PFM	Public Sector Financial Management
PCU	Project Coordinating Unit
PCN	Project Concept Note
PPDA	Public Procurement and Disposal Act
RISP	Regional Integration Strategy Paper
SHDP-1	Small Scale Irrigation and Horticulture Development Project Phase 1.
SA	Special Account
SDG	Strategic Development Goals
SRA	Strategy for Revitalizing Agriculture
UA	Units of Account

Loan Information

Client's information

BORROWER: The Republic of Kenya

EXECUTING AGENCY: Ministry of Agriculture, Livestock and Fisheries

Financing plan

Source	**Amount (USD)**	**Instrument**
ADB	39.546 million	Loan
GAFSP	24.000 million (22.8 million – (1.2 million –	Grant (implemented by ADB) (implemented by FAO)
Government	7.138 million	Counterpart Contr.
TOTAL COST	**70.684 million**	

ADB's key financing information

Loan currency	Dollars (USD)
Interest type	Floating base rate with a free option to fix the base rate
Interest rate	Base Rate (Libor) + Funding Margin + Lending Spread
Base Rate (floating)	6-month LIBOR
Contractual spread	60 base points (bps)
Funding margin	Bank lending margin in relation to the 6-month LIBOR.
Maturity	Up to 20 years
Grace period	Up to 5 years
FIRR, NPV (base case)	24%, USD 50.6 million at 12%
EIRR, NPV (base case)	28%, USD 69.6 million at 12%

Timeframe - Main Milestones (expected)

Concept Note approval	June, 2015
Project approval	November, 2015
Effectiveness	February, 2016
Closing Date	June 30, 2022
Completion	December, 2021

Project Summary

Project Overview

The proposed Kenya Small Scale Irrigation and Value Addition Project (SIVAP) is designed to focus on eleven counties within few arid and mostly semi-arid lands, namely Kitui, Makueni, Machakos, Tana River, Bomet, Meru, Tharaka Nithi, Nyandarua, Murang'a, Kajiado and Nyeri Counties. These counties have been chosen due to a number of factors, most importantly among them is that the areas receive low to moderate rainfall ranging from a low of 200 mm / year in the most arid areas to 1900 mm / year in the higher potential areas. The broad objective of SIVAP is to contribute to poverty reduction by enhancing agricultural productivity and income, and food security among beneficiaries of these 11 counties. The project has four main components which include: (i) Enhanced Irrigation Infrastructures and Water Resources Development; (ii) Improved Access to Markets and Strengthening Value Chains; (iii) Institutional Strengthening and Capacity Development; and (iv) Project Coordination and Management. The project will be implemented over a period of 6 years (2015-2021). The project will be executed by the Ministry of Agriculture, Livestock and Fisheries (MoALF). The MoALF is currently the executing agency for two on-going the Bank-funded projects, which is the Small Scale Horticulture Development Project (SHDP) and Multinational: Drought Resilience and Sustainable Livelihoods Project (DRSLP)-Kenya.

Needs Assessment:

The need for this project emanates from the lessons learnt from, and the need to upscale, the Small-Scale Horticulture Development Project (SHDP-1) which is almost being completed. The project also seeks to offer alternatives to alleviate dependency on the inadequate and natural rainfall for agricultural production. The new project will include lessons such as timely involvement of beneficiaries in design, following integrated catchment based approach, command area development and training as part of the design. Available estimates indicate that about 50.6% of the Kenyan population lack access to adequate food and this is more severe in the arid and semi-arid lands. Hence, in order to have secured food production, there is a need to minimize dependence on rain-fed agriculture by utilizing water resources for irrigation under sustainable environmental management.

The Small-scale Irrigation and Value Addition Project (SIVAP) was conceived by the Government of Kenya (GoK) and builds on the success of the just concluding SHDP I project. The project will focus on improving high value crop production through construction/rehabilitation of twelve (12) irrigation schemes (3,205 ha) in eleven counties. In addition to improved irrigation infrastructure, the project will also focus on improved access to markets, enhance agro-processing, storage and post-harvest handling technologies, nutrition and institutional and human capacity building. The project will contribute to the achievement of the core Sustainable Development Goal (SDG) objectives of poverty alleviation and sustainable development, reduced undernourishments and promoting gender equality and empowerment of women through their involvement in project activities.The project will contribute to activities that are required to be implemented within the period of the Medium Term Plan (MTP-II 2013-17) that is intended not only to modernize agriculture in Kenya but also offer improved household welfare and increased income levels. The direct and indirect beneficiaries include 104,000 farming households, (54,000 are direct beneficiaries while over 50,000 are indirect beneficiaries) making a total of 520,000 persons – of which 58% are women and youths in eleven counties of the country. The project will result in increased incomes and food security in these communities with increased economic off-farm activities as well.

Cost and Financing

The Project Cost, including price and physical contingencies, but excluding duties and taxes, is estimated at USD 70.684 million. These costs will be covered by an ADB loan of USD 39.546 million, a Global Agriculture and Food Security programme (GAFSP) grant contribution of USD 24.000 million and Government of Kenya contribution of USD 7.138 million. In the case of SIVAP, the GAFSP funds are being jointly managed by the Bank as the implementing agency (95% of the funds for investment activities) and the FAO for technical support (managing 5% of the funds for TA).

Implementation

The Project will be implemented by a Project Coordination Unit (PCU) within the Ministry of Agriculture, Livestock and Fisheries with support of County Coordination Units (CCU). The Ministry has extensive experience in implementing such projects and will be responsible for the coordination, implementation and technical supervision of project activities in addition to the procurement, financial management and Monitoring and Evaluation (M&E). The Project will have a duration of six years.

The Bank and FAO's Added Value

The Bank's comparative advantage and added value to undertake this project emanates from its experience acquired through its long and successful engagement with the Government of Kenya. The Bank's agriculture portfolio in Kenya is significant and considerable experience has been gained from construction of infrastructure, implementation of community initiatives through group formation for managing natural resources, community infrastructure and irrigation infrastructure. This has been done through implementation of similar Bank projects in Kenya such as the on-going Small scale Horticulture Development Project (SHDP) which is rehabilitating irrigation infrastructure in a number of ASAL counties and providing support to farmers in scheme management and post-harvest handling of produce. In addition the Bank is also implementing the DRSLP-Kenya Component which focuses on the provision of water resources for both irrigation and livestock in six ASAL counties of Kenya.

FAO's comparative advantage in providing technical support to the project is founded in the organisation's long term engagement with the Government of Kenya and its presence in the target counties (FAO currently has active field offices in six out of the 11 targeted counties). This field presence and localized expertise is supported by a global pool of experts based within FAO's regional offices and in the organization's headquarters.

Knowledge Management:

The knowledge gained through the implementation of similar projects in Kenya has been duly applied in designing this project. In the same pattern, the knowledge that will be generated by this Project will be instrumental in designing and managing similar projects in the future. The results from the proposed baseline studies and other surveys, including the impact study will inform the stakeholders on how to put the acquired knowledge into practical use for better results-oriented achievements and sustained benefit flows.

KENYA- SIVAP RESULTS BASED LOGICAL FRAMEWORK

Country and Project Name: Kenya: Small Scale Irrigation and Value Addition Project (SIVAP).
Purpose of the Project: Contribute to poverty reduction by ensuring increased agricultural productivity and incomes and food security among beneficiaries in eleven counties.

	RESULTS CHAIN	PERFORMANCE INDICATORS Indicator (Including CSI)	Baseline 2015	Target By 2021	MEANS OF VERIFICATION	RISKS /MITIGATION MEASURES
IMP	1.1. Rural poverty 1.2. Stunting in under-5 children (%) 1.3. Food security	1.1.1 Rural Poverty Index (% age of Population living below USD 1.25)	43.4	42.4	Kenya Bureau of Statistics, Household survey. Health survey. Rural Poverty Index for Kenya.	
		1.1.2 Percentage of stunting in under-5 children (%)	45%	40%		
		1.1.3 Global hunger index	35	<35		
OUTCOMES	2.1 Increased Agricultural Productivity	2.1.1 Average crop yields (mt/ha) **				Assumptions 1. Continued Government support to agriculture 2. Favorable climatic conditions. 3 Excellent working relations between counties and the national government level. 4. Farmers willing to adopt new production technologies Risk: Weak capacity of the counties as implementing agency. Insufficient demand for agricultural products Mitigation: Training and capacity building of counties staff. Promote market-led production, diversify products
		i. Green Maize	2.5	15	MoALF's Crop forecasting surveys. KBS M&E Study Project Impact Evaluation Study.	
		ii. French Beans	0.27	11		
		iii. Onions	3	13.7		
		iv. Tomatoes	2.5	29		
		v. Water Melons	5	25		
		2.1.2 Average livestock off-take/year/county ('000)				
		i. Poultry	100,000	150,000	MoALF Statistics Market surveys M&E Data Project Impact Evaluation Study	
		ii. Sheep	200	1,000		
		iii. Goats	2,000	5,000		
		iv. Cows	800	1,500		
		2.1.3 Post Harvest Loss reduction in crops produced (%)	40	20		
	2.2 Enhanced Value Addition of crops and livestock products	2.2.1 value addition				
		i. IGA groups supported with agro-processing equipment	2	30	Market surveys, MoALF statistics M&E Data MoALF Statistics	
		ii. Increased incomes from value added crop products marketed (%)	5	50		
		iii. Increased incomes from value added livestock products marketed (%)	2	50		
	3.1 Irrigation Schemes constructed and rehabilitated	3.1.1 Additional Area brought under irrigation (ha)	200	3,336	Project Progress Reports. M& E Data Project Impact Evaluation Study MoALF Statistics Surveys/Reports	Risk: Environmental degradation and climate change Mitigation: Sustainable management of pasture/fodder and rangelands. Climate proof SIVAP Risk: Favorable political will to support levels of coordination remains Mitigation Consultative forums among partners held from inception. Risk: Poor performance of some contractors. There aren't enough experienced contractors in counties. Mitigation: Stringent evaluation process and good follow-up in contract execution Risk: Individual or groups of farmers' lack of commitment to the project Mitigation: Farmers involvement will be insured through trainings and capacity building activities
		3.1.2 Beneficiaries Benefitted (farmers H.H), 58% women	6,000	104,000*		
		3.1.3 Scheme management entities formed (Nos)	4	12		
	3.2 Soil and Water conservation	3.2.1 Rain-fed area brought under irrigation (ha)	30	431		
		3.2.2 Volume of water stored (m3)	70,000	250,000		
	3.3 Crop and Livestock diversification	3.3.1. Livestock pastures demonstrations (Nos)	0	200		
		3.3.2 Pasture/feed/rangeland established (ha);	10	1,500		
		3.3.3 Livelihood Groups formed (bee keeping, poultry keeping, etc) (Nos)	10	120		
	4.1 Access to market	4.1.1 Marketable commodities (Nos)	10	20	Project Progress Reports. MoALF Statistics/M&E Data Project Impact Evaluation Study	
		4.1.2 Agro-market centers constructed (Nos)	0	11		
		4.1.3 Rural access roads rehabilitated (Km)	50	300		
	5.1 Training and Capacity Building (30% of all training w for women)	5.1.1. Group Dynamics and Community Sensitization sessions	5	66		
		5.1.2 Training for IGAs on Animal Husbandry, Agro-processing, Post-harvest handling and product development (Nos) (30% Women trained)	0	99		
		5.1.3 Training on Nutrition Practices, Gender Sensitization, Seed Multiplications (30% women trained)	10	77		
		5.1.3 Enterprise Development training (Nos) (30% women trained)	0	33		
	6.1 Project Management and Monitoring	6.1.1 PCU established and/or expanded (Nos)	0	1		
		6.1.2 M&E system established (Nos)	0	1		

