



RESOURCE MOBILIZATION STRATEGY

VOLUME 1

2021-2026

Cover photo: Aerial view of Mwea Irrigation Project- Kenya. Photo credits

Important Note: This Resource Mobilization Strategy (RMS) is organized into two volumes as follows:

- Volume 1: The Resource Mobilization Strategy
- Volume 2: Project Concept Notes

A portrait of Othman Ngunjiri, Chief Executive Officer of the National Irrigation Authority, smiling. He is wearing a dark suit, white shirt, and a striped tie. The background is dark with several out-of-focus circular lights.

FOREWORD

Kenya is a predominantly agricultural-based economy and agriculture is dependent almost entirely on subsistence rain-fed agriculture. The irrigation potential in the country remains, largely, unexploited. The irrigation potential in Kenya is estimated at 1,341,900 hectares (3,354,750 acres) based on available surface water, exploitation of underground water resources and water harvesting and storage. There is an additional potential of 225,000 hectares (562,500 acres) from drainage and flood protection. Of this, only 216,000 ha (540,000 acres) of the irrigation potential (16 percent) and 32,000 ha (80,000 acres) of the drainage and flood protection potential (14 percent) has been developed.

Aware of both the challenges and opportunities, the Government of Kenya (GoK) has elaborated several policies to direct the implementation of irrigation interventions to ensure optimal use of available land and water resources for agricultural production. This productivity will contribute effectively towards food security, wealth and employment creation, and export promotion. These policies are in line with the Kenya Vision 2030, international commitments including the Sustainable Development Goals (SDGs), and Agenda 2063.

To keep up with the rapid increase of population and achievement of food security by 2030, agricultural production in Kenya must increase at an annual rate of 6%. This implies that, substantial new investment in agriculture is needed to meet targets for poverty alleviation and food security. The Food and Agricultural Organization (FAO 2015) estimates that about 75% of the growth in crop production in Sub-Saharan Africa required by 2030 will have to come from intensification. Since irrigation and other forms of agricultural water management are the key to intensification, it is also clear that much of the required new investment must be in agricultural water development.

This Resource Mobilization Strategy (RMS) aims to provide the GoK through NIA, with the practical strategies to catalyze irrigation funding and scale it up, making it a faster more sustainable and inclusive process. Public sector can assist by creating an enabling environment for farmers, while private sector can contribute through co-created solutions, to open up possibilities for those who are less well connected and resourced, and monitor the environmental and social impacts.

This RMS analyzes various alternatives of mobilizing resources that are critical in expanding irrigation infrastructure as a measure of increasing food security and securing livelihoods for Kenyans. It will also assess the strategy with which NIA will engage government policy makers to prioritize Irrigation, see it as an enabler in expanding economic growth, and reduce poverty.

While the estimated cost of implementing the strategic pillars and this strategy is significant, NIA is confident that its successful implementation will be helpful in addressing poverty, unemployment and food insecurity in the country. The document will be reviewed after two years to track implementation. I take this opportunity to call upon all the stakeholders to contribute to the vision of “*water to every irrigable acre*” and ultimately improve the livelihoods of our people.

In addition to this Volume, a volume 2 of this RMS is available. The second volume comprises project concept notes that present priority areas for investment by the NIA.

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Chief Executive Officer-National Irrigation Authority

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ACRONYMS AND ABBREVIATIONS

ACs	Adaption communications
ADB	Asian Development Bank
AFD	French Development Agency
AfDB	African Development Bank
AFREDEC	African Research and Economic Development Consultants
A in A	Appropriation in aid
ASALs	Arid and semi-arid lands
ASTGS	Agricultural sector transformation & growth strategy
BADEA	Bank for Economic Development in Africa
BPS	Budget policy statement
BROP	Budget review and outlook paper
CAADP	Comprehensive Africa agriculture development program
CAPEX	Capital expenditure
CBA	Cost-benefit analysis
CBK	Central Bank of Kenya
CEO	Chief Executive Officer
CIDUs	County irrigation development units
DA	Designated account
DANIDA	Danish International Development Agency
DFID	Department for International Development
DPs	Development partners
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EPC-F	Engineering, procurement, construction and financing
ENIP/NEP	Expanded national irrigation programme
ERS	Economic recovery strategy
ESP	Economic stimulus programme
FAO	Food and Agriculture Organization
FAOSTAT	The Food and Agriculture Organization Corporate Statistical Database
GCD	Governance and institutional capacity development
GCF	Green climate fund
GDP	Gross domestic product
GEF	Global environment facility
GIZ	German Gesellschaft für Internationale Zusammenarbeit GmbH
GoK	Government of Kenya
IFIs	International financial institutions
IOR&D	Irrigation oriented research and governance
IWUAs	Irrigation water user associations
JICA	Japan International Cooperation Agency
KALRO	Kenya Agricultural and Livestock Research Organization
KERP	Kenya external resources policy

KFAED	Kuwait Fund for Arab Economic Development
KfW	Kreditanstalt für Wiederaufbau
KII	Key informant interview
MDAs	Ministries departments and agencies
M&E	Monitoring and evaluation
MoA	Ministry of Agriculture
MoWSI	Ministry of Water, Sanitation and Irrigation
MTEF	Medium-term expenditure framework
MTP	Medium term plan (of the Vision 2030)
MW	Megawatt
NAPs	National adaptation plans
NWMP	National water master plan
NDCs	Nationally determined contributions
NDMA	National Drought Management Authority
NEMA	National Environment Management Authority
NGOs	Non-governmental organizations
NIA	National Irrigation Authority
NIB	National Irrigation Board
ODA	Official development assistance
OFID	OPEC Fund for International Development
O&M	Operations and maintenance
OPEX	Operations expenditure
PA	Project account
PEV	Post-election violence
PFM	Public financial management
PIM	Public investment management
PPP	Public private partnership
PPPC	Public private partnerships committee
PPPU	Public private partnerships unit
RFP	Request for proposal
RMD	Resource mobilization department
RMS	Resource mobilization strategy
ROI	Return on investment
SDGs	Sustainable development goals
SID	Sustainable irrigation development
SIM	Sustainable irrigation management
SIWHS	Sustainable irrigation water harvesting and storage
SRA	Strategy for revitalizing agriculture
SWGs	Sector working groups
TNT	The National Treasury
TOR	Terms of reference
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WBG	World Bank Group
WSTF	Water Services Trust Fund

DEFINITION OF KEY TERMS

Bankability	A measure of a project's suitability for commercial financing that typically includes factors related to the service charges levied on users by irrigation service providers, and on whether project risk-allocation sufficiently protects the irrigation service provider.
Budget	An estimation of revenue and expenses over a specified future period of time and is usually compiled and re-evaluated on a periodic basis (Say 1 year).
Capital expenditure (CAPEX)	Expenditure on new fixed assets or expenditure on enhancing the quality or service of an existing system of fixed assets.
Concession	A grant of economic rights of a public asset in an administrative law jurisdiction to a private party by the government, including the legal title to possess the site of the land. It may also refer to a PPP contract generally reserved for contracts where the majority of revenue comes from users.
Evaluation	Periodic assessment of the amount, number, or value of something based on a set of standards.
Irrigation	Better delivery of water to, and drainage of water from, arable land, including better timing, quantity, quality, and cost-effectiveness for the water users.
Irrigation potential	Area of land, which is potentially irrigable.
Monitoring	Is a continuous process by which stakeholders obtain regular feedback on progress towards achieving the set milestones and results (often-focusing more on process, activities, inputs and outputs)
MTEF	Medium-Term Expenditure Framework is a budget based on 3 years plan
Project Management	The application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters.
Impact	Improvement in people's lives- long-term widespread improvement in society
Effectiveness	A measure of whether qualitative or quantitative results are attained
Efficiency	A measure of productivity, including quantitative and qualitative results attained against the amount of resources invested, including financial costs
Outcomes	Changes in institutional and behavioral capacities minus intermediate effect for beneficiaries
Outputs/ Deliverables	Capital goods, products and services produced
Inputs	Human and material resources
Activities/ Processes	Tasks undertaken to transform inputs into outputs
Value for Money	Ensuring that investments are efficient, economical, effective and equitable.
Service contracts	Contractual arrangements in which a private sector carries out a support service for the irrigation scheme, such as issuing the bills to the farmers using the irrigation services. These are different to management contracts, which usually include a more comprehensive set of activities, and are generally agreed for a longer time period.
Sustainability	Avoidance of the depletion of natural resources in order to maintain an ecological balance. Ability to maintain/sustain project benefits even after the implementation of a project.
Institutional Water User Association	Groups of water users receiving irrigation and drainage services. The associations may have different names according to local practice or national legislation.

EXECUTIVE SUMMARY

Irrigation is one of the priority areas for reducing poverty and accelerating economic growth. It is well anchored in Vision 2030, Medium Term Plan (MTP III) 2018-2022, Big Four Agenda 2018-2022, Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029, Water Master Plan 2030, and Irrigation Act 2019, among other agriculture and water policies and planning frameworks. These planning documents recognize irrigation not only as an enabler, but also as the main driver of rapid and inclusive economic agricultural growth and development. These documents emphasize that irrigation development and management should serve human needs such as food, nutrition, and incomes.

The Irrigation Act 2019 established the NIA, with express mandate of promoting the development, and effective management of irrigation services in Kenya. The specific roles and responsibilities of the Authority include development of irrigation infrastructure; promote agricultural production (agronomic) based services, marketing-based irrigation infrastructure services, and overall coordination and facilitating sustainable irrigation and drainage services, covering large, medium, and small-scale irrigation projects in Kenya.

Through its Strategic Plan (2019-2023), NIA has established five key pillars that will help NIA to achieve its mandate sustainably. These key pillars include Sustainable Irrigation Development (SID); Sustainable Irrigation Management (SIM); Sustainable Irrigation Water Harvesting and Storage (SIWHS); Irrigation Oriented Research (IOR) and Governance and Institutional Capacity Development (GCD). In order to achieve the outcomes under these pillars several strategies and strategic objectives are considered.

The NIA Strategic Plan is anchored on key national policy documents among them the Third Medium Term Plan (MTP III) of the Kenya Vision 2030; the Agricultural Sector Transformation and Growth Strategy 2019-2029 (ASTGS); and the Kenya National Food and Nutrition Security (2011). Other guidelines include the Kenya Water Master Plan 2030; the Irrigation Act 2019; Comprehensive African Agricultural Development Program (CAADP); and the Sustainable Development Goals (SDGs), among others.

