

AFRICAN DEVELOPMENT BANK GROUP



KENYA

GREEN ZONES DEVELOPMENT SUPPORT PROJECT-PHASE II

APPRAISAL REPORT

REVISED

RDGE/AHAI/PGCL

November 2018

TABLE OF CONTENTS

I – STRATEGIC THRUST & RATIONALE.....	1
1.1. Project Linkages with country strategy and objectives.....	1
1.2. Ration for the Bank's Involvement.....	2
1.3. Donor coordination	3
II – PROJECT DESCRIPTION	4
2.1. Project components	4
2.2. Technical solution retained and other alternatives explored.....	5
2.3. Project type	5
2.4. Project cost and financing arrangements	6
2.5. Project's target area and population.....	7
2.6. Participatory process for project identification, design and implementation.....	8
2.7. Bank Group experience, lessons reflected in project design.....	8
2.8. Key performance indicators	9
III – PROJECT FEASIBILITY	10
3.1. Economic and financial performance	10
3.2. Environmental and Social impacts.....	11
3.3. Gender and Social Analysis.....	13
IV – IMPLEMENTATION.....	14
4.1. Implementation arrangements.....	14
4.2. Monitoring	16
4.3. Governance	17
4.4. Sustainability.....	19
4.5. Risk management.....	19
4.6. Knowledge building.....	21
V - LEGAL INSTRUMENTS AND AUTHORITY.....	21
5.1. Legal instrument	21
5.2. Conditions associated with Bank's intervention.....	21
5.3. Compliance with Bank Policies	22
VI – RECOMMENDATION	22
Appendix I: Kenya's Socio-Economic Indicators	I
Appendix II: AfDB Portfolio in Kenya April 2018.....	II
Appendix III. Map of the Project Area.....	III

Currency Equivalents

As of April 2018

1 UA	=	146.62 KES
1 UA	=	1.45 USD
1 UA	=	1.18 EUR
1 EUR	=	124.27 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
CFAs	Community Forest Associations
CIDPs	County Integrated Development Plans
CPITs	County Project Implementation Teams
CSP	Country Strategy Paper
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
GEF	Global Environmental Facility
GDP	Gross Domestic Product
GoK	Government of Kenya
GZDSP-1	Green Zones Development Support Project-Phase 1
HH	Household
IGA	Income Generating Activities/Groups
IPSAS	International Public Sector Accounting Standards
KALRO	Kenya Agricultural and Livestock Research Organization
KES	Kenya Shillings
KFS	Kenya Forest Service
MTP	Medium Term Plan
MTIP	Medium Term Investment Plan
MTR	Mid Term Review
MoEF	Ministry of Environment and Forestry
NEMA	National Environmental Management Authority
NFP	National Forest Programme
PBA	Performance Based Allocation
PFMP	Participatory Forest Management Plan
PSC	Project Steering Committee
PFM	Public Sector Financial Management
PCN	Project Concept Note
PPDA	Public Procurement and Disposal Act
PMU	Project Management Unit
RISP	Regional Integration Strategy Paper
SA	Special Account
SDG	Strategic Development Goals
UA	Units of Account

Loan Information

Client's information

BORROWER:	The Republic of Kenya
EXECUTING AGENCY:	Ministry of Environment and Forestry

Financing plan

Source	Amount (UA)	Amount (EUR)	Instrument
ADF-14 PBA	16.89 million		Loan
ADF- reallocation of cancelled loans	12.80 million		Loan
ADB	4.41 million	5.20 million	Loan
Total ADF and ADB	34.10 million		Loan
Government	3.40 million		Counterpart Contr.
TOTAL COST	37.50 million		

ADB's key financing information

Loan currency	EUR
Loan type	Fully Flexible Loan
Tenor	Up to 25 years inclusive of Grace Period
Grace Period	Up to 8 years
Average Loan Maturity	Up to 16.75 years (weighted average time to repay the loan based the amortization profile)
Repayment	Up to 34 equal and consecutive semi-annual installments after Grace Period.
Interest Rate	Base Rate + Funding Cost Margin + Lending Margin + Maturity Premium.
Base Rate	Floating Base Rate (6-month EURIBOR reset each 1 st February and 1 st August). A free option to fix the Base Rate is available
Funding Cost Margin	The Bank funding cost margin as determined each 1 st January and 1 st July and applied to the Base Rate each 1 st February and 1 st August.
Lending Margin	80 basis points (0.8%)
Maturity Premium	- 0% if Average Loan Maturity <= 12.75 years - 0.10% if 12.75< Average Loan Maturity <=15 - 0.20% if Average Loan Maturity >15 years
Front-end fees	0.25% of the total loan amount payable at the latest 30 calendar days from the date of signature of the loan agreement, and in any case before any disbursement of the Loan.

ADF's key financing information

Loan currency	Unit of Account (UA)
Interest rate	1%
Interest Rate Spread	Not Applicable
Service Charge	0.75% per annum on amount disbursed and outstanding
Commitment Fee	0.50% per annum on the un-disbursed loan amount
Tenor	30 years inclusive of Grace Period
Grace Period	5 years

Key financial and economic analysis information

FNPV (at 10% base case)	KES 60,235 million
FIRR (at 10%, base case)	30.4%
ENPV (at 10%, base case)	KES 14,225 million
EIRR (at 10%, base case)	18.6%

Timeframe - Main Milestones (expected)

Concept Note approval	March 2018
Project approval	Nov/Dec 2018
Effectiveness	March 2019
Closing Date	Dec 2024
Completion	June 2025

Project Summary

Project Overview

The proposed Green Zones Development Support Project-Phase II will be implemented in fifteen counties in Kenya namely; Embu, Meru, Machakos, Tharaka-Nithi, Nyeri, Murang'a, Kirinyaga, Kiambu, Nyandarua, Nakuru, Baringo, Kericho, Bomet, Nyamira and Kisii. These counties cover four forest conservancies¹ and three out of five Kenya's water towers including Mt. Kenya, Aberdares, and the Mau complex. The counties were selected based on levels of forest degradation, social economic and environmental vulnerability. The project comprises three main components (i) Forest Conservation and Livelihood Support (ii) Sustainable and Inclusive Value Chains Development and (iii) Project Management and Coordination. The project will focus on increasing the national forest cover and household incomes through rehabilitation of degraded forests, improvement of forest infrastructure and community capacities and livelihoods in the target counties. The project will be implemented over a period of 6 years (2018-2024) and will be executed by the Ministry of Environment and Forestry (MoEF) through the Kenya Forest Service (KFS). The KFS was one of the implementing agencies for the completed Bank-funded Green Zones Development Support Project-Phase I (2006-2014).

Needs Assessment

The Green Zones Development Support Project-Phase II was conceived by the Government of Kenya (GoK) and builds on success of the concluded GZDSP-1 project. GZDSP-1 contributed to the rehabilitation and protection for regeneration of 309,000ha of degraded forest land translating to 0.54% increase in the national forest cover and significantly increased (by 25%) the annual incomes of 375,912 households (40% female-headed) through direct employment, and income generating activities. The proposed project will provide new and more efficient ways of increasing forest cover, increasing food security, improve community livelihood through sustainable and inclusive commodity value chain and market development. It is also recognized that the Bank's experience in supporting forest conservation and livelihood activities in Kenya and elsewhere in Africa will be used to enhance the quality of the project. The Bank's contribution to this project is bound to generate significant environmental, social and economic benefits to the country. Specifically, the project's intervention in water catchment conservation will contribute to improved water availability and decreased soil loss through erosion. In addition, the project will contribute to adaptation and mitigation to climate change through increased carbon sequestration.

Cost and Financing

The project cost including price and physical contingencies, but excluding duties and taxes, is estimated at UA 37.50 million. The cost will be covered by an ADF loan of UA 29.69 million, ADB Loan of UA 4.41 million while the Government of Kenya will contribute UA 3.40 million. Kenya's current balance for ADF PBA is UA 34.82 million which is available for new commitment. The indicative allocation for 2019 is UA 31.97 million of which up to 50% (i.e. UA 16 million) can be frontloaded to 2018 in accordance with the ADF-14

¹ A Forest Conservancy is an area established under the Forest Act consisting of a number of Forest Ecosystems

operational guidelines. Taking into account the 2018 Kenya indicative lending program, UA 12 million will be frontloaded.

Implementation

The project will be implemented by the Kenya Forest Service which is a semi-autonomous government agency within the MoEF. The KFS will host the Project Management Unit (PMU). The PMU will manage and coordinate the project at national level and will be supported at the county level by the County Project Implementation Teams (CPITs). The MoEF has extensive experience implementing similar projects and will be responsible for the overall design and technical supervision of project activities including procurement, financial management and monitoring and evaluation (M&E). The project implementation schedule covers a duration of six years.

Bank's Added Value

The Bank's added value to undertake this project emanates from its experience acquired through its historical and successful engagement with the Government of Kenya. The Bank's agriculture and environment portfolio in Kenya is significant and considerable experience was gained from implementation of previous and similar natural resource conservation projects. These projects include the Green Zones Development Support Project (GZDSP-1) and the Ewaso Ngi'ro North Natural Resources Conservation Project (ENNRCP).