KEY ACTIVITIES	COMPONENTS	INPUTS
	Component 1: **Enhanced Irrigation Infrastructures and Water Resources Development**. Sub-component 1.1 Irrigation Development and rehabilitation; 1.2 Enhanced Soil and Water Conservation 1.3 Crop and livestock Diversification. Component 1 cost: USD 41.83 million (59.2% of total project). **Component 2**: **Improved Access to Markets and Strengthening Value Chain**. Sub-component 2.1 Access to market; and 2.2 Market Linkages. Component 2 cost: USD 15.14 million (21.4% of total project). **Component 3: Institutional Strengthening and Capacity Development**. Sub-component 3.1 Nutrition Security and Capacity Building. Component 3 cost: USD 7.46 million (10.6%) **Component 4: Project Coordination and Management**. Sub-component 4.1 Project Management; and 4.2. Monitoring and Evaluation. Component 4 cost: USD 6.25 million (8.8%).	**Project Cost: USD 70.684 million** **Total GAFSP Grant:** USD 24.000 million (34%). Breakup of GAFSP Grant: GAFSP (AfDB):USD 22.80 million GAFSP (FAO):USD 1.20 million **ADB Loan:** USD 39.546 million (56%) **GoK:** USD 7.138 million (10%)

*54,000 HH will be the direct and 50,000 indirect beneficiaries.
** The targeted crops have been selected as part of continuation of SHDP 1's RBLF, however, are subject to change based on the farmers priorities.

Project Time Frame

Activity/Timelines	**2015**				**2016**				**2017**				**2018**				**2019**				**2020**				**2021**			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project Preparation and Appraisal																												
Loan Approval																												
Loan Signature																												
Loan Effectiveness																												
First Disbursement																												
Component 1-Enhanced Water Resources Development																												
Development of New Irrigation Schemes																												
Rehabilitation of Existing Irrigation Schemes																												
Development of Micro-Irrigation Schemes																												
Development of New Command Areas for Irrigation																												
Water Harvesting and Storage Infrastructures.																												
Component 2: Access to Markets and Strengthening Value Chains																												
Development of Rural Access Road Infrastructures																												
Construction of grading sheds and storage facilities																												
Construction/Rehab of livestock infrastructures.																												
TAs for Design and Supervision of Sub-Component Access to Markets																												
Component 3: Institutional Strengthening and Capacity Development																												
Training Modules in Irrigation Agronomy, GAPs and Animal Husbandry																												
Trainings in Management of Farmers Institutions																												
Support to product development, packaging and branding																												
Strengthening market linkages and Collective Marketing Platforms.																												
Promote Nutrition Security in the Target Community																												
TA FAO																												
Crop and Livestock Intensification and Diversification																												
Component 4: Project Coordination and Management																												
Well Developed and Functional Coordination Structure																												
Project M&E																												
Studies-Baseline, Gender, Anthropological, MTR and Impact Study																												
Mid Term Review																												
Project Completion																												
Project Closure																												

REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE AFDB GROUP TO THE BOARD OF DIRECTORS ON A PROPOSED LOAN AND GRANT TO THE GOVERNMENT OF THE REPUBLIC OF KENYA FOR THE SMALL SCALE IRRIGATION AND VALUE ADDITION PROJECT (SIVAP)

Management submits the following Report and Recommendation on a proposed ADB loan of USD 39.546 million and grant from the Global Agriculture & Food Security Program (GAFSP) of USD 22.80 million to finance the Small Scale Irrigation and Value Addition Project (SIVAP) in Kenya.

I – STRATEGIC THRUST & RATIONALE

1.1 Project linkages with country strategy and objectives

1.1.1. The proposed Kenya- Small Scale Irrigation and Value Addition Project (SIVAP) is consistent with the first Pillar (Economic) of the Medium Term Plan (MTP) for Kenya's Vision 2030. In particular, it supports the development of agriculture and livestock sub sectors of the Economic Pillar, which seeks to enhance food, industrial crop and livestock production in the arid and semi-arid areas of Kenya. The Project is also consistent with the second Pillar II of the MTP which seeks among other things to ensure equity in resource distribution and improved livelihoods for all vulnerable groups in Kenya.

1.1.2. This project has the potential to contribute to the political and economic stability of Kenya. While Kenya is not considered to be a fragile state, burgeoning youth unemployment combined with rural/urban poverty and limited economic opportunities could be present drivers of political and economic fragility in Kenya. The Bank's Strategy for Addressing Fragility and Building Resilience (2014-2019) support building resilient economies through improved capacity building and inclusive/equitable access to employment.

1.1.3. The project through the construction of irrigation schemes, access roads, markets, crop value addition, skill development and capacity building activities, is well rooted in Pillar I of the current Kenya Country Strategy Paper (CSP 2014-18) that is enhancing physical infrastructure to unleash inclusive growth and developing skills for the emerging labour market of a transforming economy. The project will result in creating job opportunities by establishing a more conducive environment for the private sector through investments in physical infrastructure and skill development. The project will boost rural households and vulnerable groups' income and the benefit from improved irrigation, market and road infrastructure, will further strengthen inclusiveness. The project will contribute to the Government of Kenya's objectives to significantly achieve the SDG of halving the proportion of people living in extreme poverty by 2025.

1.1.4. The project through its integrated development approach in infrastructure development, value addition and capacity building components, and focus on smallholder farmers, women and youth, is also in line with the Bank's Ten Year Strategy (TYS, 2013-22) and in particular its twin strategic objectives of inclusive growth and transition towards green growth. Three of the TYS's core operational priorities, infrastructure development, skills and technology development and private sector development, as well two areas of special emphasis, agriculture and food security and gender, are also addressed by the Project. The Project also aligns with the 2014-18 Governance Strategic Direction and Action Plan (GAP II) – especially on building state capacity and effective institutions, and promoting resilience through inclusive access to natural resources; and the Bank's Gender Strategy (2014-18), namely its economic empowerment and knowledge and capacity building pillars.

1.1.5. The proposed project is designed to maximize women and youth employment by using labour-intensive methods during implementation, and by training youths to undertake simple construction and maintenance work upon completion. The project will generate additional benefits and create livelihood opportunities for local communities living in proximity. The project will support the development of water resources for the proposed irrigation schemes and address the socio-economic and legal constraints to further irrigation development for an increase in agricultural production. The implementation of the project in these areas will contribute to the issue of poverty reduction and income generation. Increased horticulture crop production and productivity will be linked to markets as the country's strategy includes market-based approach to increased productivity. This will enable smallholder farmers to build upon existing market linkages, as well as to diversify, intensify and commercialize their production.

1.2. Rationale for Bank's involvement

1.2.1. The principal means of livelihoods in the project area is agriculture, pastoralism characterized by pasture and water for the human and livestock. The low rainfall status is made worse by losses due to run-off and the heavily degraded environment with minimum vegetation cover. The chances of drought occurring in parts of the region have increased from a probability of once in every six to eight years to a probability of once in every two to three years based on the data available for the past fifty years.

1.2.2. High unemployment, poverty and environmental challenges are among the main bottlenecks for inclusive growth in Kenya. The negative impact of recurrent droughts on people's livelihoods and gender balance has also challenged the inclusiveness agenda. Moreover, 80% of the Kenyans derive their livelihood from agriculture which is dependent on water. Consequently, a large proportion of the population is vulnerable and food insecure with an estimated 45% of the children suffering from under-nourishment. Other challenges include governance issues and weak capacity to manage and build resilience in the rural communities. The project intervention will therefore seek to develop skills while promoting greater economic inclusion and resilience in the rural communities.

1.2.4. To avoid the recurrence of severe water shortages and food crises in the project area, there is need to address the root causes of vulnerability in the ASALs of this region. It is against this background that the Bank is supporting this initiative to help address the key challenges to sustainable livestock production and livelihoods in the region, and help build the resilience and stability of the pastoral communities in the project area.

1.2.5. In accordance with FAO's country programme framework for Kenya, one of the organization's flagship projects focusses on the promotion of conservation agriculture, climate smart agriculture and good agricultural practice in the semi-arid regions of the country. This flagship has a strong focus on commercialization and market access but currently lacks a focus on livestock and irrigation. In areas where rainfall is exceptionally irregular, and where livestock form an essential component of livelihood assets this is a critical gap. The SIVAP has been designed to fill this gap.