Pursuant to its broadened mandate as envisaged under the Irrigation Act of 2019, NIA has developed this Resource Mobilization Strategy (RMS) to assist in resource mobilization for the plan period and beyond. The overall objective of the RMS is to instill a clear, systematic, predictable and well-coordinated approach to soliciting, acquiring, and utilization, management, reporting, monitoring and evaluating assistance and for expanding the resource base to ensure sustainable resource availability. This aims at meeting NIAs mandate; which is “To provide and coordinate Sustainable Development and Management of Irrigation Services in Kenya”.

This RMS covers a period of five financial years starting 2021/2022 to 2026/2027 in the context of the Third and Fourth Kenya Vision 2030 Medium-Term Plans with clear focus on the Big Four Agenda. It also incorporates the targets in the SDGs and Africa’s Agenda 2063. The RMS has been developed in consultation with a wide range of stakeholders such as NIA management and staff; representatives from the Ministry of Water, Sanitation and Irrigation (MOWSI); The National Treasury; Ministry of Agriculture, Livestock and Fisheries; key multilateral and bilateral donors; among others.

Only about 17% of the country’s land has potential agricultural production. The rest (approximately 83%) is arid and semi-arid land (ASALs) is not suitable for rain-fed agriculture and predominantly experience drought that greatly affects production. The biggest potential for increasing agricultural production lies in the development of the ASALs through investment in irrigation infrastructure including water-harvesting technologies for irrigated agriculture and build resilience of vulnerable communities against effects of climate change. Kenya’s irrigation potential is estimated at 1.913 Million acres (765,575 ha) as per the National Water Master Plan (2030) without water storage and can go up to 3 million acres (1.2 Million ha). Out of this total potential, only 504,880 acres has been developed accounting for 16% coverage while out of the country’s total arable land, only 5.8% is equipped with irrigation infrastructure. NIA is desirous to increase investment towards exploiting this irrigation potential in a climate smart approach for food security and social economic development.

The Authority has also conducted a sector wide analysis of irrigation and generated a white paper on Irrigation; presented and adopted by the Cabinet in 2020. The white paper sets out the ambitions of NIA in terms of programs and projects and estimates that a total of Kshs.330Billion will be required over the next 10 years. The proposed interventions will cover all regions within the nation by implementing 5,715 **projects**. This is expected to increase the area under irrigation by **1,519,913 acres**, provide **water storage capacity of 1.5 billion m³ at a cost of Kshs 330 Billion** to generate **annual revenue of Kshs 335 Billion**, and create **employment for over 5 million** directly and indirectly. It follows then that this RMS looks inwards and outwards to mobilize sufficient resources to execute its mandate.

On its side, the Authority remains committed to its reform development agenda under the new irrigation Act 2019, its attendant 2020 regulations, Strategic Plan and other planning instruments. This aims at increasing the efficiency and quality of its services, as its contribution to achieve financial sustainability and food security.

Over the years, and being a Government of Kenya agency, NIA has heavily relied on the national government budgetary allocations to execute its mandate. To mobilize more resources, this RMS identified various strategies and action for implementation. The key strategies identified include the following:

- **Engaging and securing increased funding from the Government (i.e., increasing GoK Budget Allocations):** NIA banks on the active and continued support by the GoK in the course of the 2021- 2026 RMS. While NIA's Strategic Plan recognizes the risks of increasing the burden on already strained public resources, it seeks to engage GoK on securing additional resources through improved capacity for budget formulation, implementation and reporting. The improved capacity will lead to better utilization and increased absorption of resources and credible budgets with better alignment between plans, appropriations and actual disbursements.
- **Growing internal sources:** Internal revenues for NIA mainly emanate from its operations through collection of operation and maintenance (O&M) fees from farmers. Other sources are sale of farm produce (mainly maize and rice), provision of staff housing, auctions and sales of non-strategic assets or obsolete equipment and provision of conference and guesthouse facilities. Internally generated funds have varied from a low of Kshs.218 Million and a high of Kshs. 365 Million in the last 5 years. NIA hopes to increase appropriation in aid (A-in-A) through strengthened Irrigation Water Users Associations (IWUAs) for effective collection of O&M; improved internal financial management and processes; and strengthened internal audit processes.
- **Leveraging and deepening financing from current development partners (DPs):** Currently, NIA receives an estimated Kshs. 3 billion annually from various multilateral and bilateral donors. These include Japan International Cooperation Agency (JICA); World Bank Group (WBG); and Bank for Economic Development in Africa (BADEA), Others include the OPEC Fund for International Development (OFID); Kuwait Fund, Government of Spain, and Government of Israel among others. NIA will continue to mobilize financial resources from its long-term development partners through existing collaborative frameworks as well as explore new funding opportunities from the current donors. Key approaches will include strengthened communication and reporting, informal meetings and discussions, development of bankable project concepts and follow up on approval and funding.
- **Building relationships and diversifying the donor base through new funding streams:** While NIA will continue to rely on the generous financial support from Exchequer and traditional partners, broadening the base of resource mobilization partners will remain at the centre of this Strategy with a focus on regional donors, emerging donors, International Financing Institutions (IFIs) and the private sector. In this RMS, NIA has mapped new development partners and formulated a framework for continuous engagement. NIA will identify and align with the strategic interests of the specific donors, develop a donor specific solicitation campaign, showcase achievements and sustainability of previous projects, join relevant development partners working groups and improve its strategic communication and donor visibility, among others.

- ***Harnessing public private partnerships (PPPs) opportunities in irrigation development:*** In collaboration with the PPP unit at the National Treasury, NIA will implement well-thought-out public private partnership mechanism for irrigation development by unlocking constraints related to agricultural financing by the private sector mainly occasioned by agricultural risks including unpredictability of rainfall. The Strategy focuses on the irrigation sub-sector, its core functions and key activities and suggests those to be supported through deepened PPPs. Deliberate efforts will be made to ensure greater private sector participation with the GoK largely playing regulatory and enabler roles. This engagement will be a joint effort driven by the PPPs framework and is expected to yield strong and accountable commitments by GoK and private sector to work for a common goal of employment creation, income generation and poverty reduction for Kenyans.
- ***Aligning irrigation projects for green climate financing (GCF):*** Green finance represents a positive shift in the global economy's transition to sustainability through the financing of public and private green investments and public policies that support green initiatives. Water and Irrigation is one of the five (5) priority areas under the national adaptation plan likely to mitigate against the impacts of climate change; which provides an opportunity for NIA to tap into the GCF. It also falls within the eight (8) priority investment areas for GCF among them health, water and food security and livelihoods of people and communities. To increase its chances of accessing the GCF, NIA will implement the following Actions: Conduct informal and formal meetings with the GCF Unit; develop GCF finance ready projects; understand and follow the laid down GCF application process; and enhance internal capacity for GCF proposal development and project management.
- ***Implementing co-financing/cost-sharing and cost recovery approaches in irrigation development:*** NIA foresees a scenario where irrigation beneficiaries (mainly smallholder farmers) will meet part of the costs relating to development of irrigation infrastructure. This approach is key towards creating project ownership and sustainability. Depending on the arrangement, farmers' contributions may take various forms, e.g., contribution in cash, provision of unskilled casual labour and provision of land for drains and access roads. In its current operations in the public schemes, NIA recovers part of its operational costs by charging farmers O&M costs. A similar but more strengthened approach foresees that capital expenditure costs are recoverable. Depending on the model adopted, full or partial cost recovery approaches are implementable.
- ***Provision of irrigation services:*** The new Irrigation Act 2019 mandates NIA to provide technical advisory services on commercial basis. By definition, irrigation services may include design, installations, replacements, repairs, and maintenance. This would imply that NIA will charge (at market costs) for services rendered. Already the re-organized NIA includes a fully-fledged Department of Operations and Irrigation Management Services. This department serves as the technical arm responsible for both operation and management of installed irrigation and water storage infrastructure from assumption, commissioning to optimal utilization. The department will also provide irrigation management services including but not limited to operations, maintenance, technical and advisory services. Key services that can be commercialized include: O&M services (non-subsidized), provision of irrigation water at a cost, Farm service agreements, Operation, Management and Maintenance (OMM) contracts, offering training and capacity building, and design support.
- ***Seeking and strengthening technical collaborations and partnerships:*** Technical partnerships may indirectly save on costs that would have otherwise been required by an organization to execute its mandate. Key foreseen areas of collaboration are in irrigation research and capacity building. Some of these include seconded staff from organizations and government departments, Collaborative research projects, and Collaborative capacity building projects among others.

For effective implementation of the RMS, two key other strategies are proposed. These are:

- **Improving strategic communication and donor visibility:** Through its revamped corporate communication department, NIA seeks to improve its image and highlight its achievements to its partners especially farmers (beneficiaries), GoK (as a financier), other current financiers and possible financiers. In so doing, NIA seeks to improve its ratings and thus opportunities for increased financing. This is achievable through development of an effective communication strategy, improved and diversified communication channels, and tapping into NIA “friends” as goodwill ambassadors. Ultimately, improved rating will build confidence in the Government and other development partners to have NIA as the vehicle of choice to realize the irrigation goals and deliver on the food security mandate.
- **Overall institutional internal capacity enhancement:** Governance and institutional capacity development is one of the five key pillars of NIA as outlined in its Strategic Plan. Human capacity partly influences the performance of an organization. Currently, NIA has an establishment of 273 staff but requires up to 578 staff. Out of the 273 staff members, only 106 are permanent while 167 are on contracts. NIA is largely understaffed and ill equipped as almost all departments rely on interns, casual staff, contractors (consultants) and secondment of staff from its parent ministry. To improve its overall staffing capacity NIA will: Seek corporate re-classification of the organization, Establish and or strengthen regional offices to enhance outreach, strengthen the planning and management functions and strengthening the RMS unit through additional staff and training.

This RMS also establishes the institutional implementation framework where under the leadership of the CEO. The Deputy General Manager in the Research, Planning and Strategy Department (DGM-RP&S) and the Resource Mobilization Officer will be responsible for implementing the RMS. A multi-sectoral, multi-dimensional approach with cohesive implementation arrangement of various stakeholders (roles and responsibilities are elaborated in Chapter 4) will be used. An estimated Kshs. 60 Million is budgeted for the RMS implementation in the next 5 years.

1 INTRODUCTION

1.1. Overview of Agriculture Sector in Kenya

1.1.1. Background

Agriculture remains the single most important sector of the Kenyan economy, contributing approximately 33% of the national GDP, and employing 75% of the national labour force (Economic Survey of Kenya, 2020). Over 80% of the Kenyan population live in the rural areas and derive their livelihoods, directly or indirectly from agriculture. Agriculture contributes 60% of export earnings, 45% of annual government revenue and produces almost all the raw materials for agro-industries. Agriculture provides livelihoods to millions of the population including pastoralists, the landless, and subsistence farmers. Growth in the agricultural sector will expectedly have a greater impact on a larger section of the population than any other sector.