Knowledge Management

The knowledge gained and lessons learnt through the implementation of similar projects in Kenya has been duly applied in designing this project. In particular, lessons learnt from implementation of GZDSP-I, as detailed in the project completion report, have been incorporated in the design of this project. Some of valuable lessons include providing beneficiary communities with alternative livelihoods while engaging in forest conservation, community empowerment through capacity building and efficient utilization of resources through a participatory model that embraces innovation, capacity building, value addition and ownership. 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, various specialist consultancies and studies including the impact study will inform stakeholders on how to put the acquired knowledge into practical use for better results-oriented achievements and sustained benefit flows.

KENYA- GZDSP-2 RESULTS BASED LOGICAL FRAMEWORK

Country and Project Name: Kenya: Green Zones Development Support Project-Phase II

Purpose of the Project: To improve forest conservation and livelihoods for sustainable forest management in 15 counties in Kenya

Purpose of the Project: To improve forest conservation and livelihoods for sustainable forest management in 15 counties in Kenya						
	RESULTS CHAIN	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS /MITIGATION MEASURES
		Indicator (Including CSI)	Baseline 2018	Target By 2024		
IMPACT	Contribute to sustainably managed forests and poverty alleviation	Increase in carbon sequestered (million MT)	1,772, ²	2,077,	National forest status and resource assessment reports, Economic surveys	
		% change in national poverty levels	42	36		
OUTCOMES	Increased forest area and improved household incomes	Increase in forest cover (ha)	304,871	632,671	Project baseline and completion reports	Risk : Adverse climatic conditions: Mitigation: Adhere to early warnings and species choice
		Increase in average annual household income (KES)	90,000	150,000		
OUTPUTS	1.1 Rehabilitation of degraded forest areas	1.1.1 Area of forest land rehabilitated (ha)	11,750	21,950	Project baseline and progress reports	Risk: Community goodwill and variable weather events Mitigation: Ensure adequate community sensitization and awareness creation
		1.1.2 Protection for natural regeneration (ha)	271,081	571,081		
		1.1.3 Km of riverine rehabilitated	0	100	Mapping reports	
		1.1.4 Forest area under invasive species restored (ha)	0	1000		
		1.1.5 Restoration of community & county hilltops (ha)	2,548	2,848		
	1.2 Promotion of Bamboo production and commercialization	1.2.1 No. of model bamboo nurseries developed (40% female owned)	0	3	Project progress reports	Risk: non-adoption by communities: Mitigation: Awareness creation and sensitization
		1.2.2 Establishment of bamboo plantations (ha)	0	1,000		
	1.3Forest Infrastructure developed	1.3.1 Number of forest ranger camps	1	3		Risk: Community resistance to fencing Mitigation: Participatory planning with community
		1.3.2 Number of ranger outposts ³	0	2		
		1.3.3 Km of forest roads improved to forest grade	0	300		
		1.3.4 Number of bridges constructed	6	11		
	1.4 Community livelihoods and capacities improved	1.4.1 Renewable energy sources for institutions	20	30	Project baseline and progress reports	Risk: Pests and diseases Mitigation: Selection of resistant varieties and training
		1.4.2 No of IGAs supported (50% female-headed)	190	235		
		1.4.3 No of ecotourism sites supported	0	3		
		1.4.4 No of forest parks ⁴ supported	0	2		
		1.4.5 Exchange and learning visits (50% female)	0	142		
		1.4.6 No of FFS in forestry established (50% female attendance)	0	60		

² Forest Resource Assessment (FAO) 2015

³ To target areas under protection for natural regeneration

⁴ To select from official list of KFS potential forest park sites etc.

	RESULTS CHAIN	PERFORMANCE INDICATORS				
		Indicator (Including CSI)	Baseline 2018	Target By 2024	MEANS OF VERIFICATION	RISKS /MITIGATION MEASURES
	2.1 Improved production and market linkages of timber and bamboo value chains	2.1.1 Area of woodlots established (ha) (6,270	11,270	Project progress reports	<u>Risk:</u> Aversion by stakeholders to new ventures and products <u>Mitigation:</u> Clear demonstration of potential results, participatory planning, capacity building and awareness creation
		2.1.2 Area under on-farm agro-forestry systems (ha) (40% female)	11,800	21,800		
		2.1.3 No. community timber associations formed	0	3		
		2.1.4 No. bamboo marketing associations	0	3		
		2.1.5 No. of community potato marketing associations	0	3		
		2.1.6 No. community processing centers developed	0	3		
		2.1.7 Number of produce marketing sheds	0	15		
		2.1.8 Construction of community resource centers	4	7		
	2.2 Increased production and marketing linkages of selected crop value chains	2.2.1 Potatoes (tons)	351,542	1,054,625		
		2.2.2 Maize (tons)	29,240	87,720		
		2.2.3 Beans (tons)	10,080	30,240		
		2.2.4 Fruits (tons)	3,060	9,179		
		2.2.5 Marketing of certified branded crop products	0	2		
	3.1. Project management and coordination	3.1.1 Office refurbishment	0	1		
		3.1.2 No of staff trained (40% female)	0	105		
		3.1.3 No. of M&E systems developed	1	1		
		3.1.4 No. of specialist services and consultancies including ESMPs	0	5		
KEY ACTIVITIES	Components Component 1 Forest Conservation and Livelihood Support for Climate Change Resilience: Component 1 cost: (UA 21.03 million, 61.7%). Component 2: Sustainable and Inclusive Value Chain Development Component 2 cost: (UA 10.60 million (31.1%). Component 3: Project Management and Coordination: Component 3 cost: (UA 2.47 million, 7.2%)					INPUTS Project Cost: UA 37.50 m ADB : EUR 5.20 m ADF PBA: UA 29.69m GoK: UA 3.40 m

Project Timeframe

	Project year	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
	Outputs per quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
COMPONENT 1: FOREST CONSERVATION AND LIVELIHOOD SUPPORT FOR CLIMATE CHANGE RESILIENCE																									
1.1	Rehabilitation of degraded forest areas																								
1.2	Promotion of Bamboo production and commercialization																								
1.3	Forest Infrastructure developed																								
1.4	Community livelihood and capacities improved																								
COMPONENT 2: SUSTAINABLE AND INCUSIVE VALUE CHAIN DEVELOPMENT																									
2.1	Improved production and market linkages of timber and bamboo value chains																								
2.2	Increased production and marketing linkages of selected crop value chains																								
COMPONENT 3: PROJECT MANAGEMENT AND COORDINATION																									
3.1	Project management and coordination																								

**REPORT AND RECOMMENDATION OF THE MANAGEMENT OF THE AFDB GROUP
TO THE BOARDS OF DIRECTORS ON A PROPOSED LOAN TO THE GOVERNMENT OF
THE REPUBLIC OF KENYA FOR THE GREEN ZONES DEVELOPMENT SUPPORT
PROJECT-PHASE II**

Management submits the following Report and Recommendation on a proposed ADF loan of UA 29.69 million and ADB loan of EUR 5.20 million to finance the Green Zones Development Support Project-II in Kenya.

I. STRATEGIC THRUST & RATIONALE

1.1 Project linkages with country strategy and objectives

1.1.1 Kenya with a total land area of 582,645 km² has the least forest cover in the East Africa region estimated at 7.40 % as at 2017⁵. This includes the indigenous closed canopy forest, open woodlands, on-farm forests, industrial plantations and mangroves. Kenya's dependence on the natural environment is profound and underpins most sectors, including agriculture and horticulture, tourism, wildlife, and energy. In some rural areas, the forest contributes three quarters of the cash income to forest-adjacent households. The low forest cover in the country has been linked to inadequate water supplies and adverse climatic changes that have negatively impacted on agricultural production. In attempting to stem the decline in environmental resources, the Government, in Kenya's Constitution of 2010, Vision 2030 and Medium Term Plans (MTPs), has emphasised the need to protect and conserve forests as a base for water, wood, food and nutritional security among others. It is in this context that Government of Kenya requested the Bank to finance the proposed GZDSP-II. Accordingly, the proposed Kenya-Green Zones Development Support Project-II (GZDSP-2) is in line with Kenya Constitution of 2010, Kenya's Vision 2030 and the Economic Pillar of the Third Medium Term Plan (MTP III 2018-2022) which place emphasis on attaining sustainable environment through protecting and increasing forest cover. The project is also anchored in the National Forest Programme (NFP, 2016-2030), the Kenya's Agriculture Sector Development Strategy (ASDS, 2010-2020) and will contribute to the Government of Kenya's objectives to significantly achieve the SDG 1 and SDG 5.

1.1.2 The Bank's Green Growth Framework identifies promotion of sustainable forest management and agro-forestry practices as climate change mitigation priorities, both of which are core activities within the proposed project. The project will employ innovative use of forestry in contributing to climate change, food security, rural employment and livelihood alternatives in tandem with sustainable forest conservation practice. This project has the potential to contribute to the political and economic stability of Kenya. While Kenya is not a fragile state, increasing youth unemployment combined with rural/urban poverty and limited economic opportunities could precipitate political and economic fragility in Kenya. The Bank's Strategy for addressing Fragility and Building Resilience (2014-2019) support building resilient economies through inclusive/equitable access to employment. This project will create job opportunities, increase food security and improve community livelihood through commodity value chain and market development.