1.3. Donor coordination

1.3.1. The Bank is among the top five largest development partners in the Kenya Agriculture Sector including the European Commission, World Bank, JICA, and GIZ (see Table below 1.1 for details). There exists an active Agriculture and Rural Development Partner's Group composed of the different multilateral and bilateral development partners present in Kenya involved in the sector. The Group is currently chaired by FAO, with GIZ and USAID as the co-chairs, and it meets once a month. The Bank, through the East Africa Regional Resource Centre (EARC), actively participates in this group. Development Partners are also in the process of moving towards operationalizing a single business strategy – Joint Assistance Strategy, rather than individual standalone strategies. To facilitate Sector-wide monitoring and evaluation to ascertain impacts of various development efforts by stakeholders, the Ministry of Agriculture, Livestock and Fisheries is developing a sector-wide M&E framework, which should serve the different information needs on trends and dynamics within the sector. During preparation for this operation, the Bank and FAO consulted widely and also shared the same with several development partners in Kenya (World Bank USAID, EU, GIZ, and WFP) who are currently proposing/undertaking similar initiatives in the country. The Bank will continue to coordinate with these partners in supervising the implementation of this and other Bank-financed operations in Kenya.

Table 1.1: Donor Contribution to the Agriculture Sector in Kenya

	Sector or subsector*	Size		
		GDP	Exports	Labor Force
	Agriculture Sector	24%	60%	80%
	Players - Public Annual Expenditure (average 2014/2015 to 2015/2016)**			
	Government	Donors		
UA m	UA 231 m	UA 259 m	EC	26.5%
%	47%	53%	IDA	21.2%
			AfDB	18.5%
			IFAD	11.9%
			SIDA	6.9%
			USAID	5.8%
			JICA	2.7%
			Danida	2.7%
			Germany	1.5%
			FAO	1.2%
			Italy	1.2%
	Level of Donor Coordination			
	Existence of Thematic Working Groups			Y
	Existence of SWAPs or Integrated Sector Approaches			Y
	ADB's Involvement in donors coordination****			M

* as most appropriate ** Years [yy1 to yy2] *** for this sector or sub-sector
**** L: leader, M: member but not leader, none.

II- PROJECT DESCRIPTION

2.1. Project component

2.1.1. The project has four main components which include: (i) Irrigation and Water Infrastructure Development; (ii) Access to Markets and Strengthening Value Chains; (iii) Institutional Strengthening and Capacity Development; and (iv) Project Coordination and Management. The proposed activities under each components of the project are linked with each other by following a catchment/watershed based development approach to achieve its objectives through efficient project management and implementation techniques. The components will have activities as discussed here below:

2.1.2. **Component 1: Enhanced Irrigation Infrastructure and Water Resources Development:** The project will increase irrigated land by 3,205 hectares (through sprinkler irrigation systems) in eleven Counties through development of nine new irrigation schemes (1,631 ha), rehabilitation of three existing schemes (1,274 ha) and development of 300 hectares under micro irrigation schemes and water pans.

2.1.3. **Component 2: Improved Access to Markets and Strengthening Value Chains:** Improvement of 300 km of access roads, construction of livestock sale yards, construction of post-harvest handling facilities and agro-processing facilities for value addition are some of the expected key outputs to contribute to improved market access.

2.1.4. **Component 3: Institutional Strengthening and Capacity Development:** In this component, beneficiaries will be assisted to build strong community based institutions (Farmer associations, Irrigation Water Users Associations and Women Groups) that will maintain the infrastructure as well as manage marketing of their products. Capacity development is expected to infuse sustainability into the project activities so that benefits are sustained long after the project period. In addition, capacity development in marketing will contribute to increased market access and trade for the high value crops and small stock produced by the beneficiaries.

2.1.5. **Component 4: Project Coordination and Management:** The fourth component focuses on project implementation structures at national as well as county level. It shall improve sector-wide implementation and coordination mechanisms ensuring that the project outputs and outcomes are delivered effectively and efficiently. This will be achieved through establishment of National and County Coordination Units.

Table 2.1: Project Components

Component name	**Est. cost (USD million)**	**Component Description**
1. Irrigation Infrastructure and Water Resources Development	41.83	• 12 Irrigation schemes (2,905 Ha); • 60 Micro-irrigation schemes (300 Ha); • 50 Water harvesting structures • 300 Erosion control structures • 80 Ground water development structures • 15,000 Ha of watershed/catchment area developed • TA for the Design and Supervision of infrastructure development
2. Access to markets and strengthening value chains	15.14	• 300 Km of feeder/access roads constructed • 11 Post-harvest handling facilities constructed • 11 Livestock sale yards constructed • 11 Units of agricultural processing equipment supplied for IGAs • TA for design and supervision
3. Institutional strengthening and Capacity Development	7.46	• Training for group formation, conflict resolution, community sensitization, agro-processing, entrepreneurship and marketing, irrigation and agronomy practices, seed multiplication, nutrition, etc. • Studies for baseline, gender and anthropology, MTR, project impact; • Technical Assistance for marketing and finance, food and nutrition policy, farmer/women associations, livestock market management, irrigation, etc. • Preparation and monitoring of ESMP • External M&E support
4. Project Coordination and Management	6.25	• Project management and coordination • Project M&E • Financial management, procurement, audit, etc.

2.2. Project type

This is an investment project with funding support in form of an ADB loan and a grant from the GAFSP. This project is unique as it has funding from the Bank and from a multi-donor trust fund, the GAFSP, whose funds are managed through a number of selected implementing agencies (MDBs) and technical agencies (FAO and WFP). In the case of SIVAP, the GAFSP funds are being jointly managed by the Bank and FAO as supervising and technical agencies respectively (the Bank managing 95% of the funds for investments and capacity building activities and FAO 5% of the funds for technical assistance activities. Marketing and finance, food and nutrition policy, farmer/women associations, livestock market management, ***and*** irrigation)**"** (See details in Annex C3 of the technical annexes). FAO and GoK will sign a separate Grant Agreement.

2.3. Technical solutions retained and other alternatives explored

Table 2.2: project alternatives considered and reasons for rejection

Alternative name	**Brief Description**	**Reasons for Rejection**
Scattered interventions of the project in counties	The counties prefer to oblige too many beneficiaries by scattering the project activities in all over the counties.	The scattered activities are difficult to manage, cost high in operation and maintenance, has limited impact on the communities lives.
Fuel powered pump irrigation	Provide year-round water availability for agricultural production using pumps	High operating cost of fuel powered pumps compared to using the natural topographic head. High potential contribution to ozone layer depletion of the smoke emitted
Construction of large storage reservoirs to harvest more run off water.	Building more storage in-order to conserve maximum amount of run off.	Dam safety is a serious risk factor, requiring high level technical design, reliable data, high level technical support is needed in construction and management requirements which are beyond the local level capacity to implement, manage and operate.
Furrow/Flood irrigation system for irrigation	efficient and drudgery- free irrigation water distribution equipment	Not sustainable in the long run due to high cost of maintenance of the system, and low efficiencies compared to the sprinkler irrigation systems.

2.4. Project cost and financing arrangements

2.4.1 The total project cost, excluding taxes and duties, is estimated at USD 70.684 million (KES 6.833 billion), including physical and price contingencies. The costs are composed of USD 48.464 million (69%) in foreign currency and USD 22.221 million (31%) in local currency costs. Physical contingencies have been estimated at 4% of the overall base cost and price contingencies estimated at 5% of the base cost taking into account the rate of inflation. The tables below provide the summary of the Project costs which are based on analysis of unit prices obtained from records of recent competitive bidding for similar works, goods and services.

2.4.2 The project will be financed by an ADB loan of USD 39.546 million, a GAFSP grant of USD 24.000 million and the Government will contribute USD 7.138 million as counterpart funds towards project activities.

Table 2.3: Project cost estimates by component

	(KES '000)			(USD '000)			% Foreign	% Total
Components	**Local**	**Foreign**	**Total**	**Local**	**Foreign**	**Total**	**Exchange**	**Base Costs**
1. Enhanced Irrigation Infrastructure and Water Resource Development	1,083,838	2,613,387	3,697,225	11,211	27,032	38,243	71	59
2. Market Access and Enhanced Value Chains	358,659	980,152	1,338,811	3,710	10,138	13,848	73	21
3. Institutional Strenghthening and Capacity Development	154,447	538,028	692,475	1,598	5,565	7,163	78	11
4. Project Coordination and Management	307,414	262,470	569,884	3,180	2,715	5,895	46	9
Total BASELINE COSTS	1,904,358	4,394,036	6,298,395	19,698	45,451	65,149	70	100
Physical Contingencies	70,656	164,865	235,521	731	1,705	2,436	70	4
Price Contingencies	173,188	126,391	299,579	1,791	1,307	3,099	42	5
Total PROJECT COSTS	2,148,202	4,685,292	6,833,494	22,221	48,464	70,684	69	108

Table 2.4: Sources of financing (USD '000)

Sources of Financing	Foreign Currency	Local Currency	Total Costs	Percent
Government of Kenya	3,582	3,557	7,138	10
ADB Loan	27,279	12,267	39,546	56
GAFSP Grant	17,603	6,397	24,000	34
TOTAL	48,464	22,221	70,684	100

2.4.3. The Government contribution is equivalent to 10% of the total project cost. The Bank's policy on Expenditure Eligible for Bank Financing states that for ADB countries, the Government's contribution needs to be at least 50% of the project cost unless special circumstances warrant a different percentage (See Annex B10 for details on justifications). In this case, a waiver is requested for the Bank to finance more than 50% as Kenya just graduated to an ADB country this year and is in transition and is still eligible for ADF financing (actually this Project is the first use of ADB funds by the country) and the country's budget cycle which was recently approved in June 2015 and the debt level would not allow more funding from the Government at this particular time.