Despite agriculture's importance and enormous potential, Kenya has experienced food shortages arising from declining farm productivity owing to low fertility levels, high input costs and unreliable weather in the face of a rising population. Agricultural productivity has gradually stagnated. Only about 20% of Kenyan land is suitable for farming and even in such regions, maximum yields remain unachievable, owing to over-reliance on rain-fed agriculture, changing climate among other challenges. Climatic change has aggravated the food security situation with rainfall projected to decrease, yet only a small fraction (1.8%), of the crop land is currently under irrigation (Ministry of State for Planning and Vision 2030: Public expenditure review, 2010).

Future growth and development of the agricultural sector will rely on: (a) Intensification of production (through increased use of improved inputs, diversification from low to high value crops, and commercialization of smallholder agriculture); (b) increased value addition through stronger linkages with other sectors; and (c) embracing irrigation by developing the more than 83% of arable land classified as ASALs. This implies that irrigation will play a key role towards avoiding overreliance on rainfed agriculture; increasing agricultural production; and consequently, improved food security, incomes and livelihoods.

1.1.2. Key Policy Issues and Guidelines

Agricultural policy in Kenya revolves around several main goals. These include increasing agricultural productivity and incomes for smallholder farmers, emphasis on irrigation to reduce over-reliance on rain-fed agriculture, encouraging diversification into non-traditional agricultural commodities, and value addition to reduce vulnerability. Others include enhancing food security and a reduction in the number of those suffering from hunger and hence the achievement of SDGs; encouraging private-sector-led development of the sector; and ensuring environmental sustainability.

Policies that affect the performance of the agricultural sector either directly or indirectly have important implications for the economy. Agriculture policies consist of government decisions that influence the level and stability of input and output prices, public investments affecting agricultural production, costs and revenues and allocation of resources. Notably, improved agricultural production; seen as one of the overall objectives for poverty reduction in the country.

1.2. Overview of the Irrigation Sector in Kenya

1.2.1. Irrigation Potential

Only about 17% of the country's land is high and medium potential agricultural land where crop and dairy production takes place. The rest (approximately 83%) is arid and semi-arid land (ASALs) are not suitable for rain-fed agriculture and predominantly experience drought that has greatly affected production. This means that increasing agricultural production will have to come from intensification of land use in the high and medium potential lands. The high reliance on rain-fed agriculture; which is vulnerable to weather variability leads to fluctuations in production and incomes, especially for rural areas. There is low utilization of irrigation potential with only less than 7% of the cropped land under irrigation.

For the last two decades, agricultural production has not kept pace with the increasing population. To address this challenge, the Government of Kenya (GoK) has developed ways to improve and stabilize agricultural production to cater to the food and livelihood needs of its increasing population. The biggest potential for increasing agricultural production lies in the development of the ASALs, especially through the development of irrigation and water-harvesting technologies and development of irrigation schemes.

Kenya's irrigation potential is estimated at 1.913 Million acres (765,575 ha) as per the National Water Master Plan (2030) without water storage and can go up to 3 million acres (1.2 Million ha). The Water Resources Group (2016) was more optimistic, estimating that irrigated smallholder schemes have the potential to grow tenfold in size, from 42,000 ha to 419,000 ha in the case of drip irrigation and from 14,000 ha to 140,000 ha for sprinkler irrigation. With further infra-structural investments, the irrigated area could grow tenfold to 1.3 million ha (*ibid.*). FAO (2015a) confirms Kenya's great potential for expanding smallholder irrigation.

The highest potential of 1,341,900 ha assumes additional storage and improvement in irrigation efficiency and includes between 250,000 ha and 600,000 ha of floodplains that is irrigable if equipped. The medium potential of 539,500 ha, of which 75% is located in Tana and Lake Victoria Catchments, does not always consider soil suitability.

Table 1-1: Irrigation Potential in Kenya

Water Basin Catchment areas	Irrigation Potential HIGH (WRA) (ha)	Irrigation Potential MEDIUM (NEMA) (ha)	Irrigation Potential high (MWD) (Ha)
Lake Victoria	327,219	200,000	180,000
Rift Valley	84,200	64,000	52,500
Athi River	295,956	40,000	-
Tana River	566,995	205,500	111,100
Ewaso Ng'iro North	151,730	30,000	9,460
Total (Ha)	1,341,900	539,500	352,060
Total (acres)	3,314,493	1,332,565	869,588

Source: NIA Strategic Plan 2019-2023

Out of this total potential, only 504,880 acres has been developed accounting for 16% coverage while out of the country's total arable land, only 5.8% is equipped with irrigation infrastructure. Irrigation initiatives particularly the Economic Stimulus Programme (ESP) and National Expanded Programme have seen the area increase from 354,831 acres in 2010 (NWMP, 2030) to 504,880 acres currently.

1.2.2. Contribution of Irrigation to the National Economy

Irrigation and rain-fed agriculture are complementary and not mutually exclusive. Irrigation can assist in agricultural diversification, enhancing food self-sufficiency, increasing rural incomes, generating foreign exchange and providing employment opportunities when and where water is a constraint. The major contributions of irrigation to the national economy are food security, employment creation, settlements and foreign exchange.

The Government of Kenya in the MTP III and Vision 2030 has defined agriculture as a key economic sector in sustaining Kenya's transition to a middle-income country and has emphasized the importance of value addition, commercialization, building resilience to climate change, and job creation. Irrigation benefits result from a combination of an additional crop during the dry season, the ability to deal with dry spells, and earlier production in the wet season, thus ensuring produce hits the market when prices are higher and there is surplus produce to spur agro-processing.

1.2.3. Challenges in Irrigation Development

Overall, the historical stability of Kenya's rain-fed agriculture limited the momentum by Government to invest in irrigated agricultural development with little attention accorded to technological and human capacity development in irrigation. Low investments in planning, development, operation and maintenance by both the public and private sectors characterize the irrigation sub-sector. This in conjunction with limited access to agricultural finance by farmers and high initial capital investment requirements for development of irrigation infrastructure coupled with low Returns on Investment (ROI), has made irrigation infrastructure a low priority in comparison to other sectors like energy and roads sector. Without well thought out investments in irrigation by public and private entities, the country has inadequate invests in water storage and irrigation development.

The other major challenge to irrigation development in Kenya is the underperformance of irrigation schemes, especially some public irrigation schemes. Poor infrastructure for water supply, poor scheme maintenance, poor collection of O&M fees, political interference, overreliance on NIA, understaffing, lack of technical capacity of IWUAs, and lack of sustainable markets have all contributed to the poor performance of public schemes.

In the recent past, gradual impacts of climate change and population pressure on land use have been significant and are beginning to have a remarkable negative impact on agricultural productivity. Irrigated agriculture and contract farming would attract agricultural insurance and encourage financial institutions to pay more attention to the sector. There is a great constraint to its financing by the private sector in general and commercial financial institutions in particular. This is due to risks occasioned by unpredictability of weather, more especially rainfall. Financial institutions find it difficult to lend to farmers because of the many risks involved.

2 NATIONAL IRRIGATION AUTHORITY DRIVE TO EXPLOIT THE IRRIGATION POTENTIAL

2.1. Irrigation Sector Reforms

Irrigation is one of the priority areas for reducing poverty and accelerating economic growth. This is well anchored in Vision 2030, Medium Term Plan (MTP III) 2018-2022, Big Four Agenda 2018-2022, Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029, Water Master Plan 2030, and Irrigation Act 2019 among other agriculture and water-based policies and planning frameworks. These planning documents recognize irrigation not only as an enabler but also as a key driver of rapid and inclusive economic agricultural growth and development. These documents emphasize that irrigation development and management should serve human needs such as food, nutrition, and income. For instance, ASTGS addresses sustainable agricultural and irrigation transformation for the delivery of food and nutrition security in Kenya with the overall aim of making Kenya free from extreme poverty, hunger, and malnutrition.

2.1.1. Irrigation Legal Framework

This Irrigation Act (of 1966) was reviewed and replaced with the Irrigation Act 2019 on August 2, 2019 and became operational on August 16, 2019, establishing the National Irrigation Authority. The objective of the Act is to provide for the development, management and regulation of irrigation, to support sustainable food security and socio-economic development in Kenya, and for connected purposes. This was after the Irrigation Act 2019 gazetted via Kenya Gazette Supplement No. 136 (Acts No. 14) of August 2, 2019. As an Authority, it has an expanded and well-streamlined mandate. The Irrigation Act, 2019 intends to support sustainable food production by clearly outlining the roles of national and county Governments in facilitating irrigation activities in Kenya. The sector however, faces challenges related to productivity, land use management, linkage to markets and lack of value addition to farm produce. Solutions to these challenges requires a holistic approach that considers prioritized investments in irrigation development, capacity building of the stakeholders, and organizational development of stakeholder entities, market development and product diversification among others.

Additionally, the Irrigation Act of 2019 now conforms to the 2010 Constitution. Before assenting the Bill, there was no clarity on what role the National and County Governments were playing in irrigation. Under the 2019 Irrigation Act, the roles of the National and County Governments been clearly spelt with County governments expected to establish the County Irrigation Development Units (CIDUs) to ensure they map areas suitable for irrigation. They are also expected to help in planning irrigation development, decide what irrigation system will be built at a particular location and the crops that will be grown.

The expanded mandate of NIA as envisaged in the Irrigation Act 2019 implies that the Authority has a new corporate identity since it shall have the responsibility of undertaking management as well as the coordination role of all activities within the irrigation value chain as stated in its functions, powers, duties and responsibilities. The new corporate identity will invariably require a relook and reorientation of the corporate strategic direction of the organization.

The Ministry has further developed regulations (Irrigation Regulations, 2020) to help effect the Irrigation Act 2019. The irrigation regulations operationalize the Act and provides principles, guidelines and standards for promoting irrigation development. This is while considering the National Irrigation Master Plan, investment plan, and respective strategic plans for utilization of irrigation water; promoting water harvesting and storage, and recycled wastewater for irrigation. Other considerations include streamlining organization of the irrigation sub-sector, professionalization of all irrigation services including feasibility studies design, construction and operation, compliance with all relevant statutory requirements; compliance to quality standards; effective monitoring and evaluation of irrigation schemes; construction and operation by NIA; and participatory and sustainable irrigation development.