⁵ Compendium of KFS achievements 2007-2017

1.1.3 In addition, the project through its integrated development approach in forest conservation and value addition and capacity building components, and focus on smallholder farmers, women and youth will enhance inclusiveness and transition to green growth, offer support to build resilience to extreme climatic shocks and enhance forest cover and income generating activities.

1.1.4 Against this background, the proposed project is well aligned with the Bank's Ten Year Strategy (2012-2022) and two of the Bank's High 5s, namely, "Feed Africa" and "Improve the quality of life of the people of Africa". The Project is also aligned with other Bank strategies namely: the 2014-18 Governance Strategic Direction and Action Plan (GAP II) via promoting resilience through inclusive access to natural resources; and the Bank's Gender Strategy (2014-18), economic empowerment and knowledge and capacity building pillars. The proposed project is designed to maximize women and youth employment by using labour-intensive methods during implementation and to undertake improved forest conservation and agribusiness upon project completion.

1.1.5 The broader objectives of the project will be achieved through forest infrastructure development, value addition in timber bamboo and crops chains, skills development and capacity building activities. Thus the project is well rooted in the current Kenya Country Strategy Paper (CSP 2014-18) and the proposed CSP (2018-2022) under Pillar I which focuses on enhancing physical infrastructure to unleash inclusive growth and Pillar 2 which concentrates on developing skills for the emerging labour market of a transforming economy.

1.2 Rationale for Bank's involvement

1.2.1 The Government of Kenya is implementing various strategies to better promote clean, secure and sustainable environment through various means including better conservation and management of natural resources (e.g., forest, water) and implementing sector-specific reforms. For forest sub-sector, the key strategy, NFP (2016-2030), promotes policies and practices that support conservation and zoning of natural forest and recovery of lost tree cover and tree planting for industrial, commercial and agricultural purposes. For instance, the launch of the Bamboo Development and Commercialization Strategy (2014-2017), Green Economy Assessment Report and Sustainable Environmental and Restoration Programme have stimulated interest in growing of commercial bamboo plantations.

1.2.2 The importance of this project in terms of increasing forest cover is also part of a broader Government's efforts at re-forestation and rehabilitation of water towers, including those in the project areas as initiative to improve natural water resources for the development of renewable energy sources.

1.2.3 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. About 80% of the Kenyans derive their livelihood from agriculture which is dependent on water. Forest cover has dwindled over the years exposing agriculture to unfavorable climatic changes. 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, alternative energy needs and weak capacity to manage and build resilience in the rural communities. The Government has plans to create economic opportunities for youth and women as well as the disadvantaged groups of society to avoid conflict and violence in the future. The Government is also committed to addressing environmental degradation and climate changes, which are other sources of fragility.

1.2.4 It is in this context that the Government of Kenya requests the Bank to support a forestry conservation project in Kenya to build on the achievements made in the first phase. The project, while improving forest conservation, through agriculture value addition is expected to create employment, especially for youth and women, and improve rural livelihoods as well as promote greater economic inclusion and resilience in the rural communities. The project is expected to support about 66,000 female-headed households in value addition and other income generating activities. In keeping with the Bank's Jobs for Youth in Africa and Gender Strategy (2014-2018), the project will ensure that at least 40% of the income-generating opportunities will go to women and youth.

1.3 Donor coordination

1.3.1 Development Partners (donors) in the environment and forest sub-sectors meet regularly to exchange information on respective strategic areas of support to the Government. The donors also identify areas of collaboration and joint programming to avoid duplication and to maximize impact. The main development partners in the forest sub-sector include the EU, JICA, FAO, World Bank, GIZ, AfDB, DFiD, and Government of Finland (Table 1.1). The current chair of the forestry donor sub-group is DFiD. The Bank, through the RDGE, actively participates in the relevant donor sub-groups. In addition to the forest sub-group, there are several other sub-groups and thematic working groups including land, climate change, the energy sector and environment. The Bank will continue to coordinate on planning for and implementation of activities with the international donor community under the umbrella of the development partners group and its various sub-groups and thematic working groups. The environment and natural resources donor group also holds joint periodic meetings with the government which are co-chaired by the Principal Secretary, Ministry of Environment and Forestry.

Table 1.1: Donor Contribution to the Forest Sub-sector in Kenya

Sector or subsector*	Size		
	GDP	Exports	Labor Force
Forest sub-sector	3.6%	< 1%	15%
Players - Public Annual Expenditure (average 2015/2016 to 2016/2017)**			
Government	Donors		
UA 117 m	UA 71 m	Finland	28.2%
62%	38%	AfDB	21.2%
		World Bank	18.5%
		JICA	13.0%
		EU	4.1%
		FAO	1.5%
		GIZ	1.0%
		DFID	
		UNDP	
		DANIDA	
		UNEP	
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 [2015/16 to 2016/17] *** for this sector or sub-sector

**** L: leader, M: member but not leader, none.

II. PROJECT DESCRIPTION

2.1 Project components

The project specific objectives are (i) To enhance forest conservation and livelihood support for climate change resilience and (ii) To develop timber, bamboo, potato, cereals and pulses value chains for improved household incomes. Project implementation to achieve these objectives will be through the three project components as detailed below and their associated costs indicated in Table 1.2.

Component 1: Forest Conservation and Livelihood Support for Climate Change Resilience: This component aims to increase the forest cover through forest rehabilitation and enhanced management, promotion of bamboo for conservation and commercialization, forest infrastructure development and enhanced community livelihoods through income generation activities. This component will have four outputs as follows: (i) Rehabilitation of degraded forest areas, (ii) Bamboo production for conservation and commercialization, (iii) Development and rehabilitation of forest infrastructure and (iv) Community capacities and livelihoods improvement.

Component 2: Sustainable and Inclusive Value Chain Development: This component will support the use of efficient production, processing and utilization of technologies, development of marketing infrastructure and capacity enhancement along value chains. The project will concentrate on several value chain streams including timber, bamboo, horticulture (potato), and selected cereals and pulses value chains, whose production systems will be through agroforestry. This component will support the development of three model community processing centres for maize, potato and timber and build linkages with private sector and other actors in processing technologies and marketing. This component will have two outputs namely (i) Improved value addition of timber and bamboo products and (ii) value addition for selected food security crops.

Component 3: Project Management and coordination:

This component will oversee the effective implementation and management of the project activities. This will provide support to project infrastructure, technical support, staff capacity development as well as ensure the monitoring and evaluation of the project.

Table 1.2: Key project outputs

Component name	Est. cost (UA million)	Component description and targets
1. Component 1 Forest Conservation and Livelihood Support for Climate Change Resilience:	21.03	<ul style="list-style-type: none">• 300,000 ha protected forest area for natural regeneration• 10,250 ha of state forest rehabilitated through planting• 1,000 ha of bamboo plantations established• 100km of riverine rehabilitation• 300 ha of Hilltop afforestation• 300 km of forest roads graded• 5 bridges constructed• 2 forest rangers camp constructed• 2 forest outposts constructed• 10 renewable energy sources for institutions constructed• 45 IGAs supported• eco-tourism sites supported• 60 Forestry Field Schools established

Component name	Est. cost (UA million)	Component description and targets
2. Component 2: Sustainable and Inclusive Value Chain Development	10.60	<ul style="list-style-type: none"> • 10,200 ha of agro-forestry development on-farm • 5,000 ha of woodlots established on-farm • 250 ha of fruit orchards established • 1.18 million tons of food produced • community resource centres constructed • 15 produce marketing sheds constructed • 3 Community processing centres developed • Training centre for value chain development • 45 Income Generating Activities supported
3. Component 3: Project Management and Coordination:	2.47	<ul style="list-style-type: none"> • 1 office refurbished • 105 staff trained • ESMPs carried out • Various specialist services and consultancies done • M& E system developed etc.

2.2 Technical solutions retained and other alternatives explored

The project technical option chosen involves tree seedling production and growing from both KFS and community nurseries using biodegradable potting materials for a clean environment and in conformity with legal requirements provided by NEMA. Plantation establishment through the PELIS system will involve integration of crops with exotic tree species with beneficiary communities providing the necessary labor as they tend for their crops. Other technical options explored and reasons for their rejection are as shown in Table 2.2.

Table 2.2: Project alternatives considered and reasons for rejection

Alternative name	Brief Description	Reasons for Rejection
No projective alternative	No afforestation and reforestation efforts by KFS and other stakeholders	Increased forest degradation leading to reduced forest cover and loss of biodiversity. Reduced water flows, climate amelioration and social benefits.
Afforestation and Reforestation using Seed broadcast	Identified seeds broadcasted in areas targeted for rehabilitation.	Low rate of tree establishment and the long duration taken to realize intended outcome. Method requires specialised equipment in difficult terrain. High quantity of seeds required to achieve desired results.
Management of natural regeneration.	Entails allowing clear-felled areas to regenerate and thereafter tend for the regenerated saplings to maturity.	Quality of the final crop is poor due to uneven growth and density, leading to low quality and quantity for the final crop.