Table 2.5: Project cost by category of expenditure (USD '000)

		(KES '000)			(USD '000)		% Foreign	% Total
Categories of Expenditures	**Foreign**	**Local**	**Total**	**Foreign**	**Local**	**Total**	**Exchange**	**Base Costs**
I. Investment Costs								
A. Civil Works	3,297,295	1,413,126	4,710,421	34,107	14,617	48,724	70	75
B. Goods	146,484	7,710	154,194	1,515	80	1,595	95	2
C. Services	773,651	180,628	954,279	8,002	1,868	9,871	81	15
Total Investment Costs	4,217,430	1,601,464	5,818,894	43,624	16,565	60,190	72	92
II. Total Recurrent Costs	176,606	302,895	479,501	1,827	3,133	4,960	37	8
Total BASELINE COSTS	4,394,036	1,904,358	6,298,395	45,451	19,698	65,149	70	100
Physical Contingencies	164,865	70,656	235,521	1,705	731	2,436	70	4
Price Contingencies	126,391	173,188	299,579	1,307	1,791	3,099	42	5
Total PROJECT COSTS	4,685,292	2,148,202	6,833,494	48,464	22,221	70,684	69	108

2.5. Project's target area and population

2.5.1 The project will focus on eleven counties within the arid and semi-arid lands, namely Kitui, Makueni, Machakos, Tana River, Bomet, Meru, Tharaka Nithi, Nyandarua, Murang'a, Kajiado and Nyeri Counties. These counties have been chosen due to a number of factors including: (i) These areas receive low to moderate rainfall ranging from a low of 200 mm / year in the most arid areas to 1900 mm / year in the higher potential areas, (ii) The selected areas have been identified as the areas with the greatest potential for agricultural growth and poverty reduction, and (iii) The vast majority of population in the selected counties have high poverty rates and high food security indexes. It is anticipated that the implementation of the project will deliver results for the eleven target counties by directly and indirectly benefiting 104,000 households.

Table 2.6: Category of expenditure by source of financing (USD '000)

	GoK		ADB		GAFSP		Total		For.	Local
	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	(Excl. Taxes)
A. WORKS										
Construction & Rehabilitation	0	-	37,599	70	15,897	30	53,497	76	36,820	16,677
B. GOODS										
1. Vehicles	795	100	-	-	-	-	795	1	755	40
2. Office Furniture and Equipment	145	100	-	-	-	-	145	0	137	7
3. Agro-Processing Equipment			671	100	-	-	671	1	636	35
Subtotal	940	100	671	100	-	-	1,611	2	1,529	82
C. SERVICES										
1. Training, Seminars, Workshops	0	-	-	-	2,153	100	2,153	3	1,705	448
2. Studies	213	51	-	-	203	49	416	1	329	87
3. Technical Assistance	0	-	215	4	5,747	96	5,962	8	5,005	957
4. Contractual Services	671	39	1,061	61	-	-	1,732	3	1,190	542
Subtotal	884	9	1,275	12	8,103	79	10,262	15	8,230	2,033
D. OPERATING COSTS	5,314	100	-	-	-	-	5,314	8	1,885	3,429
TOTAL	7,138	10	39,546	56	24,000	34	70,684	100	48,464	22,221

Table 2.7: Expenditure schedule by component

	Base Cost (USD '000)						
Component	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Total**
1. Enhanced Irrigation Infrastructure and Water Resource Development	2,445	11,201	10,296	7,887	4,419	1,996	38,243
2. Market Access and Enhanced Value Chains	233	3,953	3,293	2,763	1,873	1,733	13,848
3. Institutional Strenghthening and Capacity Development	843	1,571	1,693	1,527	804	725	7,163
4. Project Coordination and Management	1,663	846	846	846	846	846	5,895
Total Baseline Costs	5,184	17,571	16,129	13,023	7,942	5,301	65,149
Physical Contingencies	108	699	659	512	294	166	2,436
Price Contingencies	41	438	685	784	629	522	3,099
Total Project Costs	5,333	18,707	17,473	14,318	8,865	5,988	70,684

2.6. Participatory process for project identification, design and implementation

2.6.1. The project design process consisted of consultations with development partners, national government including the Executing Agency, counties elected leaders and management, and beneficiaries including farmer groups, civil society leaders, NGOs and should therefore be viewed in the context of the broad-based, lengthy and multi-layered process of consultation. All activities proposed for support under the project initiative were discussed and agreed upon during the process of project development, presentation, and discussion with local stakeholders and development partners. There is as much stakeholder acceptance and buy-in to the activities prioritized for support in the project as there is for their inclusion in the project itself. During project implementation, beneficiaries will also be sensitized, trained and exposed to all project technical and management aspects to ensure ownership and sustainability of the investments made.

2.7. Bank Group experience, lessons reflected in project design

2.7.1. One of the most significant lessons drawn from the ongoing KACEP programme is that the development of market links early on, which ensure that farmers are able to sell any excess, is essential if farmers are to invest additional time and resources in project activities.

2.7.2. The activities proposed under the project are similar to those currently being undertaken in three ADF-funded projects in Kenya namely; (i); Kimira Oluch Small Holders' Irrigation Development Project (ii) Small-scale Horticulture Development Project (SHDP); and (iii Drought Resilience and Sustainable Livestock Management project (DRSLP-1). The design of the proposed project has incorporated lessons and best practices from the three projects in terms of activities identification, design, and implementation approach.

2.7.3. One of the most significant lessons from SHDP1 is that farmers' responses can also be enhanced through an early and active involvement in the project identification and promotion, in addition to focusing on the problems, constraints and opportunities that relate to their basic needs. The feasibility studies revealed that most of the existing smallholder irrigation schemes were developed using a top-down approach with limited farmer participation. Based on these lessons, the Small-scale Irrigation and Value Addition Project (SIVAP) has promoted the involvement of farmers from the onset, during planning, design and implementation. The beneficiaries already have WUAs in place which will be responsible for scheme operation and maintenance.

2.7.4. Inadequate preparation and selection of appropriate technological packages could also lead to low or poor farmer response. The important lesson here is the choice of appropriate technology through a rigorous analysis and assessment of different strategic options which could enhance the relevance and rapid acceptance of the projects by local communities.

2.7.6. Another important lesson is that there is a need to put in place an effective productive and marketing system to ensure that the farmers are able to sell the surpluses generated and thus increase their incomes. Based on experience in gender mainstreaming in agriculture and learnt lessons, the major issues/challenges to agricultural production are socio-cultural constraints; illiteracy; limited access to resources; land utilization rights; high workloads (low involvement of men) and low participation of women in decision making processes. The proposed project has taken these lessons into consideration in its design.

2.7.7. Project ownership by the beneficiaries and the local authorities is extremely critical for sustainability. The success of the project productive assets depends on organization for use of water especially the formation of IWUAs to regulate water use, conveyance and synchronization of irrigation by beneficiaries. The process of IWUA formation must start from project year 1 as the irrigation infrastructure is being planned and assigned. Moreover, the apparent non-involvement of farmers in the planning and active implementation of some of the irrigation activities under SHDP 1 has led to the provision by the project of pumps that are too costly for operation and maintenance and too high water flow.

2.7.8. Quality at entry is important to ensure smooth take-off and hitch free project implementation. The possibility to recruit short term TA to work with the PCU to kick-start the project and provide such training should be explored more systematically.

2.8. Key performance indicators

2.8.1. The key performance indicators for monitoring of project achievements are identified and captured in the results based logical framework. The key outcomes include increased household income and reduced food scarcity. The key indicators are increased land area brought under irrigation, increased kilometers of rural access road rehabilitated, improved volume of water mobilized, increased crop productivity and reduced postharvest loss. It is important to note that these are in line with Bank's core sector indicators. These indicators will be collected and analyzed regularly by the M&E unit of PCU through crop trials and monitoring progress. The M&E unit will collect and report data disaggregated by gender during project implementation. In addition the project will introduce external support to achieve high standards of monitoring parameters identified by GAFSP.

2.8.2. The PCU will prepare quarterly and annual project progress reports presenting the progress on output indicators disaggregated by gender where appropriate. Outcome indicators will be monitored through external M&E support and PCU's management system and national statistics. Indicators will be updated in the Implementation Progress Report (IPR) and necessary adjustments will be made as appropriate. A medium term report (MTR) and Project Completion Report (PCR) along with external M&E and impact study will be prepared. All of these reports are circulated widely within the Government, the Bank and to other development partners.

III – PROJECT FEASIBILITY

3.1. Economic and financial performance

Table 3.1: key economic and financial figures

FIRR (base case) 24%	NPV USD 50.6 million at 12%
EIRR (base case) 28%	NPV USD 69.6 million at 12%

NB: detailed calculations are available in Annex B6 (technical annexes)

3.1.1 The project is financially and economically viable, as indicated by the Project's Financial Internal Rate of Return (FIRR) of 24% and Economic Internal Rate of Return (EIRR) of 28% **(Annex B4)** which are both significantly higher than the discount rate of 12%. The Net Present Value (NPV) is also positive in both cases indicating that the project should be accepted. At the enterprise level, a typical one hectare farm model shows that as a result of the project, annual net margin is expected to increases from KES 7,634 (USD 79) per farm to KES

473,940 (USD 4,902) per farm/haat full development. This is mainly due to the fact that before introducing irrigation, the farmers are farming in a subsistence manner but with the introduction of irrigation, they farm in a commercial manner in terms of inputs use and crop selection. This demonstrates that at the enterprise level, the project is financially feasible.

3.1.2 The analysis has considered the following assumptions: (i) economic life of the project is assumed to be 30 years; (ii) infrastructure operating and maintenance (O&M) costs of 2% of project cost per year during the project life; (iii) there will be a major rehabilitation in the 20th year equal to 20% of the initial irrigation costs; (iv) 80% of the produce is marketed after irrigation; (v) project benefits stream begin in the third year at 20% and increase annually by 20% to reach full benefits (100%) during the seventh year; (vi) the costs used for economic analysis have been adjusted to economic costs; and (vii) implementation schedule of investments built from the expenditure schedule of activities of draft technical designs. The key costs that are considered for the analysis include the capital investment costs and the recurrent operational and maintenance costs.