In addition, the policy guidelines initiated in the sector bringing on board various water management and user associations under the MoWSI, are expected to improve water use efficiency to enable farmers put more land under irrigation. Collaborations are foreseen where research institutions and other irrigation promoting agencies need to explore and introduce to the farmers yield-improving technologies in relation to improved seed, cultivation, harvesting and post-harvest handling equipment. The water user and management associations need sufficient innovativeness to tap the water resource from seasonal runoffs by way of storage and appropriate exploitation of the aquifer.

Other key policy reforms and strategies within the irrigation sector include the following:

2.1.2. Water Management and Agricultural Policies

Past irrigation, development strategies and approaches are contained in several policy papers on agriculture, food security and water development. These include the Sessional Paper No.4 of 1981 on National Food Policy, Sessional Paper No. 1 on Economic Management for Renewed Growth, Sessional Paper No.2 of 1994 on National Food Policy, the Economic Recovery Strategy (ERS) (2003 - 2007), Strategy for Revitalizing Agriculture (SRA) 2004-2014, the Water Act (2002) and Vision 2030. Irrigation and drainage in all these documents are key to the intensification of agriculture through increasing production and productivity of land currently opened for farming and utilization of the ASALs. Although opportunities existed for the implementation of the envisaged policy changes, little efforts are seen in terms of initiatives to actualize the strategies as laid out

Kenya did not have a national irrigation policy and strategy in place, and for this reason, the 1966 Irrigation Act (CAP 347) and other separate pieces of legislature that created the NIB were still in force. This allowed uncoordinated development in the irrigation sector for a long time. For instance, the Ministry of Agriculture (MoA) remained responsible for production activities under irrigation whereas the Ministry of Water, Sanitation and Irrigation (MoWSI) had its own irrigation activities through the autonomous NIB and water management and control through a number of water user associations which actually have little to do with the real users. The then Ministry of Regional Development, on the other hand, did most of the dam construction and desilting for irrigations in various parts of the country with little collaboration with the enterprise development agencies. This led to lack of good enterprise selection prioritization, production standards, organization of producers and focus on external factors including environmental conservation aspects.

2.1.3. Strategy to Revitalize Agriculture (SRA) 2004-2014)

The Strategy for Revitalising Agriculture (SRA 2004-2014) complemented the Economic Recovery Strategy for Wealth and Employment Creation (ERS) 2003-2007. The SRA emphasises public-private sector partnerships to facilitate competition, enhance markets, raise efficiency in the usage of resources and improve private profitability. It recognises only two roles for Government: (a) to provide a limited range of goods and services; and (b) to carry out a reduced range of regulatory functions that cannot be enforced by private self-regulation and industry code of conduct.

Objectives of the institutional reform agenda set out in the SRA included to: increase productivity to lower per unit costs of production; improve the extension service system; improve the link between research, extension and the farmer; improve access to financial services; encourage growth of agribusiness; reduce taxation of agriculture; increase market orientation; and improve the regulatory framework.

Unlike the other policy framework documents before it that were participatory, the SRA embodied no stakeholder consultations and faced the challenge of developing stakeholder ownership. In spite of this, the SRA had the advantage of a well-defined medium- to long-term framework for policy formulation and implementation in the agricultural sector.

During the period of the SRA implementation, the agricultural sector recovered from a growth rate of 3% in 2002 to 5.4% in 2006 (GOK 2007). However, the infamous Post Election Violence (PEV) reduced the sectors growth rate to -1.6% due to its effects on the farming community in the early 2008. This was compounded by the droughts of 2008 and 2009.

2.1.4. The Agriculture Sector Development Strategy (ASDS) 2009-2020

The ASDS took over from the SRA and aligned the sector initiatives to Vision 2030 while recognizing the achievements of the SRA. It was also to provide a guide for public and private sectors' efforts in overcoming the outstanding challenges facing the agricultural sector in Kenya. The strategy contextualizes the global commitment and national policies and in comprehensively taking up the primary goal of the Comprehensive Africa Agriculture Development Programme (CAADP) of eliminating hunger, reducing poverty and food insecurity besides opening the way for export expansion. Besides ensuring food and nutritional security for all Kenyans, the strategy aimed at generating higher incomes as well as employment, especially in the rural areas. It's expected to position the agricultural sector as a key driver in achieving the 10% annual economic growth rate envisaged under the economic pillar of Vision 2030.

Under the ASDS, agricultural sector ministries were to ensure that farmers, producers, processors and marketers of agricultural produce employed contemporary methods and technologies. This required that all agricultural enterprises be highly productive, commercial in nature and competitive at all levels. The strategy also underscored the need to develop and prudently manage the factors of production such as land, water, inputs, and financial resources so that the cost of production was within international standards.



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2.1.5. The Draft Irrigation Policy, 2015

The draft policy's key objectives included: expansion of land under irrigation and drainage through increasing available water capacity from 5.3m³ to 60m³ per capita; mobilize resources for investments in the irrigation subsector; seeking partnerships with private sector; creation of an enabling environment for stakeholder participation; promotion of multi-sectoral approach for enhanced innovations; research and technology adoption and capacity building; and development of the stakeholders.

The draft policy vested irrigation, drainage and water activities with the Ministry responsible for water affairs in the country. The challenge is that there were about 17 Government ministries with some direct or indirect relationship and/or impact on irrigation, drainage and water storage. It anticipated that the reforms that saw the irrigation sub-sector transferred to the MoWSI would institute an important institutional change to influence growing responsibility in water resource development for expanded irrigation activities and coordination of investment activities in the subsector.

2.1.6. The Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029

The Government of Kenya formulated ASTGS with a view to transform Kenya's agricultural sector and make it a regional powerhouse. The strategy is anchored on the belief that, food security requires a vibrant, commercial and modern agricultural sector that sustainably supports Kenya's economic development and commitments to the Big Four agenda, the Malabo Commitments to the CAADP and the United Nations SDGs. The significance of the agriculture sector to the country's socio-economic development has been emphasized through Kenya Vision 2030, and the Medium-Term Plan III and the Big Four Agenda for 2017-2022; which emphasizes the importance of 100% food security for all Kenyans.

The three anchors to drive the 10-year ASTGS are; increase small-scale farmer, pastoralist and fisher-folk incomes; increase agricultural output and value add; as well as increase household food resilience. To drive the ASTGS, the GoK has identified the relevant enablers including: strengthening research and innovation; digital and data use cases for decision making and performance management; actively monitor and rapidly respond to food system risks that include NRM, disease and pests, and global price shocks.

Historically, key policy concerns revolve around the main goals of increasing productivity and income growth, especially for smallholders; enhanced food security and equity, emphasis on irrigation to introduce stability in agricultural output, commercialization and intensification of production especially among small-scale farmers; encouraging private-sector-led development of the sector; appropriate and participatory policy formulation and environmental sustainability.

Kenya has made progress in modernizing agriculture, but has not yet reached the full potential. To achieve the agricultural potential, Kenya must do agriculture in a different way, from how it develops policy and prioritization at the national level, to how it allocates resources in farming households. Not only will it adopt new ideas under the mandate but also bold steps must be bold in achieving them. Given the critical role that irrigation is expected to play, its development and management must be prioritized.

As Kenya seeks to rapid transformation of this critical sector through policy initiatives, regulations irrigation development must be at the center to reduce over-reliance on rain-fed agriculture in the face of limited high potential agricultural land. This could be the only way of achieving agricultural potential for food and nutrition security, improve our farmer and local community incomes, lower the cost of food, and increase employment (particularly for women and youth). The National Irrigation Authority should leverage on the policy transformation and take lead in coordinating irrigation initiatives in the country to reduce on wastage of resources, increase synergy and avoid duplication of efforts.

2.2. National Irrigation Authority (NIA) Strategy and Mandate

2.2.1. The NIA Strategic Direction

Following the enactment of the Irrigation Act 2019 NIA developed the first cycle Strategic Plan (2019-2023). The strategic outcomes include increased irrigated agriculture production and productivity for local and export use; improved national and household incomes, food and nutritional security; and improved irrigation service delivery. Others include community resilience for adverse weather conditions; increased employment and income creating opportunities; enhanced land and water productivity through sustainable land tenure arrangements, catchment management and water harvesting and; reduced risk of disruptive variations in food supply.

Irrigation is strategically anchored under the Vision 2030, the Third Medium Term Plan (MTP III) 2018-2022, and the Big Four Agenda 2018-2022. This is further cascaded in the Authority's Strategic Plan 2019-2023. The aim of the NIA Strategic Plan

is to contribute to the improvement in food security through increased food production and productivity as well as stability in year-to-year production, on an economically, socially, and environmentally sustainable basis. The Strategic Plan has been prepared in recognition and realization that the Authority needs to be more relevant, competitive, and sustainable in the provision of sustainable irrigation development and management. Following the NIA Strategic Plan, this RMS is prepared in line with Kenya's international commitments as well as the Kenya Vision 2030, MTPIII 2018-2022, the Big Four Agenda, and other government development goals and policies.

2.2.2. Mission and Vision

The Vision and Mission of NIA are:

Vision *"Water to every irrigable acre".*

Mission *"Provide and coordinate sustainable development and management of irrigation services in Kenya".*

2.2.3. Objectives

The objective of NIA is to provide for the development and management of irrigation, to support sustainable food security and socioeconomic development in Kenya, and for connected purposes.

2.2.4. Core Values

Commitment- Integrity- Professionalism

2.2.5. National Irrigation Authority (NIA) Mandate

Pursuant to Part III, Section 7(1) of the Irrigation Act 2019 establishes the National Irrigation Authority (NIA). The mandates of NIA are to:

- a) Develop and improve irrigation infrastructure for national or public schemes;
- b) Provide irrigation support services to private medium and smallholder schemes, in consultation and cooperation with County governments and other stakeholders;
- c) Provide technical advisory services to irrigation schemes in design, construction supervision, administration, operation and maintenance under appropriate modalities-including agency contracts;
- d) In consultation with County governments and other stakeholders, (i) facilitate formation and strengthening of Irrigation Water Users' Associations (IWUAs) at scheme level for operation, maintenance and management, (ii) facilitate formation and strengthening of scheme management and dispute resolution committees at scheme level for management of the schemes and resolution of disputes relating to scheme management; (iii) promote the marketing, safe storage and processing of crops, animal and fish products grown or produced on national and other irrigation schemes and to liaise in this regard with other responsible state agencies and organizations; (iv) carry out periodic researches to determine and make recommendation on fair prices for crops, animals and fish products grown or produced on national and other irrigation schemes;
- e) In consultation with the cabinet secretary and county governments, co-ordinate and plan settlement on national or public irrigation schemes, as well as schemes which traverse or straddle more than one county and determine the number of settlers thereof and;
- f) Facilitate linkages between and among the national government and county governments, private sector, civil society organizations, communities and other stakeholders for the provision of support services to IWUAs.