2.3 Project type

This is an investment project with Bank funding consisting of ADF and ADB loans. It is a standalone project given that in the draft MTP III (2018-2022) and the NFP (2016-2030), the

Government of Kenya has clearly specified project objectives, beneficiaries and implementation modalities. Co-financing options within and outside the Bank were actively explored during preparation and appraisal and these will be continued after project approval.

2.4 Project cost and financing arrangements

2.4.1 The total project cost is estimated at UA 37.50 million including physical and price contingencies. The costs are composed of UA 11.43 million (34%) in foreign currency and UA 22.67 million (66%) in local currency costs. Physical contingencies have been estimated at 5% of the overall base cost and price contingencies were estimated at 5% of the base cost taking into account the rate of inflation. The tables 2.3, 2.4, 2.5 and 2.6 below provide the summary of the project costs that are based on analysis of unit prices obtained from records of recent competitive bidding for similar works, goods and services.

Table 2.3: Project summary cost estimates by components (UA'000)

Kenya Green Zones Development Support Project-Phase 2 Components Project Cost Summary								
	(KES '000)			(UA '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
1. Forest Conservation and Livelihoods Support	2,070,058.7	1,013,996.3	3,084,055.0	14,118.5	6,915.8	21,034.3	33	62
2. Inclusive Value Chains Development	1,021,784.1	532,019.9	1,553,804.0	6,968.9	3,628.6	10,597.5	34	31
3. Project Management and Coordination	231,577.0	130,565.0	362,142.0	1,579.4	890.5	2,469.9	36	7
Total BASELINE COSTS	3,323,419.8	1,676,581.2	5,000,001.0	22,666.8	11,434.9	34,101.7	34	100
Physical Contingencies	166,171.0	83,829.1	250,000.1	1,133.3	571.7	1,705.1	34	5
Price Contingencies	206,198.8	42,589.8	248,788.5	1,406.3	290.5	1,696.8	17	5
Total PROJECT COSTS	3,695,789.6	1,803,000.1	5,498,789.6	25,206.4	12,297.1	37,503.6	33	110

Table 2.4: Sources of financing (UA '000)

	Local	Foreign	Total	% total
Government	2,540	862	3,402	9.1
ADB	22,667	11,435	34,102	90.9
Total	25,207	12,297	37,504	100

2.4.2. The project will be financed by an ADF loan of UA 29.69 million and an ADB loan of EUR 5.20 million and the Government will contribute UA 3.40 million as counterpart funds towards project activities.

Table 2.5: Project component costs per year

Kenya
Green Zones Development Support Project-Phase 2
Project Components by Year – Base Costs

	Base Cost (KES'000)							Base Cost (UA'000)						
	2018	2019	2020	2021	2022	2023	Total	2018	2019	2020	2021	2022	2023	Total
1. Forest Conservation and Livelihoods Support	584,534.0	647,090.0	573,855.0	527,829.0	444,749.0	305,998.0	3,084,055.0	3,986.7	4,413.4	3,913.9	3,600.0	3,033.3	2,087.0	21,034.3
2. Inclusive Value Chains Development	133,596.0	396,196.0	363,296.0	234,296.0	224,246.0	202,174.0	1,553,804.0	911.2	2,702.2	2,477.8	1,598.0	1,529.4	1,378.9	10,597.5
3. Project Management and Coordination	106,337.0	37,687.0	37,687.0	54,137.0	81,887.0	44,407.0	362,142.0	725.3	257.0	257.0	369.2	558.5	302.9	2,469.9
Total BASELINE COSTS	824,467.0	1,080,973.0	974,838.0	816,262.0	750,882.0	552,579.0	5,000,001.0	5,623.2	7,372.6	6,648.7	5,567.2	5,121.3	3,768.8	34,101.8
Physical Contingencies	41,223.4	54,048.7	48,741.9	40,813.1	37,544.1	27,629.0	250,000.1	281.2	368.6	332.4	278.4	256.1	188.4	1,705.1
Price Contingencies														
Inflation														
Local	4,124.0	22,031.0	34,066.6	44,463.9	51,574.0	49,939.3	206,198.8	28.1	150.3	232.3	303.3	351.8	340.6	1,406.3
Foreign	2,224.4	5,877.5	8,546.2	7,977.3	10,247.3	7,717.1	42,589.8	15.2	40.1	58.3	54.4	69.9	52.6	290.5
Subtotal Inflation	6,348.4	27,908.5	42,612.8	52,441.3	61,821.2	57,656.4	248,788.5	43.3	190.3	290.6	357.7	421.6	393.2	1,696.8
Devaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Price Contingencies	6,348.4	27,908.5	42,612.8	52,441.3	61,821.2	57,656.4	248,788.5	43.3	190.3	290.6	357.7	421.6	393.2	1,696.8
Total PROJECT COSTS	872,038.7	1,162,930.2	1,066,192.7	909,516.4	850,247.3	637,864.3	5,498,789.6	5,947.6	7,931.6	7,271.8	6,203.2	5,799.0	4,350.5	37,503.7

Table 2.6: Project expenditure categories ('000 UA)

Kenya
Green Zones Development Support Project-Phase 2
Expenditure Accounts Project Cost Summary

	(KES '000)			(UA '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
I. Investment Costs								
Civil works	216,697.5	264,852.5	481,550.0	1,478.0	1,806.4	3,284.3	55	10
Vehicles	24,650.0	221,850.0	246,500.0	168.1	1,513.1	1,681.2	90	5
Heavy plant and light equipment	38,445.0	217,855.0	256,300.0	262.2	1,485.8	1,748.1	85	5
Inputs	772,694.0	416,066.0	1,188,760.0	5,270.0	2,837.7	8,107.8	35	24
Development labor input	783,933.0	-	783,933.0	5,346.7	-	5,346.7	-	16
Consultancies	49,610.0	40,590.0	90,200.0	338.4	276.8	615.2	45	2
Specialist services	430,290.3	352,055.7	782,346.0	2,934.7	2,401.1	5,335.9	45	16
Capacity building	244,968.0	163,312.0	408,280.0	1,670.8	1,113.8	2,784.6	40	8
Total Investment Costs	2,561,287.8	1,676,581.2	4,237,869.0	17,468.9	11,434.9	28,903.8	40	85
II. Recurrent Costs								
Salaries and allowances	68,400.0	-	68,400.0	466.5	-	466.5	-	1
vehicle and equipment maintenance	459,072.0	-	459,072.0	3,131.0	-	3,131.0	-	9
General operating costs	234,660.0	-	234,660.0	1,600.5	-	1,600.5	-	5
Total Recurrent Costs	762,132.0	-	762,132.0	5,198.0	-	5,198.0	-	15
Total BASELINE COSTS	3,323,419.8	1,676,581.2	5,000,001.0	22,666.9	11,434.9	34,101.8	34	100
Physical Contingencies	166,171.0	83,829.1	250,000.1	1,133.3	571.7	1,705.1	34	5
Price Contingencies	206,198.8	42,589.8	248,788.5	1,406.3	290.5	1,696.8	17	5
Total PROJECT COSTS	3,695,789.5	1,803,000.0	5,498,789.6	25,206.6	12,297.1	37,503.7	33	110

2.4.3. The overall project cost is estimated at UA 37.50 million comprising an ADF loan of UA 29.69 million, an ADB loan of EUR 5.20 million and the Government counterpart contribution of UA 3.40 million. The Government contribution is equivalent to 9.1% of the total project cost. The justification for the Bank funding more than 50% of the project cost is provided in the Annex B10 of the technical annexes.

2.5 Project's target area and population

2.5.1 The project will focus on fifteen counties covering four forest conservancies and three water towers in Kenya. The fifteen counties include; Embu, Meru, Machakos, Tharaka-Nithi, Nyeri, Murang'a, Kirinyaga, Kiambu, Nyandarua, Nakuru, Baringo, Kericho, Bomet, Nyamira and Kisii. These counties have been chosen based on levels of forest degradation, social economic and environmental vulnerability. It is anticipated that the implementation of this project will directly benefit 167,083 households out of which 40% (66,833) will be

women. Indirectly, the project will benefit 501,249 people within the project area. The project will also assist the county governments in capacity building and technical support.

2.6 Participatory process for project identification, design and implementation

2.6.1 The proposed project seeks to upscale the benefits of the recently concluded GZDSP-1 project that was financed by the Bank and the Government of Kenya and covered 24 districts (now counties) in Eastern, Western and Rift Valley regions. The proposed project will be implemented in fifteen counties and will utilize an existing PMU in the implementing agency. The project identification and design draws directly from the GoK's Vision 2030, NFP, ASDS and MTIP-2 (2013-2017), MTIP-3 (2018-2022) and more recently the GoK Big Four agenda that includes prioritizing manufacturing, health, housing and food security. The project design is also informed by lessons learned from the exiting and previously completed projects in the sector.