3.1.3 The benefits considered in the analysis are those derived from increased productivity of crops due to enhanced water management through irrigation. Due to the availability of irrigation, the majority of farmers switch from some of the traditional crops to more high value crops that have higher productivity and are more marketable. This increase in productivity translates directly into increased incomes at the household level and increased food security. The project includes other benefits which have not been factored in the EIRR analysis above such as improved watershed management; improved market access; increase in land values after installation of irrigation systems; increase in off-farm activities due to increased household income; and better nutrition. If all of these benefits are quantified, the EIRR would even be better.

3.1.4 Sensitivity analysis was conducted on the EIRR (**Annex B4**) for various scenarios and demonstrated that the project is very robust and would remain viable under a range of alternatives. The one scenario where there was a significant change in the EIRR was where the benefits stream would be delayed by 3 years, this resulted in an EIRR of 17%. The results are presented in the table below.

Table 3.2: Results of the Sensitivity Analysis on the EIRR

Scenario	ENPV (USD)	EIRR
Base Case	$69,571,081	28%
20% Decrease in Crop Prices	$44,481,549	23%
20% Increase in Project Costs	$58,395,765	24%
Benefits Delayed by 3 Years	$31,437,257	17%

3.2. Environmental and Social impacts

3.2.1. The project has been categorized by ORQR as Category 2 projects are likely to have detrimental and site-specific environmental and social impacts that can be minimised by the application of mitigation measures included in an ESIA, conducted by the project and approved by ORQR. Summary of the ESIA **(Annex B8)** was published on Bank website on June 1, 2015.

3.2.2**. Climate Change:** The project sites are reported as having erratic patterns of rainfall with an increase of drought. The project will therefore strive to address this issue by building climate resiliency through: a) introducing integrated watershed base development approach; b) climate smart irrigation systems and rural roads and agrarian infrastructures that are more adapted to climatic conditions; and c) contributing to livelihood diversification through a market oriented agricultural production system. Awareness and training including agriculture techniques specifically adapted to the area's climatic variability will be provided to build and sustain social resilience for the farmers and their communities, aiding them to cope with the effects of climate change.

3.2.3. Overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and are effective considering climate change. Environmental and social monitoring will enable response to new and developing issues of concern during implementation, hence ensuring compliance with environmental provisions and standards of the Bank and the Government of Kenya.

3.2.4. During the preparation of the ESIA, public consultations were carried out with the Ministry of Agriculture, Livestock and Fisheries, respective beneficiary county governments and some farming communities. The purpose of consultations was: (i) to generate a good understanding of the project by all stakeholders of the project; (ii) to enhance ownership of the project by local leadership, the community and local farmers; (iii) to understand people's and agency expectations about the project; (iv) to understand and characterize potential environmental, social and economic impacts of the project; (v) to enhance local benefits like providing manpower and other businesses created through increased farm production and sales opportunities that may accrue from the project; and (vi) to enable stakeholders involved in the project to provide views, hence participating in or refining project designs.

3.3. Gender and social analysis

3.3.1. The African Development Bank Group's (ADB) Gender Policy 2001 and FAOs' gender strategy provide the requisite conceptual and operational framework for promoting gender responsive development in Africa. Through the policy and strategy, the Bank and FAO seeks to promote the mainstreaming of gender in Bank operations.

3.3.2. In Kenya women constitute nearly 51% of the population. Based on previous studies, in subsistence and/or small-scale farming, women were found to contribute higher labour inputs than men. They do land preparation, planting, weeding, scaring birds and other animals, harvesting, threshing and winnowing and post-harvest storage and processing. Women, thus, ensure household and largely community food security. They are, therefore, an important segment in the implementation of this project. Fortunately, both the national government of Kenya as well as county governments have political will at the highest level of government for gender equality backed by legal instruments such as the Constitution of Kenya, 2010, National Gender Policy, Employment Act, Guidelines for Gender Mainstreaming in Human Resources Management among several other instruments.

3.3.3. The Project through its entrepreneur development, capacity building and livelihood activities will employ a gender sensitive approach in order to maximize the productivity of women at household levels while minimizing biases in the attainment of economic development and empowerment. In addition, the youth are strongly disadvantaged in the competition for jobs in the formal economy since they lack skills, work experience and have no (or have only limited) social networks compared to the older people. The young people also comprise greater proportion in the population of Kenya. Young people will thus be engaged in the value chain activities in the project.

3.3.4. The recurrent droughts that ravage many parts of the country including the project area have had negative impacts on the food and water availability, thus increasing women and youth's social and economic vulnerability, as well as exposing them to other risks, such as violence.

3.3.5. The Kenya SIVAP will support 104,000 H.H (520,000 beneficiaries) directly and indirectly with more than 58% (301,600) women and youth beneficiaries in the eleven counties. The project will seek to improve the role of both gender in infrastructure, irrigation, water harvesting, natural resource management, and ensure economic empowerment and involvement in decision making to improve livelihoods. Women will specifically play a central role in those project activities which aim to improve sustainable livelihoods and provide alternative sources of energy. These activities will lighten the burden of gathering firewood and water and allow women more time for alternative income generation and capacity building activities.

3.3.6. The increased water and market infrastructures, water harvesting, value addition supported by information systems, and livestock health facilities will ease existing economic activities women and youth are engaged in such as agro-processing, improved livelihoods and entrepreneurs development as well as saving them time. Their inclusion in these irrigation, water and market infrastructure management committees will improve their decision making capacity and skills at community level; whilst their training (in for e.g. bee-keeping, public awareness) will ensure that their participation is meaningful.

3.3.7 The project will improve incomes, stimulate economic activities and raise living standards. Water harvesting facilities are also likely to be a source of water-borne diseases including malaria. The project will, however, have many positive health impacts through improved nutritional standards.

3.3.8. Involuntary Resettlement: The project does not involve any resettlement. However, farmers whose land will be subjected to right of way of civil works will suffer some disruption to farming activities, and loss of crops in the field. The GoK/PCU will compensate the farmers according to the size, type of crop and anticipated economic loss by involving them in the project sub activities.

IV– IMPLEMENTATION

4.1. Implementation arrangements

4.1.1. Executing Agency: The Executing Agency will be the Ministry of Agriculture, Livestock and Fisheries in close collaboration with the Ministry of Water and Irrigation and counties governments. FAO will provide technical support to the Ministry of Agriculture, Livestock and Fisheries in nutrition support and capacity building.

4.1.2. National Project Co-ordination Unit (PCU): At the national level, a PCU will be constituted to coordinate the implementation of this project. In this connection, the PCU of the present SHDP could be used and expanded with recruitment of additional key staff including the Accountant, procurement officer, M&E officer, Engineer, Livestock specialist, Environmental Specialist and Gender Officer among others. This will ensure that experienced and efficient staff familiar with the agriculture sector are retained to manage this project. The PCU will be responsible for the day-to-day coordination and monitoring of implementation of the project activities. In this regard, the PCU will ensure that project activities are initiated and executed in time, they are adequately budgeted for, consolidate project records, submit all procurement documents to the Bank for review and approval, compile and submit all disbursement applications and quarterly progress reports, and undertake annual audits of all project accounts and submit the audit reports to the Bank. The PCU staff will be provided by the Government.

4.1.3. Project Steering Committee (PSC): At the national level, a PSC would be established to oversee project implementation. The PSC would be chaired by the Principal Secretary, State Department of Agriculture, Livestock and Fisheries (MoALF) and comprise representatives from the PS or his/her nominee of National Treasury/Ministry of Finance, DG Ministry of Environment and Natural Resources, PS or his/her nominee for Ministry of Water and Irrigation, Director-General of NEMA or their representatives, two representatives each from the County Executives responsible for Agriculture (selected on alternate basis from the 11 counties) and the project beneficiaries. The National Project Coordinator will be the Secretary to the PSC. AfDB and FAO may be invited to PSC meetings as observers. The main task of the PSC would be to review and approve the project's annual work plans and related budget to ensure adherence to project development objectives. The PSC will also provide guidance to project management and resolve problems that might arise during project implementation. The PSC will also monitor performance of the project and advise it on policy issues. The Committee shall meet at least twice a year.

4.1.4. Coordination at the County and Sub-County Levels: The implementation of project activities at the county level would be carried out through the office of the County Executive responsible for Agriculture. A County Project Coordination Committee will be formed at each county and comprise the relevant technical departments, representatives for the irrigation schemes and will be chaired by the County Executive responsible for Agriculture. It will meet quarterly and guide the implementation of the project and endorse work plans, budgets and progress reports. The Committee will be responsible for facilitation and coordination of all technical matters pertaining to the implementation.

4.1.5. Supervision, Implementation and Expenditure Schedule: The project has been designed and processed by the MoALF, FAO and Bank staff based at the EARC. It will be supervised from the Bank's East Africa Resource Centre, at least twice each year, to ensure that the Bank's procurement and financial management procedures and guidelines are adhered to. Through the project's monitoring system, the PCU will monitor progress of the project and submit quarterly progress reports to the Bank. A Mid-Term Review (MTR) will be undertaken by end of PY3 and a Project Completion Report (PCR) will be prepared by both the GoK and the Bank towards end of PY6.

4.1.6. Procurement Arrangements: All procurement of goods, works, and related services and acquisition of consulting services financed under the ADB and GAFSP resource will be carried out in accordance with the Bank's Rules and Procedures for Procurement of Goods and Works May 2008 edition (Revised July 2012) and Rules and Procedures for the Use of Consultants, May 2008 (Revised July 2012), as amended from time to time, using the relevant Bank Standard Bidding Documents, and the provisions to be stipulated in the Financing Agreement. The various items under different expenditure categories and related procurement arrangements are described in the Technical Annex of the appraisal report for each contract to be financed by the Loan or Grant. The different procurement methods or consultant selection methods, estimated costs, prior-review requirements, and time frame as agreed between the Borrower and the Bank will be provided in the Procurement Plan and detailed in the PAR technical annex (see **Technical Annex B.5**).The PCU will be responsible for the procurement of all goods, works and related consultancy services for the project through a qualified procurement officer. Any additional staff deployed on the project will be trained on Bank-financed procurement. With these measures, the resources, capacity, expertise and experience of the project team at MoALF to conduct procurements envisaged under the project will be considered to be acceptable. The detailed review of MoALF is contained in the procurement annex. Any procurement undertaken by FAO under the technical component will be done in accordance with FAO's procurement rules as laid out in the organization's Manual Section 502.