2.2.6. The Key Pillars and Strategic Objectives

In line with its new Strategic Plan (2019-2023), NIA's new approach to sustainable irrigation development focuses on new agriculture practices; water efficient irrigation methods; economic incentives for adopting irrigation; improved on-farm irrigation technologies; and capacity building of stakeholder groups, especially farmers. Furthermore, increased attention will focus on the active participation of stakeholders, and a new institutional structure in association with physical, managerial, environmental, technical, financial and operational component to address sustainability of irrigated agriculture.

The overall goal of the strategy is to contribute food security and sustainable national economic growth and development through enhanced irrigation development and management service. The long-term outcomes are increased irrigated agriculture production and productivity for local and export use using irrigation technologies that take into account climate change; improved national and household incomes, food and nutritional security; improved irrigation service delivery; increased employment opportunities; and enhanced land and water productivity through sustainable land tenure arrangements, catchment management and water harvesting.

NIA focuses on managing the five key pillars as follows:

- a) **Strategic Pillar 1: Sustainable Irrigation Development (SID)** anticipated increasing area under irrigation by 518,000 acres in the plan period;
- b) **Strategic Pillar II – Sustainable Irrigation Management (SIM)** planned to increase Irrigation water storage capacity by 400million m3 over the plan period;
- c) **Strategic Pillar III – Sustainable Irrigation water harvesting and storage (SIWHS)** expected to achieve at least 200% utilization (2 seasons) in each NIA developed irrigation scheme; and form and strengthen at least one farmers' organization in every NIA developed schemes.
- d) **Strategic Pillar IV – Irrigation Oriented Research (IOR)** to be able to identify irrigation development advancement technologies; and develop and adopt sustainable irrigation management Frameworks; and
- e) **Strategic Pillar V – Governance and Institutional Capacity Development (GCD)** to develop and implement a transition plan to the irrigation act; and develop and implement seven (7) operationalization frameworks to improve efficiency.

2.3. The NIA Legacy

2.3.1. Previous Experiences and Performance

Irrigation has been a relatively neglected sector in Kenya for many years as the country has relied mostly on rain-fed agriculture. Some of the challenges that have hindered expansion of public irrigation schemes are low investment in public irrigation schemes, inefficient water use variability and low productivity of public irrigation schemes. However, irrigation is now picking up, and the sector has seen tremendous changes in the last 10 years. This is partly due to the increased government financing to irrigation and improved farmers' reception and attention to irrigation due to encouraging efforts by NIA. This is in addition to changing weather patterns that increase risks in rain-fed agriculture. It is also becoming increasingly clear that with increased population and pressure on arable land, the typical smallholder farmer under dryland conditions cannot even provide for his own family's subsistence without irrigation. This calls for more investments and better approaches and technologies to irrigation.

On its part, NIA has been a leader in conducting studies, designing, developing and managing irrigation infrastructure nationally. The experience acquired after over 50 years in the irrigation and drainage sector has made NIA acquire adequate competences in irrigation projects development and management.

Irrigation has only recently received attention from government that has seen the launch of two outstanding irrigation development programmes. The first one was the economic stimulus package (2009-2011) while the second was the national expanded irrigation programmes.

The Economic Stimulus Programme (ESP)

The development goals of the ESP were to: (a) increase availability and accessibility of maize/rice crop to Kenyan households that will ensure health and welfare of Kenyans by improving the quality and increasing the quantity of maize consumed within the country; and (b) increase and stabilize the strategic grain reserve. The programme involved rehabilitation of the irrigation infrastructure, production of maize and rice and carrying out of a databased study to identify potential areas for the subsequent projects. As a result, the food production component was the most successful under ESP, directly and indirectly benefiting an estimated 1.2 million households. Key achievements of the ESP included:

- a) A total area of 38,890 acres **put under crop production** with maize (7,140 acres) and rice (31,750 acres)
- b) Producing more than 80,000 MT of maize (17,282 MT) and rice (63,500 MT).
- c) Increasing the value of production by more than Kshs. 3.5 Billion from maize (Kshs. 296 Million) and rice (Kshs. 3.2 Billion).

The Expanded National Irrigation Program (ENIP)

With the success of the ESP, the GoK initiated the Expanded National Irrigation Programme (ENIP/NEP) and in the Financial Year 2011-2012, an allocation of Kshs 8.5 Billion provided for initiating the comprehensive countrywide NEP.

The programme involves provision of irrigation infrastructure for abstraction, conveyance, distribution and application of irrigation water for the various irrigation projects. The project targeted interventions in 610 projects across the country to bring an additional 531,574 acres under irrigation. For sustainability and reliability of irrigation water, the sector also embarked on providing water storage for irrigation. In arid areas, development initiatives focused on provision of water storage reservoirs and installation of greenhouses. The water pans provide water for domestic, crop production and animal consumption while greenhouses supplemented local community's nutritional needs and provided a source of income for women and youth groups.

Since 2011, the summary achievements under ENIP is as follows:

- a) Rehabilitation, expansion and modernization of public irrigation schemes that has seen the irrigation area increase from 23,055 acres to 48,842 acres.
- b) Construction of over 159 irrigation projects across all the 47 Counties with a cumulative total of 127,969 acres directly benefiting over 88,000 farmers at a cost of Kshs 22.42 billion translating to Kshs 175,000 per acre.
- c) Completed feasibility studies and detailed designs for over 30 projects covering 430,000 acres.
- d) Completed feasibility studies and detailed designs for nine (9) water storage reservoirs with a cumulative total of 1.3billion m³.
- e) Construction of 47 water pans with a combined volume of 2,600,000m³ in arid areas for domestic, animal consumption and irrigation in greenhouses.

2.3.2. Current Projects and Programs (On-going Projects)

Currently, NIA is implementing the following programs and projects:

- a) Construction of 15million cubic meters Thiba dam and irrigation infrastructure under Mwea irrigation development project that will see the area developed for crop production increase to 35,000 acres and support production of a second crop (ratoon crop);
- b) Construction of intake and gravity canal for Bura Irrigation Rehabilitation project financed by BADEA, Kuwait Fund and OFID and a sizeable component of GoK counterpart funding to convert the system from pump-fed to gravity-fed irrigation system and increase area from 6,000 acres to 15,000 acres;
- c) Expanded National Irrigation Programme (ENIP) targeting an additional 531,574 acres under irrigation through construction of 610 projects countrywide;
- d) Implementation of the 10,000 acres model farm for Galana Kulalu Food Security Project;
- e) Construction of the 1,500 acres Rwabura Irrigation Development Project financed by the Government of Kingdom of Spain;
- f) Construction of 10,000 acres Lower Nzoia Irrigation Project under the Kenya Water Security Project financed by the World Bank and KFW;
- g) Construction of the 19,290 acres Lower Kuja Irrigation Scheme in phases where 4,000 acres has already been achieved;
- h) Construction of the 1,500 acres Lower Sabor Irrigation Development Project under gravity-fed sprinkler irrigation system;
- i) Construction of the 30,000 acres Turkana Irrigation Development Programme in Naipa, through ground water in Lotikipi aquifer where 2,000 acres has already been achieved;
- j) Community based smallholder irrigation to develop 270 schemes with a total area of 30,000 acres spread across the country; and,
- k) Continued operation of public irrigation schemes to optimize production.

In addition to the above, the sector intends to invest in water storage facilities that will increase reliability of irrigation water and build resilience for communities against effects of climate change. Some of the key water harvesting programmes includes:

- a) Thiba dam as mentioned earlier;
- b) Construction of water harvesting infrastructure for households with the aim of providing 125,000 households with localized reservoirs to supplement their irrigation needs;
- c) Rehabilitation of existing small dams and water pans to increase their capacity to meet irrigation demand for neighbouring communities. The programme aims at rehabilitating over 4,000 water pans with a capacity of 400 million cubic meters across the country;
- d) Implementation of four large dams for irrigation namely: Thuchi; New Gogo; Kwa Kiviyai; and Rwabura and Thiririka.

Because of the above interventions, the area under irrigation has increased from 354,831 acres in 2010 (NWMP, 2030) to 504,880 acres.

2.4. Opportunities for Irrigation Development

Irrigation potential estimated at 1.913 million acres with water storage considered; but with only 551,000 acres currently developed it requires concerted efforts to develop the unexploited potential. In this regard, NIA has completed feasibility studies and detailed designs for approximately 40 projects, which will provide the next frontier in irrigation development and will be the focus of the future. These include both irrigation and water harvesting and storage projects. Some of the earmarked projects whose feasibility studies and detailed investigations and designs are completed include:

a) Irrigation projects

i. Large scale irrigation projects

The Irrigation Act, 2019 defines large-scale irrigation scheme as schemes whose area is above 3,000 acres. These projects conceptualized around the available water resources to meet crop water requirements for projects covering a large area. Feasibility studies and detailed designs for 22 large projects are complete and are ready for implementation. These projects will add a total combined area of 398,731 acres estimated to cost Kshs 83.7billion. This will have a huge impact in the food and nutrition pillar of the Big Four Agenda through projected annual production of 85,470 MT of rice paddy, 765,250 MT of maize, 52,100 MT of cotton and Kshs 75 Billion worth of horticultural crops including Irish potatoes. The total projected revenues amount to Kshs 114 Billion and creation of 1.9 million jobs both directly and indirectly. Some identified projects are trans-boundary including Daa in Mandera County using Daa river that is shared between Kenya, Ethiopia, and Somali; and Umba valley project whose water source is Umba river shared between Kenya and Tanzania. Others are the expansion of Challa irrigation project with Lake Challa, shared between Kenya and Tanzania; and Kocholia-Amagoro-Amoni using River Sio that is shared between Kenya and Uganda. Such projects will require signing of memoranda of understanding (MOUs) with the neighbouring countries.

ii. Small holder or community managed irrigation projects

These are community owned and managed schemes initiated by the government, development partners, or even farmers. In line with the Irrigation Act, the National Government through NIA is responsible for smallholder irrigation schemes with acreage ranging from 100 to 3,000 acres. Their key advantages include short planning and implementation cycle. The structures are small making them easy to build, operate and maintain. They are implementable in regions with limited water resources and can use different water sources including major rivers, streams, and boreholes.