2.6.2 The project design process consisted of consultations with development partners, national government including the Executing Agency, counties management and beneficiaries including farmer groups, 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 MTIP and CIDP development, presentation, and discussion with local stakeholders and development partners. Discussions with development partners did not yield any co-financing results as donors indicated that their budgets were already committed. However, co-financing will continue to be explored from within and outside the Bank even after project approval.

2.6.3 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 MTIP and CIDPs. 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 Since the commencement of Bank Group operations in Kenya, the Bank Group has committed up to UA 300 million in agriculture. The investments have made significant contributions towards improving agricultural productivity and food security. By end May 2018, the Bank's portfolio in Kenya comprised 34 operations (including approvals), with a total commitment of UA2.6 billion. Transport sector operations dominate the portfolio with a share of about 33% by value. Agriculture and environment constitutes about 5% by value of the current portfolio. The agriculture and environment operations in the portfolio include, (i); Drought Resilience and Sustainable Livelihood Project (DRSLP-1); ii) Smallscale Irrigation and Value Addition Project (SIVAP); iii) ENABLE Youth Kenya; and iv) Kenya Emergency Humanitarian Assistance For Persons Affected by Drought (v) Rural Livelihoods Adaptation to Climate Change (RLACC). The performance of the Bank's portfolio in Kenya is assessed to be satisfactory with an average rating of 3.19, and with a cumulative disbursement of 38%.

Considerable experience has been gained from the implementation of ongoing and past agriculture portfolio in Kenya. The experience covers knowledge on conservation of natural resources, construction of irrigation infrastructure and supporting community initiatives through group formation for income generation activities. The key lessons learnt from

implementation of GZDSP-1 are outlined in the following paragraphs and these have been incorporated into design of this project.

2.7.2 One of the most significant lessons is the importance of early and active involvement of communities in specifying their basic needs and constraints and contributing to the formulation of the concrete interventions. For this project, engagement with the relevant beneficiaries, including farmers and county officials started even from the preparation of the completion report of phase 1. Some valuable ideas were gleaned from farmers on the new strategies for the income-generating initiatives proposed for this phase.

2.7.3 Another important lesson is that there is a need to put in place an effective produce and marketing system to ensure that the farmers are able to sell the surpluses generated and thus increase their incomes. The proposed project has incorporated this in its design through provision of marketing and grading sheds for the CFAs (beneficiary communities) and is expected that once the CFAs are formed, there will be produce and marketing sub-committee who will be responsible for exploring better markets for farmers produce and linkages with the private sector including crop processors, timber processors and financial providers among other actors.

2.7.4 Project ownership by the beneficiaries who are organized as CFAs and the local authorities is extremely critical for sustainability. The success of the project will depend on early formation of effective CFAs that could own, manage and sustain the project benefits beyond the project period. In addition, project ownership by local authorities will be assured through continuous sensitization from project preparation to implementation.

2.7.5 Quality at entry is important to ensure smooth take-off and hitch free project implementation. In this regard, the design of this project has avoided using overly optimistic assumptions about project outputs, including targets, timelines and required resources. Further, to reduce delays in project implementation, the project implementing team has already been appointed and the profiles of its members will be submitted to the Bank for review.

2.7.6 For the communities to embrace forest conservation initiatives whose benefits are long term and sometimes intangible, there is need to incorporate alternative livelihood initiatives as incentives. These incentives include income-generating activities like bee-keeping, fish farming, dairy production, baking and fruit processing among others.

2.7.7 Use of a participatory model that embraces innovation, capacity building, value addition and ownership is critical for efficient use of resources. Timeliness in disbursement of funds, especially counterpart funds, is key to success of project implementation as well as ensuring value for money.

2.8 Key performance indicators

2.8.1 The key performance indicators for monitoring of project achievements are identified and detailed in the results-based logical framework. The key outcomes include increased forest cover and increased household incomes. The key output indicators are increased area brought under reforestation and afforestation, increased kilometers of forest access roads rehabilitated, increased crop and forest products produced and reduced postharvest loss. These key indicators are noted to be in line with Bank's core sector indicators. These indicators will be collected and analyzed regularly by the M&E unit of PMU through field visits and monitoring progress. The M&E unit will collect and report gender-disaggregated data and information during project implementation.

2.8.2 The PMU 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 Mid Term Review (MTR) report 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) 30.4%	NPV KES 60,235,342,874 at 10%
EIRR (base case) 18.6%	NPV KES 14,225,178,209 at 10%

3.1.1 The project is financially and economically viable, as indicated by the project's Financial Internal Rate of Return (FIRR) of 30.4% and Economic Internal Rate of Return (EIRR) of 18.6% which are both significantly higher than the discount rate of 10%. The Net Present Value (NPV) is also positive in both cases indicating that the project is viable. At the enterprise level, a typical one-hectare farm model comprising the three main enterprises analyzed (woodlot intercropped with legumes, agroforestry model of maize and grevillea, irish potato under PELIS) shows that the project's annual net margin is expected to increase from KES 42,074 to KES 582,507 at full development. This is mainly because before project interventions, community associations are not organized and undertaking forestry and crop production activities in subsistence manner than after project interventions where they are well organized and commercially-oriented.

3.1.2 In estimating project costs, the following assumptions were made. The project will be implemented over six years and costs are based on most recent updated prices, excluding taxes. Component unit cost estimates for civil works are based on KFS engineering design estimates as verified by the public works department. The road unit of KFS will implement rehabilitation and improvement of forest access roads through the force account. Domestic price increases have been assumed at 7.32% throughout the project period, representing average annual inflation rate from 2010 to 2017. Cost estimates include physical contingencies of 5% of base cost; except for consultancy, specialist services, salaries and allowances. The Bank funding will cover all investment and recurrent costs except for salaries and allowances which will be financed by the government. The communities/farmers contribution will be in form of land, inputs and labour.

3.1.3 The project will significantly contribute to improved food security, climate change resilience, enhanced community livelihoods and improved forest and tree cover. In addition, the project will contribute to enhanced ecological functions key among them increased carbon sequestration, water flows, biodiversity and other vital conservation functions. In all, about 167,083 households of which 40% (66,833) are female-headed will benefit directly

from community-based initiatives. Over 501,249 households are expected to benefit indirectly from all or some of the various project initiatives.

3.1.4 Sensitivity analysis was conducted on the EIRR for various scenarios with some scenarios indicating that the project is sensitive to delayed benefits and costs increases beyond the base costs. For instance, benefits stream delayed by two years yielded an EIRR of 12%.

3.2 Environmental and Social impacts

3.2.1 Environmental, social and climate change challenges

Kenya like all other countries in sub-Saharan Africa is facing many environmental, social and climate change challenges. About 80% of the country is semi-arid and arid lands (ASAL). The country experiences challenges associated with climate change such as reduced rainfall amounts, increased temperatures, increased winds; a number of social and economic challenges such high levels of poverty, poor infrastructure and low crop yields.

3.2.2 Acceptability and significance of the proposed project

The proposed project has been positively received by the Government of Kenya through the Ministry of Environment and Forestry and the County Governments in the target counties as one of the projects that will positively contribute towards addressing the environmental, social and climate change challenges in Kenya. For example, the project will help the country in achieving several of its national and international obligations such as the in the attainment of the country's Nationally Determined Contributions (NDCs), attainment of the United Nations Convention on Climate Change (UNFCCC), addressing the United Nations Convention on Biodiversity (UNCBD) as well as the United Nations Convention to Combat Desertification (UNCCD).

3.2.3 Social and economic importance of the project

The project will have several social and economic benefits, key among them are: (i) improved environment that will include carbon sequestration of about 2.2 Gt CO₂e per annum; (ii) increased water flow as a result of increased forest cover and subsequently improved water percolation; (iii) improved food and nutritional security, particularly for the communities involved in the project; (iv) increase household incomes as a result of diversified and increased income generating activities; (v) improved forest management through improved forest road networks and other facilities within the gazetted forests; (vi) forest products and agricultural produce value addition consequently improving household incomes; (vii) enhanced employment opportunities; (viii) improved incomes at households and community levels; (ix) improved national income hence contribution to the GDP; and, (x) improved industrialisation through processing and value addition.

3.2.4 Environmental and social monitoring

The project has been classified as category 2, implying that it will not have serious irreversible environmental effects. The summary ESMP has been disclosed and posted on the Bank's website on 6th April 2018. The overall objective of environmental and social monitoring is to ensure that mitigation measures are implemented and are effective. 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. The overall responsibility of the environmental and social monitoring will lie with the KFS, MoE, respective county governments and the National Environmental Management Authority (NEMA). Both the executing agency (MoEF) and the implementing agency (KFS) were assessed to have the required staff capacities to implement all the proposed adaptation measures. It was also noted that KFS satisfactorily implemented the ESMPs under GZDSP-1.