4.1.7. Disbursement Arrangements: The Borrower will open two Special Accounts (SA) denominated in US Dollars for the purpose of the project and one Project Account in Kenya Shillings. One of the USD denominated special accounts will be for receiving GAFSP resources. In addition, another Kenya Shillings account will be opened for receiving counterpart funds from the GoK. All the three Bank accounts will be opened at the Central Bank of Kenya. The opening of these Accounts will be a Disbursement Condition. The Bank's four disbursement methods (Direct Payment, Special Account, Re-imbursement and Re-imbursement Guarantee) will be available to be used during project implementation. Payments for all works will be through direct payment to contractors based on acceptable work completion certificates as will be defined in the contracts. The first request for Direct Payment will include a copy of the approved contract. The Special account will only be used for the few Project administration expenses which the Bank will cover at the PCU as it is envisaged that all project administration operational expenses expected at the Counties will be covered through Counterpart funds. An initial deposit for an amount corresponding to six months of activities as justified by a work program approved by the Bank will be made into the Special Account. Subsequent replenishments of the SA will be subject to the Borrower having provided sufficient justifications for the use of at least 50% of the previous deposit and upon production of agreed work program for the following six months in line with the Bank's disbursement rules and procedures. To ensure adherence to agreed financial regulations, the special account will be monitored by the AfDB supervision missions.

Table 4.1: Summary of Procurement Arrangements (USD '000)

	Procurement Method				
	National Competitive Bidding	Consulting Services: QCBS	*Unidentified	N.B.F.	Total
A. WORKS	53,496.51	-		-	53,496.51
	(37,599.08)				(37,599.08)
B. GOODS					
1. Vehicles & Equipment					
Vehicles	-	-		795.50	795.50
Agro-Processing Equipment	-	-	670.99		670.99
			(670.99)		(670.99)
Office Equipment & Furniture	-	-		144.55	144.55
C. SERVICES					
1. Studies	-	-		415.88	415.88
2. Training, Seminars, Workshops &	-		2,152.82	-	2,152.82
3. Technical Assistance	-	4,761.74		1,200.00	5,962.22
		(214.56)			(214.56)
4. Contractual Services	-		1,731.90	-	1,731.90
			(1,731.90)		(1,731.90)
D. OPERATING COSTS	-	-		5,314.40	5,314.40
TOTAL	53,496.51	4,761.74	4,555.71	7,870.33	70,684.75
	(37,599.08)	(214.56)	(2,402.89)		(39,545.54)

Note: Figures in parentheses are the respective amounts financed by ADB
*Unidentified - EA will justify procurement method at implementation.

Procurement of civil works valued at USD 53,496,510, and totalling about 67 contracts, will be carried out under *National Competitive Bidding (NCB)* procedures, using the Bank's Standard Bidding Documents (SBDs) **(Annex B5.2.1)**. These include works for development and rehabilitation of Irrigation Infrastructure which comprise about 12 contracts estimated at USD 29,267,680 in aggregate as well as localized works in each of the eleven target counties for Micro Irrigation Schemes (USD 1,999,260); Water Harvesting Infrastructure (USD 4,428,710); Erosion Control Infrastructure (USD 1,675,240); Ground Water Development (USD 884,360) and Watershed/Catchment Area Development (USD 2,225,850). NCB has been recommended because the works are labor intensive and, from the geographical spread, nature and size of the contract packages, they are unlikely to attract foreign competition and there are qualified local contractors in sufficient numbers to ensure competition. However, foreign firms that wish to participate in bidding for the contracts shall be allowed to do so.

4.1.8. Financial Management (including Audit) Arrangements: Consistent with the Paris Declaration on Aid Effectiveness and the Accra Agenda for Action, the project will make use of the country's PFM systems and the Head of Accounting of the Ministry will be responsible for the FM of the project. In line with the Government of Kenya (GoK) systems, the Permanent Secretary of the Ministry of Agriculture and Fisheries will be the Accounting Officer. The ministry's internal audit will also cover the project. The ministry's FM is led by a Head of Accounting from the Accountant General's office who has appointed two accountants to manage the day to day financial operations of the Bank's funded projects guided by the GoK financial regulations and procedures. In order to supplement the existing two accountants, the ministry will appoint a new Project Accountant who will be responsible for maintaining financial records and financial reporting for the project. The project will use the Integrated Financial Management Information System (IFMIS) to capture and report on all its financial transactions based on the International Public Sector Accounting Standards (IPSAS) cash basis. There is adequate number of accounting staff in the ministry who assist the project staff in transactions approval process. Since the project will be implemented in eleven (11) counties in the Country, the ministry FM staff will be required to work very closely with the procurement and finance staff at the Counties in order to timely obtain accounting information for recording and reporting purposes. The funding of the county will be done through the agreed protocol (between the National Government and the specific county) (see **Technical Annex 4)**.

4.1.8.1. Budgeting for the project will follow the GoK rules and procedures on budgeting. The total project budget will be included in the Ministry's annual budget and included in the National budget. The project will follow the GoK financial year of 1st July to 30th June and its financial statements will be audited by the Auditor General. The audit terms of reference will be agreed between GoK and the Bank by negotiations. The audit report, complete with a Management Letter and responses, will be submitted to the Bank within six months of the end of the financial year. The Ministry will also be required to submit quarterly Financial Reports together with the Projects Progress report to the Bank no later than 45 days after the end of each quarter.

4.1.8.2. The Ministry is executing two other Bank funded projects, the Smallholder Horticulture (SHDP) and the Drought Resilience and Sustainable Livelihoods Project (DRSLP). To provide oversight and assist in strengthening the Project Internal control mechanism, the Ministry's internal audit department will include the project in its annual audit planning and the project's audit reports will be shared with the Bank as needed. This is an area which requires improvement because the Ministry has not been performing specific project internal audits.

4.1.8.3. The results of the assessment indicate that the Financial Management overall risk rating is **Moderate** after mitigating measures. Appropriate mitigating measures have been identified and incorporated in project design which includes Bank funds not being advanced to the Counties and also a new set of staff being appointed to manage the Project. In conclusion, the proposed financial management arrangements put in place meet the Bank's minimum requirements for project financial management and therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by the Bank.

4.2. Monitoring

4.2.1. The national PCU and external Monitoring and Evaluation unit has a very detailed and current database on the key indicators of: (i) household income; (ii) food scarcity index; (iii) Nutrition level and (iv) crop yields and (iv) Post Harvest Loss reduction in selected sites of the 11 counties. However, a baseline survey will be conducted in each command area and associated communities at project start-up to assess the physical and socio-economic baseline status of the project area and to measure the additional selected project indicators. The baseline will include sex-disaggregated data and be based on gender analysis. The project has incorporated gender sensitive results-based indicators and target values. The project will also conduct at its onset, a start-up workshop, with the aim of sensitizing and training National and county level staff, implementing partners and project beneficiaries on the project objectives and scope and review the Results Based Logical Framework.

4.2.2. Through External M&E consultancy and PCU's based Monitoring and Evaluation (M&E) department, the Project will provide: (i) timely and accurate information on project implementation progress and constant feedback for decision making and addressing potential work plan deviations and problems during implementation; and (ii) the basis for assessing the achievements of the project as per the Results Based Logical Framework. The project will submit quarterly progress reports to the Bank and the Bank will undertake two supervisions mission per year and prepare an Implementation Progress Report (IPR) for each supervision mission. PCU's M&E experts would be responsible for planning, monitoring and evaluating key project results in the project areas. These experts will also support farmers' awareness and knowledge exchange, train selected persons in Operation and Maintenance, prepare progress reports and implement studies as required.

Table 4.2- Monitoring Process

Time Frame	Milestone	Monitoring Process/Feedback
Year 1	Baseline data collection	External M&E team and the PCU's M&E officer,
Year 1-6	Project Implementation	External M&E team and PCU, Project Team, TAs/Service Providers and beneficiaries
Year 1-6	Impact of project activities	External M&E team, M&E officer, Project Team, Project Steering Committee, Service Providers and beneficiaries. Annual process along project implementation with progress report
Year 3	Mid-term review	Ext-M&E team, Beneficiaries, Bank, Government and Project Team
Year 1-6	Audit Reports	Ext-M&E team, Project Team and Auditors, annually
Year 6	Project Assessment and Completion Report	Ext-M&E team, Beneficiaries, Bank and Project Team

4.3. Governance

4.3.1. Kenya's socio-economic performance has in the past been undermined by poor governance. Kenya ranks low, both in absolute terms and relative to the regional average, on key indicators of governance including control of corruption, rule of law, regulatory quality, and government effectiveness. Steadfast implementation, including enforcement, will be key to the success of the fight against corruption. In recent years, several initiatives have been undertaken by the Government to promote good governance through reforms in public financial management, civil service, privatization of public enterprises, and anticorruption.

4.3.2. The Government has embarked on legislation in a range of areas including public officer ethics, anti-corruption and economic crimes, government financial management, public procurement and audit, privatization and statistics. Numerous other measures have followed, including a ministerial code of conduct, and reforms of the judiciary and the police force. To streamline procurement, one of the main sources of irregularities in Government, a Public Procurement Oversight Authority (PPOA) was established in 2005. The transparency of the budget formulation process has improved and it is generally acknowledged by the donor community that recent budgets have been more pro-poor and that there has been improvement in the delivery and quality of public services. In August 2011, Kenya promulgated the new constitution which contains a raft of measures to enhance leadership and integrity, maintain rule of law while protecting the rights of its citizens. Among these measures include the establishment of the Ethics and Anti-Corruption Commission.

4.3.3. The project design includes inbuilt technical assistance and supervision for each major infrastructure sub-components supported by an external monitoring and evaluation support. In addition the project steering committee and the counties level implementation committees together with communities' involvement will ensure better governance at all level of the project implementation. FAO will provide technical assistance to support capacity building, training and nutrition sub-components.