NIA has earmarked 610 projects with a total area of 531,574 acres. Currently, NIA has been implementing this cluster of projects under ENIP. Already, NIA identified 228 projects that are at different levels of implementation. On implementation, 174,690 acres will be irrigated at a cost of Kshs 42.9 Billion to benefit 219,539 farmers. With proper capacity building and incentives for farmers, implementation of these projects has the potential of increasing maize production by 234MT and horticultural crops valued at Kshs 43.7 Billion.



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iii. Expansion of Public Irrigation Schemes

Proposed expansion and modernization of public irrigation schemes will see the irrigation area increase by an additional 12,500 acres from the current 48,842 acres. The areas targeted for expansion will utilize the same water resources abstracted and conveyed by the existing infrastructure. The estimated cost for this expansion is Kshs 1.025 Billion.

b) Water harvesting for irrigation projects

Kenya is as a water-scarce country implying that less water is available for irrigation. Water scarcity has been attributed to climate change and competing human activities. Since irrigation is critical in more during the dry spells, water storage reservoirs proposed to increase reliability and stabilize irrigation water. NIA has identified four categories of water storage structures including:

i. Large dams for large irrigation projects

NIA and other water sector agencies have initiated studies for a number of dams for various irrigation projects and more studies are proposed. The water sector in the medium term proposes to implement 7 water harvesting and storage projects; construction of new water pans and small dams in areas that do not have perennial rivers; and rehabilitation of existing water pans and small dams. This will increase water storage capacity by 1.14 billion cubic meters and irrigate an additional 408,400 acres at an estimated cost of Kshs 135 Billion. Currently, NIA is executing construction of Thiba dam for Mwea irrigation scheme and leverage on the construction of Thwake dam to irrigate its downstream areas.

ii. Household water harvesting for Irrigation

The objective of the household water project is to provide localized water access through construction of water harvesting and storage reservoirs at the household level especially in ASALs. This is through harnessing surface water (runoff) resulting from rainfall as long as landowners freely cede land for excavation of the reservoir. The target is to construct household water pans with a cumulative volume of 125 million cubic meters in the first phase to irrigate 125,000 acres at an estimated cost of Kshs 16.25 Billion. As at January 2020, 10,404 household water pans with a volume of 14,363,460m³ that can irrigate 14,000 acres were complete.

iii. Rehabilitation and construction of community small dams and water pans

It is estimated that there are over 6,000 water pans and small dams spread across the country both on public and private land that have been constructed over the years, spanning from the colonial times. However, over time, the reservoirs have silted or breached thus reducing their capacity to hold water. The objective of this project therefore is to rehabilitate the reservoirs thus increase their ability for continued use. The key advantage is that land is already available eliminating the complication of land acquisition and compensation. The target is to intervene in 3,945 pans with a combined volume of 400 million m³ to irrigate 394,500 acres at an estimated cost of Kshs 59.2 Billion.

iv. North-Eastern frontier project

The arid Counties of Marsabit, Wajir, Mandera, Garissa, Samburu and Isiolo fall in the Ewaso Ng'iro North Catchment Area (ENNCA) classified as an arid land with an average mean annual rainfall of 510 mm. These counties experience frequent episodes of drought and rely mostly on food relief. By hydrology, the catchment has numerous ephemeral streams that hold storm water in direct response to precipitation with water flowing only during and shortly after large precipitation events. There is an opportunity for livestock watering and agricultural production through provision of water harvesting and storage structures. Construction of small dams across the *lagas* accompanied by water pans and provision of efficient irrigation system (preferably drip) in greenhouses and solar powered pumps is envisaged to transform the aforementioned counties towards food sufficiency.

The first phase implementation of a cascade of water pans with a combined volume of 10 Million m³ to be constructed along the ephemeral streams to increase area under irrigation to 10,000 acres in each of the six (6) Counties. The investment will increase irrigated area by 60,000 acres through 600 water pans with an accumulated volume of 60 million cubic meters. Upon development, the counties in the catchment will have the potential to provide water for 108,000 sheep and goats, produce 1,135,000 MT of maize of maize and horticultural produce with an approximate value of Kshs. 15 Billion annually. This will build food self-sufficiency, resilience against climate change, and contribute to economic empowerment.

c) Groundwater for irrigation

This relatively new area for the water sector has shown potential for enhancing food security for communities with limited surface water resources. A good example is Turkana County that has immense groundwater resources, which presents a unique opportunity for cotton production at large scale under irrigation. The Lotikipi aquifer alone has renewable water (slightly saline) amounting to 3.224BCM/year and can irrigate approximately 170,000 ha of cotton particularly because it also does well in saline conditions. NIA proposes to carryout groundwater mapping mainly for areas with limited surface water resources followed by investment in boreholes combined with efficient irrigation technologies such as drip irrigation and centre pivots. The water sector proposes to develop 23,000 acres in the ASAL counties using solar driven boreholes and complete efficient irrigation systems at an estimated cost of Kshs 7 Billion as a pilot.

In summary, the proposed interventions detailed above will cover all regions within the nation by implementing **5,715 projects** and increase the area under irrigation by **1,519,913 acres**. This will also provide **water storage capacity of 1.5 billion m³** at a **cost of Kshs 330 Billion** and generate **annual revenue of Kshs 335 Billion**. It will also create direct and indirect **employment for over 5 Million people**. Fundraising for development of the above projects is the key objective of this RMS as expounded in the Strategic Plan summarized under the section that follows. The timeline for implementing the over **5,700 projects is 10 years**.

2.5. Estimated Financial Needs to Implement the RMS and Long-Term Plans

Together with the Medium-Term Expenditure Framework (MTEF) budgets for expenditure, NIA's Strategic Plan funding requirements estimated to be KES **250.49 billion** over the 5 years period (2019-2023). The cost estimates will increase from Ksh.9.5 billion to Kshs. 82.43 billion in the fiscal years 2019/2020 and 2023/2024. The costs of irrigation investments are enormous and require concerted efforts of all the stakeholders to achieve the set targets. The Kenya Government will play a critical role in ensuring mobilization of these resources.

Table 2-1: Estimated 5-Year Funding for NIA Strategic Plan (KES)

Financial Year	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	TOTAL
Approximate Budget -Billion KES	9.47	20.96	64.43	73.2	82.43	250.49

Source: NIA Strategic Plan 2019/2023

This expenditure emanates from five identified pillars as follows:

- Pillar 1- Sustainable irrigation development (Kshs. 129.866B)
- Pillar 2-Sustainable irrigation water harvesting and storage (Kshs. 111.870B)
- Pillar 3-Sustainable irrigation management (Kshs. 2.024B)
- Pillar 4- Irrigation oriented research (Kshs.1.355B)
- Pillar 5- Governance and institutional capacity development (Kshs. 3.63 B)

The highest proportion of resources is required for Pillar 1 and Pillar 2, both of which comprise infrastructural development of projects. By subtracting the resources secured between 2019 and 2021, this resource mobilization strategy targets to raise **Kshs. 241 billion**.

By expanding the horizon of development past the current strategic plan period to 10 years, the white paper for the irrigation sector development estimates that investments for the various categories will require up to Kshs. 330.4 Billion.

3 THE RESOURCE MOBILIZATION STRATEGY-COMPONENTS AND STRATEGIES

3.1. Rationale for the RMS

3.1.1. Problem Statement

Irrigation development comprises provision of irrigation infrastructure, institutional arrangements and capacity building both technical and financial, management of infrastructure, and engagement of the private sector participation in terms of investment and service delivery. While NIA has implemented a number of programmes and projects in the past, key challenges persist. Some of these include overreliance on government funding, lack of documented resource mobilization strategies, insufficient skills and capacity to mobilize resources, and limited donor interaction opportunities.

Currently, the exchequer is the main source of funding for NIA. The funding process entails development, presentation and negotiation of projects with National Treasury for annual budgetary support. The amount of funding varies on annual basis as influenced by various factors including economic performance, priority weighting on irrigation and development, lobbying processes among others. NIA also gets some funding from donors. Further, NIA realizes some revenue from its operations mainly through collection of O&M from farmers, sale of produce as well as revenue from conference facilities and staff houses. However, the internally raised funds (A-in-A) vary from scheme to scheme. The internal revenue generation is not a reliable source of funding and a lot needs improvement to achieve higher targets.

The planned development will require at least Kshs 30 Billion annually, against a budgetary allocation of between Kshs. 10 to 13 Billion. This implies huge deficits of approximately Kshs.17 to 20 billion. Invariably, the competing needs for Government Ministries, Departments and Agencies (MDAs) has made it difficult to get higher allocations from the GoK. The current COVID-19 pandemic has not only compelled re-allocation of government funding but also aggravated the inability of government to collect sufficient resources, leading to cutting down of its expenditure. In the last few years, the amount of funding raised from donors has ranged from Kshs. 3 to 3.5 billion annually. Most of these funding is however ending in the year 2022.

3.1.2. Justification and Rationale for Preparation of the RMS

Mobilizing the Kshs 330 billion for development requires diverse strategies. Given the dwindling resources from GoK, the RMS will assist NIA to deepen current sources and identify new sources of finances. Given that NIA's Strategic Plan has outlined its strategic areas of intervention and the required finances, the RMS will be a point of reference for financing the planned interventions. The RMS provides the strategic objectives, strategies, activities, roles allocation and targets, which are incorporated within the NIA annual work plans and performance contracts as efforts geared towards harnessing additional resources.

3.1.3. RMS Outcomes

This RMS will serve as the overarching instrument for mobilizing financing of irrigation development for NIA. It will create an enabling framework for a clearer system with streamlined services and processes for promotion of irrigation, improving technical information sharing, and simplifying decision-making. The major outcomes of this strategy include:

- increased yields;
- Enhanced agronomic potential by permitting the growth of crops that would not have been grown under a rain-fed environment;
- Increased opportunities for farmers to indulge in year-long agricultural production;
- Enhanced income because farmers can select crops that are not produced by a large number of other farmers;
- Increased opportunities to access reliable markets because farmers are assured of consistency in production;
- Enhanced returns to production inputs (labour, capital and land);
- Enhanced food security;
- Increased opportunities for employment; and
- Enhanced natural resource management through the adoption of agro- forestry.