3.2.5 During the preparation of the ESIA/ESMP, public consultations were carried out with the Ministry of Environment and Forestry, 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. In addition, site-specific investigations were also conducted to gain insight to the likely impacts of the programme on the environment. Furthermore, public consultations were also carried out during the site-specific feasibility studies where detailed ESIA's were carried out and ESIA/EIA reports developed. During the meetings, main issues raised included: (i) addressing environmental challenges and degradation of natural resources; (ii) anticipated long terms benefits of the project; and (iii) the need for consultations and agreements by community members with regard to usage of water resources both upstream and downstream

3.2.6 The project will have many complementary initiatives, which include the following: (i) a capacity building sub-component targeting to train key project officers on various aspects of environmental management; (ii) capacity building of farmers focusing on good agricultural production systems and practices aimed at ensuring long term sustainability of their lands; (iii) mainstreaming public health and HIV/AIDS in the overall operations of the agricultural sector, natural resource conservation and other economic activities; (iv) engagement and support for local interventions to ensure good environmental management in the agricultural sector and increasing value chain activities and systems; (v) other complementary initiatives include income-generating activities such as bee-keeping, fruit processing into jam, dried mangoes, etc, maize milling,, agro-processing crop by-products into animal feeds and supplementary livestock feed production among others.

3.2.7 Climate change and green growth

The project will mitigate the impacts of climate change through increased forest/tree cover and consequently increased greenhouse gas sinks by source. The project will greatly improve environment including carbon sequestration of about 2.2 Gt CO₂e per annum and also contribute to climate change resilience through alternative livelihoods and income generating activities as well as improved agricultural production and subsequently improving the farmers' incomes and reducing poverty. The project supports the Government of Kenya in achieving its obligations in the Nationally Determined Contributions (NDCs). The project was screened for climate change impacts and found to be a Category 2 in the Climate Safeguard Systems.

3.3 Gender and social analysis

3.3.1 The African Development Bank Group's (ADB) Gender Policy 2001 provide the requisite conceptual and operational framework for promoting gender responsive development in Africa. Through the policy and strategy, the Bank 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, 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 conservation efforts, 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 It is anticipated that the implementation of this project will directly benefit 167,083 households out of which 40% (66,833) will be women-headed households. Indirectly, the project will benefit 501,249 people within the project area. The project, through gender action plans to be developed, will seek to improve the role of both gender in 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 that 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.

IV. IMPLEMENTATION

4.1 Implementation arrangements

4.1.1 **Executing Agency:** The Executing Agency will be the Ministry of Environment and Forestry.

4.1.2 **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 Environment, MoEF and comprise representatives from the PS or his/her nominee of National Treasury, Chief Conservator of Forests, Principal Secretary or his/her nominee, Ministry of Agriculture and Irrigation, Director-General of NEMA or his/her representative, representative in charge of environment and natural resources from Council of Governors and two representatives of project beneficiaries. The National Project Coordinator will be the Secretary to the PSC. The Bank may be invited to PSC meetings as an observer. 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.

4.1.3 Implementing Agency and Project Management Unit (PMU). The project will be implemented by the Kenya Forest Service (KFS) which will also host a national PMU. The PMU will be responsible for day-to-day project management and coordination activities. In order to avoid project start-up delays, the existing PMU of the concluded GZDSP-1 will be used and expanded with recruitment of additional key staff namely an Agronomist, M&E officer, Environmental Specialist and Gender and Community Mobilization Officer. This will ensure that experienced and efficient staff with requisite sector knowledge are retained to manage the project. It is worthwhile to note that majority of staff at the PMU are government employees. The PMU 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.

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 Ecosystem Conservator. A County Project Implementation Team (CPIT) will be formed at each county and comprise the relevant technical departments, representatives for community forest associations and will be chaired by the County Executive responsible for Environment and Natural Resources. 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 MoEF and Bank staff based at RDGE and will be supervised 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 PMU 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 resources will be in accordance with the Procurement Framework

for Bank Group Funded Operations, dated October 2015 as may be amended from time to time (the “Procurement Framework”) and the provisions of the Borrower’s procurement plan for the Project. The various items under different expenditure categories and related procurement arrangements, the respective procurement methods and procedures, estimated costs, Bank-review arrangements, and time frame as agreed between the Borrower and the Bank will be provided in the Procurement Plan and detailed in the Project Appraisal Report Technical Annexes (refer to Annex B5). In order to facilitate the participatory demand-driven approach required to assure sustainability of interventions with the beneficiary communities, procurement of works and inputs will follow a participatory Community Project Cycle. The PMU 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. Since the procurement arrangements for the project are not complex, capacity, expertise and experience of the project team at MoEF to conduct procurements envisaged under the project is considered to be acceptable. The detailed review of MoEF is contained in the PAR Technical Annexes (Annex B5).

4.1.7 Financial Management

The overall fiduciary responsibility for the Loan will rest with the Principal Secretary, Ministry of Environment and Forestry. The KFS will be responsible for the implementation of the Project. The project will make use of the country’s public financial management systems as provided for in the Public Finance Management Act (2012), Government Financial Regulations and Circulars. The Project Steering Committee (PSC) will be constituted to provide strategic, policy and implementation oversight including the review and approval of the project annual work plans and budgets. The day to day financial management (FM) functions will be handled by the national Project Management and Coordination Unit (PMU) that will be headed by a Project Coordinator. The Chief Conservator of Forests (CCF) will assign one of the Accountants in KFS, with adequate qualifications and experience in the Bank’s Financial Management (FM) requirements, as the Project Accountant to handle project financial transactions. The Project Accountant will functionally report to the Manager, Finance and Accounting but will administratively report to the Project Manager.

4.1.8 The KFS Finance Accounting Manual (2017) which has elaborate description of FM policies and procedures will be followed by the project in addition to the Bank’s Financial Management Rules and Procedures. The existing Oracle Financials, an accounting software, will be adapted to include the Loan as a separate source of financing to enable the monitoring of Project expenses and generation of project specific financial reports. The FM and payment system for the project will be centralised at the KFS headquarters and funds for the execution of activities at the County and Road units targeted will be released in tranches using the KFS systems, based on approved work plans and achievement of identified milestones. Replenishments will be subject to accountability of previous resources allocated to each county. All expenditures and related supporting documents will be properly and physically archived by the PMU for supervision and auditing purposes. The KFS Internal Audit department, which reports to the KFS Board of Directors, shall undertake audits on the project. The internal audit reports shall be shared during Bank supervision missions. Regular monitoring and evaluation of funded activities will be carried out by the National Treasury, MoEF, as well as the KFS top management, in order to enhance transparency and accountability in project implementation. The Bank will field supervision missions to provide additional FM implementation support.

4.1.9 The PIU shall prepare interim financial reports (IFR), as part of the Quarterly Progress Reports (QPR), which will be submitted to the Bank, not later than 45 days after the end of each quarter. In addition, Project specific financial statements shall be prepared in accordance with the International Public Sector Accounting Standards (IPSAS) on an annual basis, with the year end of 30 June. The project financial statements shall be audited by the Office of the Auditor General or a private audit firm competitively recruited, based on the Bank's standard audit terms of reference (ToRs). The audited Financial Statements shall be submitted to the Bank no later than six (6) months after financial year end. The project resources will cover the cost of the Audit, if carried out by a private audit firm.

4.1.10 Disbursements under the Project will be in accordance with the Bank's Disbursement Handbook. The Project shall use the Direct Payment Method and the Special Account Method for disbursements. However, the other two disbursement methods, namely the Reimbursement and Reimbursement Guarantee Methods could be used when a need arises but after consultation and approval of the Bank. In the case of special account method, one (1) USD denominated Special Account and one (1) local currency (Kenya Shilling) denominated account will be opened by KFS, at the Central Bank of Kenya or in a commercial bank acceptable to the Bank, to receive funds. The opening of accounts will be an action prior to the first disbursement. The Bank will issue a disbursement letter, which will provide specific guidelines on key disbursement procedures and practices.

4.1.11 The current project's financial management arrangements meet the Bank's minimum requirements based on the Bank's FM Implementation Guidelines-2014 and are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by the Bank. For more details on the project's FM arrangements, refer to technical annex B4.

4.2 Monitoring

4.2.1 The national PMU and external Monitoring and Evaluation unit has a current database on the key indicators of: (i) household income; (ii) Area of forest rehabilitated (iii) Area under agro-forestry and woodlots and (iv) crop yields and in selected sites of the 15 counties. However, a baseline survey will be conducted in each county and associated CFAs 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 will incorporate gender sensitive results-based indicators and target values. The project will also conduct a launching workshop followed by county specific project launches, with the aim of sensitizing and training national and county PMU 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 PMU's based Monitoring and Evaluation (M&E) unit, 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. PMU's M&E expert would be responsible for planning, monitoring and evaluating

key project results in the project areas. The expert will also support farmers' awareness and knowledge exchange, prepare progress reports and implement studies as required. The summary of the project monitoring process is illustrated in Table 4.2.

Table 4.2: Monitoring Process

Time Frame	Milestone	Monitoring Process/Feedback
Year 1	Baseline data collection	External M&E team and the PMU's M&E officer,
Year 1-6	Project Implementation	External M&E team and PMU, Project Team, 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 ranks low 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, reforms of the judiciary and the police force and a compulsory lifestyle audit for all public servants, starting with vetting of procurement and finance officers. To streamline procurement, one of the main sources of irregularities in Government, the Public Procurement Oversight Authority (PPOA), which was established in 2005 was reconstituted and its role enhanced into a regulatory authority under the 2015 Procurement Act. 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 2010, 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 and the office of Ombudsman. Further, the devolved governance system that created the 47 counties was established in 2012.