4.3.4. All completed infrastructure projects including irrigation schemes, roads, markets and water harvesting structures will still have their operation and maintenance manuals prepared and communities trained as part of the completion exercises.

4.4. Sustainability

4.4.1. The sustainability of the project will be due to a combination of a number of factors, most importantly the participatory approach. The participatory demand-driven approach was discussed with the beneficiary communities involved during the design of the project and will be factored during implementation in order to promote a sense of ownership among the beneficiaries.

4.4.2. The other key issue to the project sustainability is the flow of additional resources and incomes to the resource poor communities, most of which are located in the project area. The objective of the project is not necessarily to increase food production but to improve access to food through improved production of high value crops. It is believed that when farmers get the additional incomes from sale of produce, particularly horticulture, they become encouraged to sustain the project. The financial returns to the households coupled with the attainment of food security at community level will contribute to sustained interest in the project. The project has been designed in such a way that the commitments of the beneficiaries are obtained from the outset, thus fostering a sense of ownership. The fact that farmers will assume ownership and responsibility of the irrigation infrastructure at the various schemes after construction, and will thus bear the responsibility for O&M will further sustain flow of project benefits.

4.4. 3. The project will also focus on capacity building, including training the beneficiaries on efficient use and management of scarce water resources. Suitable TA and service providers, with experience in capacity building and training for transformation will be identified and contracted to institute the process of participation and empowerment among stakeholders during implementation. The institutionalization of a cost recovery and beneficiary contribution of efforts, the use of best service providers and reputable NGOs will minimize failure and sustain flow of outputs. The project will empower local contractors and create capacity for undertaking similar works. The application of best practices and provision of wide range of options add value to sustainability of flow of resources.

4.4. 4. For the sustainability of all project schemes and infrastructure constructed, manuals for the operation and maintenance will be developed before handing- over of these schemes to the benefitting communities. Using these manuals, the communities will be trained in the operation and maintenance of all completed schemes. This will be one of the parameters that would be covered by the monitoring and evaluation of the project to ensure that the IWUAs are well groomed to take over completely as the project phases out.

4.4.5. Use of simple technologies that are at the level of farmers, IGAs and communities will ensure adoption and replicability. Mainstreaming the participation and capacity building of the communities IGAs/FOs Members and all the other actors of the value chains will bolster ownership, and their management capabilities to continue project activities even after completion. Establishing and strengthening IGAs/FOs, agribusiness and market linkages will offer opportunities for increased income thereby contributing to the improvement of the beneficiaries' livelihood and expansion of their activities.

4.4.6. Involving beneficiary communities in project design and implementation as well as monitoring progress ensures ownership which further guarantees the sustainability of the project. The beneficiaries are required to develop and implement maintenance plans for the infrastructure provided by the project and being managed and operated by them. The maintenance plans will be funded from contributions by IGAs/FOs and these would be managed by autonomous units having received the required training from the project.

4.5. Risk Management

Risks	**Mitigation Measures**	**Risk Rating /Mitigation**
Institutional Capacity		
Weak capacity of the counties as implementing agency.	Appropriate sizing of contract packages to attract the efficient local contractors will mitigate this risk.	Low
Project Cost Overruns		
Project cost overruns due to rising costs of raw materials may lead to cost increases	Efficient procurement timing to address the increases, as well as adequate price contingencies for the unavoidable increases will mitigate the risk.	Medium
Farmers Commitment		

Individual or groups of farmers' lack of commitment to the project may hinder improvements for all farmers in a particular project area.	Effective sensitization and awareness campaigns to be spear-headed by farmer organizations such as Agricultural Cooperatives and Water Users Associations (WUAs).	Medium
Local Market Demand		
Insufficient demand for agricultural products in the local market.	Promote market-led production, diversify products. Promote cross-border and regional marketing.	Low
Implementation Challenges at counties level		
Delays in implementation at county level.	The challenge will be addressed through the established implementation mechanisms that is involving stakeholders' and politicians at county and national government level.	Medium to High
O&M of the Infrastructures developed under the project		
Unclear resources allocations and establishing people responsible for O&M of the projects	The challenge will be addressed through education and training of stakeholders and the counties involved. Counties and WUAs will be trained in developing mechanism for O&M and upkeep of the systems.	Medium

4.6. Knowledge Building

4.6.1. The special studies and the development of comprehensive framework policy document for the sustainable management of Kenya agricultural water to be conducted will provide the requisite knowledge and data that would be used for more effective monitoring of the project indicators as well as long term planning in the utilisation of agriculture water. The knowledge and data generated will also be shared with institutions nationwide and more importantly with projects having similar objectives.

4.6.2. The technologies and approaches that will be promoted by the project can be used as models for replication and up scaling outside the project area, i.e. other communities within Kenya. The production/ commercialisation channels being demonstrated will also be used as learning tools by the beneficiaries with the ultimate aim of adopting them as business enterprises with funding from the project.

4.6.3. The IGAs and FOs will serve as sources of innovative knowledge and information sharing learning tools empowering farmers and other actors of the value chain to train their peers, share knowledge and experiences, thus reducing their overdependence on the public extension agents. This will also expand significantly the number of farmers having access to the disseminated knowledge and information. The technical assistance (TA) supports will introduce and consolidate knowledge and skills, and facilitate technology and skills transfer both at the community and national levels.

4.6.4. At the project level, the project implementation review, quarterly progress reports, audit, impact study, M&E and completion reports will also provide information on various aspects of the project for further diagnosis. The knowledge obtained will be shared within the Bank and with other development partners as well as with RMCs.

V – LEGAL INSTRUMENTS AND AUTHORITY

5.1. Legal instrument

The Project will be financed by an ADB loan and GAFSP grant.

5.2. Conditions associated with Bank's intervention

5.2.1. Conditions Precedent to Entry into Force of the Loan and Grant Agreements: The entry into force of the Loan Agreement and the Grant Agreement shall be subject to the fulfilment by the Borrower/Grant Recipient of the provisions of Section 12.01 of the General Conditions Applicable to Loans and Guarantee Agreements of the ADB and the signature of the GAFSP Grant Protocol Agreement.

5.2.2. Conditions Precedent to First Disbursement of the Loan and GAFSP Grant: The obligation of the Bank to make the first disbursement of the loan and the grant shall be conditional upon entry into force of relevant financing agreement, i.e. ADB Loan Agreement and GAFSP Grant Agreement, respectively, in accordance with 5.2.1 above and, (for the Loan only), the submission by the Borrower of evidence in form and substance satisfactory to the Bank of the opening of a special account at the National Bank of Kenya for the deposit of the proceeds of the Loan.

5.2.3. Other Conditions: The Borrower/ Grant Recipient shall cause the Executing Agency to: (a) extend the mandate of the existing Project Coordination Unit (PCU) not later than six months following the entry into force of the ADB Loan Agreement; and (b) establish a Project Steering Committee not later than six months following the entry into force of the Loan Agreement.

5.2.4. Undertaking: The Borrower/Grant Recipient shall cause the Executing Agency to implement the project in compliance with national legislations and in accordance with the Environmental and Social Impact Assessment (ESIA) study done for the project, and submit to the Bank on an annual basis an acceptable Environmental and Social Monitoring Report.

5.3. Compliance with Bank Policies

This Project complies with all applicable Bank policies.

VI – RECOMMENDATION

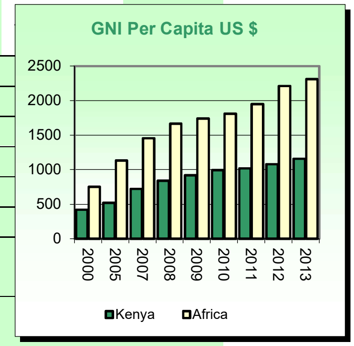
Management recommends that the Board of Directors approves an ADB loan of USD 39.546 million and a grant from the Global Agriculture & Food Security Program (GAFSP) of USD 22.80 million to the Republic of Kenya to finance the Small Scale Irrigation and Value Addition Project (SIVAP) and subject to the conditions stipulated in this report.

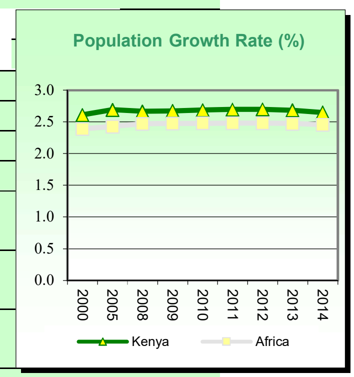
Appendix I. Kenya's Socio-Economic Indicators