3.2. Assumptions for the RMS

The basis of this RMS are contextual assumptions presented in NIA's Strategic Plan. These assumptions continue to inform the strategic direction over the resource mobilization period, in particular those that relate to the four (4) identified pillars of the organization. In formulating this RMS, the following additional assumptions are made:

- a) **Strategic plan implementation:** That the Authority will be successful in implementing projects envisaged in the Strategic Plan 2019-2023, aiming thereby to increase efficiency and maximize service delivery. The funding requirements for the Strategic Plan 2019-2023 do not address all the needs of the Authority. However, the plan establishes the strategic priorities in addressing the needs of the Authority. Also, that the RMS priorities will continue to be shaped by national policies and strategic priorities.
- b) **Current funding sources will continue to be of key importance:** In particular, support of the Exchequer is important thus, that GoK through the National Treasury will continue to provide their financial and other support to the Authority. In addition, support of the current Development Partners is paramount. In addition, the Authority will continue to enjoy the support of its former and current financiers, while forging and strengthening new partnerships in order to carry out its mandate unimpeded.
- c) **Conducive operating environment:** The Authority's capacity to implement projects and its core programmes will not be severely hampered by inadequate staff and Government bureaucratic processes. In addition, the RMS assumes that support from NIA stakeholders will be a key driver of the RMS activities. Although working under the line Ministry, the Authority will achieve financial autonomy while the Government will create an enabling environment that supports donor relationship management. In addition, that there will be political and financial stability, both nationally and regionally.
- d) **Effective and efficient resource mobilization that provides requisite funding:** A diversified donor base that increasingly contributes to resource needs while broadening the base and the depth of resource mobilization partners will remain at the centre of the RMS.

3.3. RMS Goals and Objectives

3.3.1. Overall Goal of the Resource Mobilization Strategy

The overall goal of the NIA Resource Mobilisation Strategy is to ensure sustainable resource availability to meet NIA's mandate i.e. "To provide and coordinate Sustainable Development and Management of Irrigation Services in Kenya". This will be done by ensuring that there is a clear, systematic, predictable and well-co-ordinated approach to soliciting, acquiring, and utilisation, management, reporting, monitoring and evaluating assistance and for expanding the resource base.

3.3.2. Specific Objectives of the Resource Mobilization Strategy

Specific objectives of the resource mobilization strategy are to:

- a) Provide guidance on resource mobilization;
- b) Align resource mobilization for NIA to its strategic planning and development strategies;
- c) Provide a framework for engagement with potential funders;
- d) Build internal capacity for resource mobilization and monitoring.

3.4. Resource Mobilization Strategies and Actions

3.4.1. Strategy 1: Leveraging and Deepening Financing from Current Development Partners

Currently, NIA receives an estimated Kshs. 3 billion annually from various multilateral and bilateral donors. NIA has entered into formal agreements with the African Development Bank (AfDB), Japan International Cooperation Agency (JICA), World Bank Group, Government of Spain, and Government of Israel. Multilateral and bilateral institutions provide support for irrigation in Kenya in terms of infrastructure development, capacity building and technical assistance. The main donors for

the NIA implemented projects include: The World Bank; JICA; The Arab Bank for Economic Development in Africa (BADEA); Organization of the Petroleum Exporting Countries (OPEC) and Kuwait Fund for Arab Economic Development (KFAED), among others. Among the bilateral institutions are the Kingdom of Spain and the Government of Israel who are involved in supporting irrigation systems, especially in the production of maize and other crops. These are strategic partners with whom NIA can develop long-term relationship and partnership for the development of the irrigation sector in Kenya.

Notably, current funders are easy to on-board given the existence of mutual interests, prior working modalities, and the performance of due diligence. NIA will continue to mobilize financial resources from its long-term development partners through existing collaborative frameworks as well as explore new funding opportunities from the current donors. Key Actions towards this end will include the following:

- **Action 1: Strengthen the role of the Board of Management in strategic management and resource mobilization.** The powers for a State Corporation (SC) to borrow domestically or elsewhere is exercised only with the consent of the Minister (parent ministry) and subject to such limitations and conditions as may be imposed by the National Treasury. The basis for approval is financial viability of the project, the ability to repay the loan, whether the project for which funds are been borrowed is in line with the MTP, Vision 2030 and the corporation's core mandate, among others. At institutional level, financial oversight of Board of Directors or Board of Management (BOM) involves planning, directing, monitoring and control of monetary resources. Therefore, the BOM has fiduciary responsibility to ensure financial resources entrusted in the organization are efficiently used to avoid wastage; use the resources at their disposal for the benefit of the entity and the Kenyan people at large; approve and oversee execution of budgets. Additionally, the guidelines provide that no SC should enter into financial commitments or initiate new projects unless funding is secured. Sources of funding by SCs that requires Board approval can be classified into: direct loan- SC using its balance sheet, on lent loan- GOK borrows and on lend to a SC; guaranteed loan-GOK guarantees the loan on behalf of SC; infrastructure bond and overdrafts. Section 15 (1) of the State Corporations Act provides that "A Board shall be responsible for the proper management of the affairs of a state corporation and shall be accountable for the moneys, the financial business and the management of a state corporation". Section 73 (2) of Public Financial Management Act (PFMA) requires Board of Directors to establish an Audit Committee. The Audit Committee shall provide assurance on reviewing the governance mechanisms of the entity and mechanisms for transparency and accountability with regard to the finances and assets of the entity and conduct risk-based, value-for-money and systems audits aimed at strengthening internal control mechanisms that could have an impact on achievement of the strategic objectives of the entity.
- **Action 2: Strengthen the resource mobilization (RM) department:** The RM unit at NIA is relatively new and understaffed. NIA will endeavour to equip the unit by increasing its staff and capacity building of staff from other departments to aid in the RM processes. The unit will undertake lobbying, fundraising and reporting as a full-time responsibility while assisting in budget preparation and overall organizational planning. Notably, NIA has a good number of experienced and competent management team and support staff members with sound knowledge and technical expertise of irrigation and water services sector, as well as the competitive landscape for growth and development.
- **Action 3: Map out relevant products from existing partners:** The Authority will establish a database of current funding partners and their funding cycles and products while matching potential partners with the strategic objectives of the plan and the prioritized projects.
- **Action 4: Development of project concepts specific to donor needs:** Based on financing preferences and objectives of the current donors, NIA will develop targeted (customized) concept notes for suitable projects.
- **Action 5: Informal discussions with current donors while developing concepts:** NIA will engage current donors to ensure coordinated joint development of concepts, proposals, and studies in order to increase the chances of the funded project. This should align with the guidelines provided by the National Treasury.
- **Action 6: Continuous reporting of progress:** NIA will seek to provide timely reports and engage in results reporting (quarterly reports and other progress reports) to its current financing partners. Development Partners (DPs) often appreciate openness and updates by the beneficiary organizations (borrowers). Regular and meaningful communication results in maintenance of lasting relationships with DPs. NIA will ensure regular updates of project implementation progress including updates on challenges encountered, changes in timelines, cost escalations, changes in project management staff or any other changes that occur while implementing the projects. This will promote openness and trust between the financing organizations and NIA. Progress reviews may also include site visits and presentations to the client. NIA will also create a simple system for feedback through automated mails, updates on website and/or social media accounts especially reporting impacts created by the DPs' funding to beneficiary communities and government priorities. These will include change stories (stories from the field), pictorials and short video clips.



National
Irrigation
Authority

- **Action 7: Aligning the Strategic Plan and other planning documents (where possible) with the donor's thematic areas:** NIA must (proactively, continuously, and creatively), align its priorities with those of funding agencies to the extent possible. This will involve communication and continuous engagement through meetings, round table forums, informal meetings; gathering and incorporating feedback from the donors through project site visits and field missions; and improving project reporting and M&E, thus providing evidence for value for money and cost benefit analysis in programming as well as sustainability.
- **Action 8: Prepare an external resources manual:** NIA will sensitize its staff on the utilization of the manual and ensure compliance. The Authority will also prepare and implement a plan to strengthen its capacity for the management and reporting on Official Development Assistance (ODA). The Authority will therefore continue to pursue efforts to improve mobilization, absorption and utilization of external resources in development programmes.

3.4.2. Strategy 2: Building Relationships and Diversifying the Donor Base through New Funding Streams

NIA believes that the foundation for a strong fundraising strategy is building relationships with its donors. By focusing on building relationships, NIA seeks to realize better donor retention over time; meaning a higher lifetime value for its donors and consequently a better return on investments (ROI) for NIA's efforts. NIA hopes that building lasting relationships with donors will snowball over time, leading to a more effective and complete fundraising strategy as below:



Figure 3-1: Results Chain for Enhanced Donor Relationship

To build stronger donor relationships, NIA will undertake the following:

- Decide if building a relationship even makes sense;
- Start donor engagement early in a relationship;
- Understand the donor's perspectives;
- Provide plenty of opportunities for engagement;
- Practice listening to donors; and
- Remain transparent as an organization.

By building relationships, the Authority will be able to access additional funding to address potential gaps in its finances. This will also imply possible reduction of the share of burden for existing financiers and partners (especially GoK). NIA will seek additional new core partners and increase the share of earmarked funding.

In addition to key institutional changes such as strengthening the role of the Board of Management and that of the resource mobilization unit, other relevant Actions for diversifying the donor base will include the following:

- **Action 1: Mapping of new donors:** Through this RMS, NIA has already identified prospective donors with financing interests in agriculture, irrigation and water sectors. The list includes major donors that previously financed NIA or other water sector efforts. NIA will continue to conduct a detailed donor profiling to understand the thematic areas of new and potential donors as well as their products, financing terms and partnership opportunities.
- **Action 2: Identify and align with the strategic interests of the specific donors:** Based on the needs, preferences, strategic interests and products of the specific donors.
- **Action 3: Develop a donor-specific solicitation campaign:** NIA will execute a specific solicitation campaign targeting each prospect. Approaches will include invitations to social events, setting up informal meet-and-greet occasions or sending out emails or even personal connections to staff at the organizations.