4.3.3 Recently, concerns have emerged regarding the governance issues in the forest sub-sector especially those relating to indigenous people human rights violation at Embobut forest in Cherangani, illegal logging, mismanagement and corruption at the MoEF and KFS. As a standing member of the AU, the Government of Kenya is committed to the full implementation of the decisions of the African Court on Human and Peoples Rights ruling on the 'Ogieks of Mau' in 2017. In respect to this, the Government accepted the ruling and set up a taskforce to guide the implementation of the court's decision. As a way of

mainstreaming the decision of the court, the taskforce shall develop a framework for the country to mitigate such occurrences in future. To further entrench human rights based conservation approach, KFS in conjunction with Kenya National Commission on Human Rights (KNCHR) has developed Human Rights Based Approaches (HRBA) curriculum and training manuals to build the capacities of KFS staff and stakeholders. KFS has also established a Community Development Unit and recruited a Social Development Expert to address issues of human rights, social safeguards, gender equity, economic empowerment of marginalised groups and other emerging cross-cutting issues. The Unit will be strengthened through recruitment of additional social development officers to cover hotspot areas. The proposed project will develop and implement a framework aimed at entrenching the human rights-based conservation approach in project execution. In this regard, the project will recruit a social development officer for Mau ecosystem who will engage and build capacities of forest dwellers, local communities and stakeholders on human rights issues. The project will closely monitor human rights violations in all the target counties.

4.3.4 Regarding corruption allegations in KFS, twelve senior staff who were suspected to have been engaged in corrupt practices were suspended and the new KFS board and government investigative agencies are pursuing individual cases. Further, the task force report on Forest Resources Management and Logging Activities in Kenya identified logging operations within KFS as the area that needs strengthening, and recommended major reforms in that section. The newly constituted KFS board has taken up this task and is currently implementing the necessary reforms. The government has also intensified the fight on corruption and has in the recent months arraigned multiple suspects in court among them top government officials from various institutions. A raft of measures aimed at streamlining procurement and accounting procedures across all government ministries with a view to enhancing transparency and accountability, have been put in place. Through Executive Order No. 2 of 2018, the government aims at enhancing transparency and accountability in procurement by ensuring that all procurement processes are handled through the Integrated Financial Management System and publication of critical information on procurement such as bid evaluation and awards. MoEF shall ensure that all agencies under it fully comply with these measures.

4.3.5 The aforementioned issues address the concerns raised by the Bank's Board of Directors in June 2018. The GoK has committed itself in actions taken and planned on these issues as detailed in Annex C1.3 of the technical annexes. **The project will closely monitor these commitments in all the target counties.** In case of insufficient progress in implementing the human rights and governance related measures, the Bank may suspend disbursements **in accordance with standard loan terms.**

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. 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 they

are 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 forest conservation and livelihoods activities from the onset will further sustain flow of project benefits.

4.4.2 For the sustainability of all project forest conserved areas and infrastructure constructed, Participatory Forest Management Plans (PFMPs) will be developed and agreed upon with the benefitting communities. Using these plans, the communities will be trained in the operation and maintenance of conserved areas. This will be one of the parameters that would be covered by the monitoring and evaluation of the project to ensure that the CFAs are well groomed to take over completely as the project phases out.

4.4.3 Mainstreaming the participation and capacity building of the communities IGAs/CFAs 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/CFAs, agribusiness and market linkages with the private sector, will offer opportunities for increased income thereby contributing to the improvement of the beneficiaries' livelihood and expansion of their activities.

4.4.4 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 their respective PFMPs with funding from contributions by CFA members.

4.5 Risk Management

The main potential risks and their respective mitigation measures are as follows:

Risks	Mitigation Measures	Rating
Adverse climate changes and other environmental factors		
Effects of extreme climate changes and other environmental factors disrupting the natural resources management and agricultural interventions	Identify climate smart option and support sustainable agricultural practices. Choice of suitable species, diversification and capacity building in management. Adoption of IPM practices	Medium
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.	Low-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 Community Forest Associations (CFAs)	Medium
Human Rights violations		
Pressure on forest resources due to increasing population, high poverty	Development and implementation of a framework to mainstream human rights-	Medium

levels and lack of alternative livelihood options may result in conflicts between the community and government.	based conservation approach. This will promote co-management of forest resources, institutional capacity development of communities and their organizations, support alternative livelihoods, conflict resolution and benefit sharing mechanisms	
Transparency and accountability in project implementation		
The project will be implemented in a wide area covering 15 counties and procurement and accounting procedures may not be strictly adhered to.	Capacity building will be provided to implementing units at the counties on the financial, procurement and project cycle management. Disbursement to the counties will be in tranches based on approved work plans and achievement of identified milestones. Replenishment will be subject to accountability of previous resources allocated to the county. Monitoring and evaluation of funded activities will be regularly carried out by the Bank, National Treasury, MoEF, KFS and the Project Implementation Unit.	Medium
Political interference		
The major identified stakeholder in the project areas are the county and national government bodies. It is anticipated that there shall be potential conflicts on the roles and responsibilities	The project will in a participatory manner, develop a project implementation manual with clear roles and responsibilities of all stakeholders. The project will create an environment of openness and continuous consultation across all stakeholders to forestall any misunderstanding that may occur. KFS is rolling out the transition implementation plans for devolved forestry functions which clearly specify the roles and responsibilities of national and county governments	Low
Societal risks		
Within the project area, specifically Mau ecosystem, there is the presence of forest dwellers who may resist project activities within state forest areas	The project will hire a Social Development Expert for Mau ecosystem who will develop and implement human rights based conservation framework approach. Lessons learnt from past projects, including GZDSP-1 will be relied on to provide mitigation measures.	Low

4.6 Knowledge Building

4.6.1 The special studies and the development of comprehensive framework policy document for the sustainable management of Kenya natural resources such as forests and 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 sustainable conservation and use of forest resources. 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 areas, 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 CFAs 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.

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 and an ADF loan

5.2 Conditions associated with Bank's intervention

5.2.1 Conditions Precedent to Entry into Force of the Loan Agreements: The entry into force of the Loan Agreements shall be subject to the fulfilment by the Borrower of the provisions of Section 12.01 of the General Conditions Applicable to Loans and Guarantee Agreements of the African Development Bank and African Development Fund (Sovereign Entities).

5.2.2 Conditions Precedent to First Disbursement of the ADB and ADF Loan: The obligation of the Bank /Fund to make the first disbursement of the loan shall be conditional upon entry into force of respective Loan Agreements.

5.2.3 Other Conditions applicable to the ADF/ADB Loan:

Other Condition. The Borrower shall open a foreign currency denominated Special Account to receive the proceeds of the Loan and a local currency denominated account.

5.2.4 Undertaking: The Borrower shall cause the Executing Agency to: (i) Utilize the Project Management Unit (PMU) established under the GZDSP-1 project for the implementation of this Project by extending its mandate, within six (6) months of the entry into force of the Loan Agreement; (ii) Establish a Project Steering Committee within six (6) months of the entry into force of the Loan Agreement; (iii) Implement the Project in compliance with the national laws, regulations and implementation matrix in Annex C1.3 of the technical annexes; (iv) Fully implement the Environmental and Social Management Plan (ESMP); and (v) Comprehensively report on the implementation of the ESMP on an annual basis.

5.3 Compliance with Bank Policies

This Project complies with all applicable Bank policies.

VI. RECOMMENDATION

Management recommends that the Boards of Directors of the Bank approve the proposed ADF Loan of UA 29.69 million and an ADB loan of EUR 5.20 million to the Republic of Kenya for the purposes and subject to the conditions stipulated in this report.