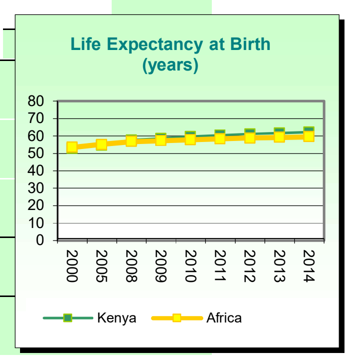
Kenya

COMPARATIVE SOCIO-ECONOMIC INDICATORS

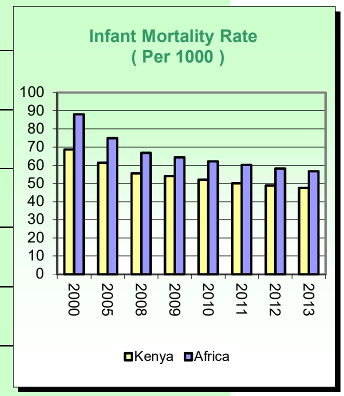
	Year	Kenya	Africa	Develo-ping Countries	Develo-ped Countries
Basic Indicators					
Area ('000 Km²)	2014	580	30,067	80,386	53,939
Total Population (millions)	2014	45.5	1,136.9	6.0	1.3
Urban Population (% of Total)	2014	25.2	39.9	47.6	78.7
Population Density (per Km²)	2014	78.5	37.8	73.3	24.3
GNI per Capita (US $)	2013	1 160	2 310	4 168	39 812
Labor Force Participation - Total (%)	2014	67.4	66.1	67.7	72.3
Labor Force Participation - Female (%)	2014	46.7	42.8	52.9	65.1
Gender -Related Development Index Value	2007-2013	0.908	0.801	0.506	0.792
Human Develop. Index (Rank among 187 countries)	2013	147	...	...	...
Popul. Living Below $ 1.25 a Day (% of Population)	2008-2013	*43.4*	39.6	17.0	...
Demographic Indicators					
Population Growth Rate - Total (%)	2014	2.7	2.5	1.3	0.4
Population Growth Rate - Urban (%)	2014	4.3	3.4	2.5	0.7
Population < 15 years (%)	2014	42.0	40.8	28.2	17.0
Population >= 65 years (%)	2014	2.7	3.5	6.3	16.3
Dependency Ratio (%)	2014	82.1	62.4	54.3	50.4
Sex Ratio (per 100 female)	2014	99.5	100.4	107.7	105.4
Female Population 15-49 years (% of total population)	2014	24.3	24.0	26.0	23.0
Life Expectancy at Birth - Total (years)	2014	62.2	59.6	69.2	79.3
Life Expectancy at Birth - Female (years)	2014	64.2	60.7	71.2	82.3
Crude Birth Rate (per 1,000)	2014	34.3	34.4	20.9	11.4
Crude Death Rate (per 1,000)	2014	8.0	10.2	7.7	9.2
Infant Mortality Rate (per 1,000)	2013	47.5	56.7	36.8	5.1
Child Mortality Rate (per 1,000)	2013	70.7	84.0	50.2	6.1
Total Fertility Rate (per woman)	2014	4.3	4.6	2.6	1.7
Maternal Mortality Rate (per 100,000)	2013	400.0	411.5	230.0	17.0
Women Using Contraception (%)	2014	51.3	34.9	62.0	...
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2004-2012	18.1	46.9	118.1	308.0
Nurses (per 100,000 people)*	2004-2012	79.2	133.4	202.9	857.4
Births attended by Trained Health Personnel (%)	2009-2012	43.8	50.6	67.7	...
Access to Safe Water (% of Population)	2012	61.7	67.2	87.2	99.2
Healthy life expectancy at birth (years)	2012	53.0	51.3	57	69







Access to Sanitation (% of Population)	2012	29.6	38.8	56.9	96.2
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2013	6.0	3.7	1.2	...
Incidence of Tuberculosis (per 100,000)	2013	268.0	246.0	149.0	22.0
Child Immunization Against Tuberculosis (%)	2013	79.0	84.3	90.0	...
Child Immunization Against Measles (%)	2013	93.0	76.0	82.7	93.9
Underweight Children (% of children under 5 years)	2005-2013	16.4	20.9	17.0	0.9
Daily Calorie Supply per Capita	2011	2 189	2 618	2 335	3 503
Public Expenditure on Health (as % of GDP)	2013	1.9	2.7	3.1	7.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2011-2014	114.4	106.3	109.4	101.3
Primary School - Female	2011-2014	114.6	102.6	107.6	101.1
Secondary School - Total	2011-2014	67.0	54.3	69.0	100.2
Secondary School - Female	2011-2014	64.5	51.4	67.7	99.9
Primary School Female Teaching Staff (% of Total)	2012-2014	48.1	45.1	58.1	81.6
Adult literacy Rate - Total (%)	2006-2012	72.2	61.9	80.4	99.2
Adult literacy Rate - Male (%)	2006-2012	78.1	70.2	85.9	99.3
Adult literacy Rate - Female (%)	2006-2012	66.9	53.5	75.2	99.0
Percentage of GDP Spent on Education	2009-2012	6.6	5.3	4.3	5.5
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2012	9.8	8.8	11.8	9.2
Agricultural Land (as % of land area)	2012	0.5	43.4	43.4	28.9
Forest (As % of Land Area)	2012	6.1	22.1	28.3	34.9
Per Capita CO2 Emissions (metric tons)	2012	0.3	1.1	3.0	11.6



Sources : AfDB Statistics Department Databases; World Bank: World Development Indicators; UNAIDS; UNSD; WHO, UNICEF, UNDP; Country Reports.

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

Updated: July 205

Appendix II: AfDB Portfolio in Kenya (August 2015)

Sector Name	Long name	Loan Number	Approval Date	Completion Date	Funding Source /1	Net Loan (UA Million)	Disb. Ratio
Agriculture	KENYA-DROUGHT RESILIENCE & SUSTAINABLE LIVELIHOOD PROGRAM	2100150028345	12/19/2012	12/31/2018	ADF	37.4	5.4%
	SMALLSCALE HORTICULTURE DEVELOPMENT PROJECT	2100150014943	09/05/2007	12/31/2015	ADF	17.0	84.8%
Agriculture Total						54.4	30.2%
Power	ADF - PRG FOR TURKANA T-LINE	2100140000101	10/02/2013	03/15/2019	ADF	15.8	0.0%
	ETHIOPIA-KENYA ELECTRICITY HIGHWAY(KENYA)	2100150027845	09/19/2012	12/31/2018	ADF	75.0	2.0%
	KENYA - LAST MILE CONNECTIVITY PROJECT	2100150032195	11/19/2014	12/31/2019	ADF	90.0	0.0%
	KENYA - TANZANIA INTERCONNECTION (KENYA)	2100150032846	02/18/2015	12/31/2019	ADF	27.5	
	MENENGAI GEOTHERMAL DEVELOPMENT PROJECT	2100150026101	12/14/2011	12/31/2017	ADF	80.0	62.0%
		5565130000101	12/14/2011	12/31/2017	SCF	5.4	36.7%
		5565155000401	12/14/2011	12/31/2017	SCF	12.5	41.3%
	MOMBASSA NAIROBI TRANSMISSION LINE PROJECT	2100150019893	05/06/2009	12/31/2015	ADF	50.0	55.1%
	NELSAP INTERCONNECTION PROJECT - KENYA	2100150022643	06/16/2010	12/31/2016	ADF	39.8	31.1%
	POWER TRANSMISSION IMPROVEMENT PROJECT	2100150023752	12/06/2010	12/31/2016	ADF	46.7	50.3%
Power Total						442.6	29.3%
Social	AFRICAN VIRTUAL UNIVERSITY SUPPORT PROJECT (PHASE 2)	2100155021616	12/16/2011	06/30/2017	ADF	10.0	68.8%
	COMMUNITY EMPOWERMENT AND INSTITUTIONAL SUPPORT PROJECT (CEI	2100150015794	12/17/2007	10/30/2015	ADF	17.0	93.6%
	EAST AFRICA CENTERS OF EXCELLENCE KENYA	2100150031997	10/03/2014	12/31/2019	ADF	25.0	0.0%
	SUPPORT FOR TECHNICAL, INDUSTRIAL, VOCATIONAL AND ENTREPRENE	2100150018493	12/16/2008	12/31/2015	ADF	25.0	87.4%
	SUPPORT TO HIGHER EDUCATION SCIENCE AND TECHNOLOGY TO ENHANC	2100150027993	11/14/2012	06/30/2018	ADF	28.0	31.4%
	SUPPORT TO TVET AND TRAINING FOR RELEVANT SKILLS DEVELOPMENT	2100150033295	07/01/2015	12/31/2020	ADF	41.0	
Social Total						146.0	50.9%
Transport	EMERGENCY ASSISTANCE TO ADDRESS THE DAMAGES AND LOSSES CAUSE	5000199003168	09/30/2013	04/30/2014	SRF	0.7	0.0%
	MOMBASA -NAIROBI-ADDIS ABABA CORRIDOR PHASE III - KENYA	2100150025546	11/30/2011	12/31/2018	ADF	120.0	53.1%
	MOMBASA-MARIAKANI ROAD HIGHWAY PROJECT	2100150032743	03/11/2015	12/31/2017	ADF	80.0	0.0%
	MOMBASA-NAIROBI-ADDIS CORRIDOR II - KEN	2100150020744	07/01/2009	12/31/2016	ADF	125.0	73.9%
	MULTINATIONAL: ARUSHA-HOLILI/TAVETA-VOI ROAD (KENYA)	2100150028894	04/16/2013	12/31/2018	ADF	75.0	25.0%
	NAIROBI OUTER RING ROAD PROJECT IMPROVEMENT PROJECT	2100150030144	11/13/2013	12/31/2018	ADF	77.0	10.8%
		2100155026117	11/13/2013	12/31/2018	ADF	0.6	0.0%
	NAIROBI-THIKA ROAD IMPROVEMENT PROJECT	2100150015544	11/21/2007	12/31/2015	ADF	117.9	97.1%
		2100155010466	11/21/2007	12/31/2015	ADF	2.6	100.0%
	REHABILITATION OF TIMBOROA ELDORET ROAD	2100150023344	11/24/2010	12/31/2016	ADF	35.0	81.7%
Transport Total						633.7	51.9%
Water Sup/Sanit	LAKE VICTORIA WATER AND SANITATION PROGRAM	2100155019967	12/17/2010	12/30/2016	ADF	73.0	37.2%
	NAIROBI RIVER REHABILITAION: SEWERAGE IMPROVEMENT PROJECT	2100150023655	12/06/2010	12/31/2016	ADF	35.0	67.2%
	SCALING UP RAINWATER MANAGEMENT	5600155002901	07/05/2012	03/31/2016	AWF	0.5	100.0%
	SMALL MED TOWNS WATER SUPPLY & WASTE WAT	2100150021543	11/03/2009	12/30/2016	ADF	70.0	60.1%
	THWAKE MULTIPURPOSE WATER DEVELOPMENT PROGRAM	2100150029993	10/30/2013	12/31/2019	ADF	61.7	0.5%
		2100155025973	10/30/2013	12/31/2019	ADF	1.2	0.0%
Water Sup/Sanit Total						241.4	38.8%
GRAND TOTAL						1,518.2	42.3%

Appendix III. Map of the Project Area