Appendix I: Kenya's Comparative Socio-economic Indicators

	Year	Kenya	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km²)	2017	580	30,067	94,716	35,018
Total Population (millions)	2017	48.5	1,244.8	6,252.1	1,190.0
Urban Population (% of Total)	2017	26.9	40.5	49.2	81.4
Population Density (per Km²)	2017	85.2	42.4	66.0	34.0
GNI per Capita (US \$)	2016	1 380	1 836	4 442	41 208
Labor Force Participation *- Total (%)	2017	67.1	65.8	62.3	60.3
Labor Force Participation **- Female (%)	2017	62.4	55.3	47.8	52.5
Sex Ratio (per 100 female)	2017	99.9	100.2	107.5	105.3
Human Develop. Index (Rank among 187 countries)	2015	146	...	...	...
Popul. Living Below \$ 1.90 a Day (% of Population)	2013	...	...	12.7	0.6
Demographic Indicators					
Population Growth Rate - Total (%)	2017	2.6	2.5	1.3	0.6
Population Growth Rate - Urban (%)	2017	4.3	3.5	2.4	0.9
Population < 15 years (%)	2017	41.4	40.8	27.9	16.6
Population 15-24 years (%)	2017	19.4	19.2	16.7	11.9
Population >= 65 years (%)	2017	2.9	3.5	6.8	17.4
Dependency Ratio (%)	2017	79.5	79.6	54.6	52.0
Female Population 15-49 years (% of total population)	2017	24.5	24.0	25.6	22.6
Life Expectancy at Birth - Total (years)	2017	63.1	61.9	70.2	80.7
Life Expectancy at Birth - Female (years)	2017	65.2	63.3	72.3	83.5
Crude Birth Rate (per 1,000)	2017	33.0	33.9	20.6	10.9
Crude Death Rate (per 1,000)	2017	7.6	9.0	7.5	8.6
Infant Mortality Rate (per 1,000)	2016	35.6	49.3	33.1	4.5
Child Mortality Rate (per 1,000)	2016	49.2	72.6	44.3	5.3
Total Fertility Rate (per woman)	2017	4.1	4.4	2.6	1.7
Maternal Mortality Rate (per 100,000)	2015	510.0	444.1	237.0	10.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2005-15	19.9	41.6	121.6	293.5
Nurses and midwives (per 100,000 people)	2005-15	86.8	120.9	211.3	873.4
Births attended by Trained Health Personnel (%)	2010-16	61.8	55.9	76.6	98.9
Access to Safe Water (% of Population)	2015	63.2	71.6	89.4	99.5
Access to Sanitation (% of Population)	2015	30.1	39.4	61.5	99.4
Incidence of Tuberculosis (per 100,000)	2016	348.0	221.7	163.0	12.0
Child Immunization Against Tuberculosis (%)	2016	99.0	82.1	84.9	95.8
Child Immunization Against Measles (%)	2016	75.0	74.4	84.0	93.7
Underweight Children (% of children under 5 years)	2010-15	...	18.1	15.3	0.9
Prevalence of stunting	2010-15	26.0	33.3	25.0	2.5
Prevalence of undernourishment (% of pop.)	2015	19.1	17.5	12.3	2.7
Public Expenditure on Health (as % of GDP)	2014	3.5	2.6	3.0	7.7
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2010-16	109.0	101.7	103.8	102.6
Primary School - Female	2010-16	108.7	98.8	102.2	101.8
Secondary School - Total	2010-16	...	51.8	...	106.6
Secondary School - Female	2010-16	...	49.7	...	106.4
Primary School Female Teaching Staff (% of Total)	2010-16	50.2	46.0	51.3	81.0
Adult literacy Rate - Total (%)	2010-16	78.7	68.6	...	...
Adult literacy Rate - Male (%)	2010-16	83.8	76.0	...	...
Adult literacy Rate - Female (%)	2010-16	74.0	61.7	...	...
Percentage of GDP Spent on Education	2010-16	5.3	4.9	4.1	5.2
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2015	10.2	8.0	11.3	10.1
Agricultural Land (as % of land area)	2015	48.5	37.4	38.1	35.1
Forest (As % of Land Area)	2015	7.8	21.0	31.4	28.8
Per Capita CO2 Emissions (metric tons)	2014	0.3	1.1	3.5	11.0

Appendix II: AfDB Portfolio in Kenya (19 April 2018)

Sector Name	Long name	Loan Number	Funding Source	Approval Date	Date Entry Into Force	Completion Date	Loan Amount (UA Million)	Disb. Ratio (%) /1
Agriculture	KENYA EMERGENCY HUMANITARIAN ASSISTANCE FOR PERSONS AFFECTED	5000199004918	SRF	07/03/2017		12/29/2018	1.0	0.0%
	SMALLSCALE IRRIGATION & AGRICULTURE VALUE CHAIN DEVELOPMENT	2000130014530	ADB	11/18/2015	6/15/2016	06/30/2022	39.5	7.0%
		5570155000751	GAFSP TF	11/18/2015	2/4/2016	06/30/2022	22.8	3.4%
	KENYA-DROUGHT RESILIENCE & SUSTAINABLE LIVELIHOOD PROGRAM IN	2100150028345	ADF	12/19/2012	5/5/2013	12/31/2019	37.4	24.3%
	MULTINATIONAL-GEF RURAL LIVELIHOODS ADAPTATION TO CLIMATE CH	5550155001201	GEF	12/15/2016	5/19/2017	05/31/2021	2.8	0.0%
	ENABLE YOUTH KENYA	2100150038895	ADF	01/11/2018		06/30/2022	21.3	n.a.
Agriculture Total							124.8	12.2%
Power	ADF PRG MENENGAI	2100140000151	ADF	10/22/2014		12/31/2020	12.7	n.a.
	ADF - PRG FOR TURKANA T-LINE	2100140000101	ADF	10/02/2013	12/8/2014	03/15/2019	20.0	0.0%
	KENYA - LAST MILE CONNECTIVITY PROJECT	2100150032195	ADF	11/19/2014	10/2/2015	12/31/2019	90.0	64.7%
	LAST MILE CONNECTIVITY PROJECT - 2	2000200000152	ADB	06/27/2016	5/5/2017	12/31/2022	134.6	9.7%
	MENENGAI GEOTHERMAL DEVELOPMENT PROJECT	2100150026101	ADF	12/14/2011	7/10/2012	12/31/2018	80.0	95.1%
		5565130000101	SCF	12/14/2011	7/10/2012	12/31/2018	7.5	71.2%
		5565155000401	SCF	12/14/2011	3/12/2012	12/31/2018	17.5	63.8%
	ETHIOPIA-KENYA ELECTRICITY HIGHWAY(KENYA)	2100150027845	ADF	09/19/2012	3/1/2013	12/31/2018	75.0	58.5%
	KENYA - TANZANIA INTERCONNECTION (KENYA)	2100150032846	ADF	02/18/2015	11/13/2015	12/31/2019	27.5	15.4%
Power Total							464.8	46.9%
Social	SUPPORT TO HIGHER EDUCATION SCIENCE AND TECHNOLOGY TO ENHANC	2100150027993	ADF	11/14/2012	2/19/2013	06/30/2019	28.0	80.5%
	SUPPORT TO TVET AND TRAINING FOR RELEVANT SKILLS DEVELOPMENT	2100150033295	ADF	07/01/2015	12/10/2015	06/30/2021	41.0	16.0%
	EAST AFRICA CENTERS OF EXCELLENCE KENYA	2100150031997	ADF	10/03/2014	7/7/2015	12/31/2019	25.0	7.2%
Social Total							94.0	32.9%
Transport	NAIROBI OUTER RING ROAD PROJECT IMPROVEMENT PROJECT	2100150030144	ADF	11/13/2013	5/8/2014	12/31/2018	77.0	69.5%
		2100155026117	ADF	11/13/2013	9/26/2014	12/31/2018	0.6	64.1%
	MOMBASA-MARIAKANI ROAD HIGHWAY PROJECT	2100150032743	ADF	03/11/2015	10/29/2015	06/30/2021	80.0	11.8%
	SIRARI CORRIDOR ACCESSIBILITY & ROAD SAFETY IMPROVEMENT PROJ	2000130015238	ADB	03/30/2016	8/18/2016	12/31/2021	228.0	16.5%
		5580155000451	EU AITF	03/30/2016	5/13/2016	12/31/2021	10.0	6.9%
	MULTINATIONAL: ARUSHA-HOLILI/TAVETA-VOI ROAD (KENYA)	2100150028894	ADF	04/16/2013	10/18/2013	12/31/2018	75.0	67.9%
	MOMBASA -NAIROBI-ADDIS ABABA CORRIDOR PHASE III - KENYA	2100150025546	ADF	11/30/2011	6/29/2012	12/31/2018	120.0	75.9%
	KAPCHORWA - SUAM - KITALE AND ELDORET BYPASS ROADS PROJECT (	2000200001052	ADB	03/29/2017	8/22/2017	12/31/2022	82.0	13.0%
		2100150037300	ADF	03/29/2017	8/22/2017	12/31/2022	35.1	10.6%
	KENYA - LAKE VICTORIA MARITIME COMMUNICATIONS AND TRANSPORT	2100150036247	ADF	10/24/2016	3/23/2017	04/30/2021	3.8	0.4%
	JOMO KENYATTA INTERNATIONAL AIRPORT AIRFIELD EXPANSION PROJE	2000200001901	ADB	11/28/2017		12/31/2022	160.0	0.0%
Transport Total							871.5	29.6%
Water Sup/Sanit	KENYA TOWNS SUSTAINABLE WATER SUPPLY AND SANITATION PROGRAM	2000200000501	ADB	11/09/2016	4/4/2017	12/31/2021	381.2	0.5%
		2100150036294	ADF	11/09/2016	4/4/2017	12/31/2021	5.1	2.6%
		2100155033467	ADF	11/09/2016	1/9/2017	12/31/2021	0.5	13.8%
		5500155011104	MIC TF	11/09/2016	3/3/2017	12/31/2021	1.2	5.8%
	THWAKE MULTIPURPOSE WATER DEVELOPMENT PROGRAM	2100150029993	ADF	10/30/2013	5/28/2014	12/31/2019	61.7	1.5%
		2100155025973	ADF	10/30/2013	1/27/2014	12/31/2019	1.2	40.3%
Water Sup/Sanit Total							450.9	0.8%
Total Public Sector Operations							2,006.1	26.2%

Appendix III: Map of the Project Area