- **Action 4: Aggressive and continuous advocacy and networking.** This will be through meetings to gain popularity among the new and potential donors and sharing past results and reports.
- **Action 5: Showcasing achievements and sustainability of previous projects** (i.e. the continuation of project activities and sustenance of projects outcomes after the initial/primary financial expires): Most financiers are concerned about the sustainability of projects and often fund projects that have a well-defined sustainability plan in place. This includes financial sustainability (enduring steady flow and generating revenue for maintaining and continuing the organizations work); institutional sustainability (ensuring proper working of the organization and institutions that were developed as part of the project); and programmatic sustainability (continuing of the organizations projects and programme in the absence of donor support). Towards this end, NIA will undertake the following in project management:
 - o Develop a clear understanding of goals for the partnership;
 - o Understand partner motivations/optics and conduct due diligence;
 - o Involve stakeholders early and often;
 - o Develop a monitoring and evaluation plan;
 - o Ensure the partnership aligns with the institution's mission;
 - o Remain flexible;
 - o Plan for and adequately allocate resources; and
 - o Develop and implement an exit strategy.
- **Action 6: Join and advance the Authority's interests in the relevant development partners working groups (DPGs):** NIA is currently not a member of either the Water and Sanitation (WASH) sector or the agricultural sector development partners working groups (DPG). NIA will endeavour to join these donor-working groups to increase its visibility amongst the donor community. This gives NIA and the Ministry at large an opportunity to display their works and seek funding for planned projects. It is also a suitable forum to identify new and potential donors as well as to align to new realities and conditions set by the financiers.
- **Action 7: Strategic communication for donor visibility:** NIA will purpose to raise awareness among key stakeholders (especially financiers) on its mandate, activities and projects. More specifically, NIA will explore the possibility of developing project specific communication strategies implemented through appropriate media, including website(s), television, newspapers, magazines, and radio as well as stakeholders' forums. Key messages may include role of financiers, economic and social benefits to realizable from implementation of specific projects, relationship to Kenya's long-term development agenda, among others.
- **Action 8: Conformity with the legal and regulatory framework:** Funds sourced from external financiers should always operate within the legal and regulatory borrowing framework. This instils confidence and protects investors, creditors and rating agencies. In dealing with potential donors, NIA will adhere to government debt guidelines, strategies, systems and procedures that ensure that the government's funding and risk management activities in a transparent manner.
- **Action 9: Compliance with PFMA:** Section 12 (1d) of the Public Finance Management Act (2012) states that the National Treasury shall mobilize domestic and external resources for financing national and county government budgetary requirements. Project proposals based on which external funding sought must emanate from the implementing Ministry or Agency. Since the National Treasury does not initiate project proposals, NIA will process project proposals through its line Ministry and the Accounting Officer.

3.4.3. Strategy 3: Harnessing Public Private Partnerships (PPP) Opportunities in Irrigation Development

Public private partnerships (PPP) are a form of management in which the government teams up with the private sector to deliver public goods and services. The partnerships may take the form of shared responsibility, outsourced services, joint-venture agreements, leases, or even shared contributions as jointly agreed or as per the terms of the contract.

The Government through development of critical laws (Public Private Partnerships Policy 2011, the Public Private Partnerships Act, 2013, and the Public Private Partnerships Regulations, 2014) encourages public agencies to form partnerships with the private sector. This aimed at facilitating enhanced public service delivery and efficiency in the PPP process, through reducing the number of oversight approvals and proposing timelines on key project processes and stages.

The Government through the National Treasury has also established the PPP unit and the PPP committee charged with developing and distributing PPP operating guidelines and manuals for use by public entities in developing PPP projects. The regulations state that the PPP Committee shall be responsible for the approval of project concepts, feasibility studies, bid documents, and the negotiated contracts while the Cabinet shall be the final authority in the approval of PPP projects; but will delegate such responsibilities to the PPP Committee or the Contracting Authority. Ultimately, all concessions of natural resources ratified by Parliament as provided for in the Constitution of Kenya. From a public finance perspective, PPPs have the following advantages:

- a. Reducing government sovereign borrowings and associated risks;
- b. Driving the creation of local long-term funding market;
- c. Utilizing efficiencies of private sector in running public services;
- d. Expanding economy and stimulate job creation;
- e. Increasing quality of public services;
- f. Reducing the burden on taxpayers having to pay for a project;
- g. Enhancing risk sharing between government and the private sector; and
- h. Significantly reducing corruption and wastage since both partners are accountable for the project.

In irrigation, a number of PPP models are available including: Operate & Maintain; Build Operate & Transfer (BOT); Design Build Operate (DBO); Concession; Management; Management & Lease among others. The scope could cover either or both irrigation infrastructure development and agriculture. The most commonly used contractual forms of PPP in the irrigation sector include the following:

- **Operation, Management and Maintenance (OMM) contract:** The private sector is engaged to undertake operation, management and maintenance of infrastructure services for defined recipients. The private sector provides a service for which it receives a fee (either from the government or from users). Where rehabilitation or construction works are required, they can also be part of the contract. Assets are publicly financed, and this is an appropriate form of contract where there is limited scope to raise private capital.
- **Farm service agreement:** The private sector can also partner with smallholder farmers and communities for the provision of farm-level services. Services might be on-farm, such as planting, harvesting and water application; or off-farm, such as storing, processing and marketing (e.g. out-grower services). Such farm services, by improving the agricultural performance of water users, are likely to improve the viability of irrigation infrastructure. The level of private finance required depends on the services provided. Farm services can be integral or separate from infrastructure OMM
- **Infrastructure concession:** The private sector is engaged to raise commercial finance for infrastructure development and then construct, operate, manage and maintain the infrastructure. Investment and financing costs recoverable through fees (either from the government or from users). End user risk is significant in irrigation projects where often the users are only partially defined at the beginning of the project (it depends on how many farmers take up the water from the system). It might be possible to share end user risk between the public and private parties, for instance with a guarantee on minimum revenue. The investment may be undertaken in whole or in part by the private sector where for instance there is grant funding available to bear some of the investment cost.
- **Hub farm agreement:** The private sector can be engaged to undertake commercial agricultural production through a land concession or lease. This might be on unoccupied land owned by the government or third parties, or community land held under collective title (or especially consolidated) and leased in return for a fee of share in commercial operations. The hub farm has purely commercial objectives and requires a certain scale in order to offer commercial opportunities. Private capital is required for on-farm investments, while irrigation fees can reflect any or all infrastructure related costs (e.g., OMM, investment and finance).

Through its Strategic Plan (2019-2023), NIA aims to develop 10,000 acres (4000ha) of irrigated land using the PPP approach at a cost is Kshs. 2.5 Billion. The opportunities for NIA with PPP model projects in Kenya include: visibility through identification of projects that will be viable and bankable as there are immediate social and economic impacts; clear partnerships in the linkage between other sectors in the economy, job creation, income generation, food security and economic growth among others benefits. NIA will use the following Actions to harness funding through the PPP model:

- **Action 1: Conduct informal and formal meetings with the PPP Unit and the PPP committee** to understand the conditionality for PPP projects, the guidelines and the processes thereof.

- **Action 2: Develop PPP finance ready projects.** In compliance with the PPP guidelines, NIA will review its current feasibility studies and identify projects that fit the conditions for PPP before developing the concept notes and the project proposals. The PPP guidelines provide those proposals will be limited to projects that demonstrate genuine innovation and/or use of proprietary technology, economic viability and satisfy the principles of public interest. It also provides procedures to be undertaken for Privately Initiated Investment Proposals and the process of stakeholders' engagement including employees and their trade unions, the public, the people who will use the assets and services provided, local communities, sectoral interest groups, amongst others. In irrigation, appropriate PPP projects are thought to be those that have limited land ownership complications, with huge parcels of land suitable for commercial ventures (especially when land is publicly-owned); and where key infrastructure is provided by the government; and where projects are able to generate sufficient revenues. PPP agreements can also take the form of leases on land, management and operational contracts, and maintenance contracts, among others. In developing the proposals, the following will be considered:
 - **Is the proposal technically viable?** Technical viability will assess technical design and specification of proposed structures, adequacy of soil and hydrological surveys, topographical estimates of irrigable area etc.
 - **Is the proposal environmentally viable?** Does the project design (forthcoming amendments) comply with national and local environmental and planning standards? i.e., prediction, evaluation and mitigation of environmental impacts and address issues specific to an irrigation project (for example, over-exploitation of groundwater and accessibility of surface water).
 - **Is the proposal socially viable?** Project must present clear social benefits for the farmers, community, and the society. Identify social risks and propose a risk management.
 - **Is the proposal economically beneficial to the users?** There should be a clear economic rationale for the project where the needs bring larger benefit to the farmers. i.e., the net income effect of an irrigation scheme for farmers, and the economic benefits associated with improved livelihoods and nutrition.
 - **Is the proposal legally possible?** Are there any legal barriers to the project? e.g., legal constraints on the Government's ability to enter into a PPP contract.
 - **Is there sufficient institutional capacity and capability to undertake the project?** e.g. Does the granting authority need to complement the existing institutions with external technical, legal and financial advisers?
 - **Is the project bankable?** Project's suitability for commercial financing that typically includes factors relating to charges levied by irrigation service providers on irrigation users and whether the project risk allocation sufficiently protects the irrigation service providers.
 - **Is the project sustainable?** The long-term abilities of all parties to the contract (i.e., the public authority which has granted the PPP, the private firm(s) that provide the services, and the beneficiaries of the services) to benefit in a sustained way from the project. For the private sector in particular this implies being able to operate and maintain the scheme profitability.
- **Action 3: Understanding the interests of the private vs the public partner.** The private sector approach is centred on the financial aspects of the project, focusing on the returns generated, particularly in the early years of a project, for debt repayment obligations, and on ensuring that the project life is long enough to reach profitability. In contrast, the public sector requirements would include economic criteria in its assessments, with a focus on benefits rather than revenues.
- **Action 4: Understand and follow the laid down PPP process:** NIA understands that the effectiveness of a given PPP is based on the preliminary stages of its development. These include an appropriate legal and regulatory framework, suitability assessment, selection of the PPP type, structure and design, agreement of the oversight body, funding, competitiveness of the procurement process, and the actual implementation. NIA together with the line Ministry will conceptualize the PPP projects in compliance with PPP regulations and once approved, open it to competitive bidding to private sector partners. This takes care of the value for money, spread of benefits, and risk allocation.
- **Action 5: Develop the PPP disclosure portal.** The PPP Disclosure Portal is an online instrument that makes all non-confidential information relating to PPP contracts available to the public. It is a tool to provide stakeholders with information to help increase confidence that interactions with the private sector are fair, legitimate, and above board. It discourages corruption and ensures that the public can voice any concerns about a given project.
- **Action 6: Enhance internal capacity for PPP project management:** The PPP guidelines require that a PPP implementing agency shall enhance its internal capacities. While NIA currently lacks sufficient capacities on PPP, the regulations allow agencies to hire transaction advisors in cases where capacity is lacking to manage the commercial processes involved. This is an option that NIA intends to utilize while strengthening and building capacity for identification, formulation, appraisal, and analysis, supervision/management, monitoring and reporting on the PPP projects.

- **Action 7: Improve the institution's governance:** Making credible, high-quality PPP bids requires time, effort, and money. To justify these high transaction costs, firms considering entering a PPP need assurance of timely review of bids using a transparent and standardized process as transactions are subject to approval from various government departments. Standardization is particularly important to international investors, who need comfort and confidence in how they will be treated (contract terms related to termination, arbitration and dispute resolution, and repatriation of profits are particularly important in this context). NIA will collaborate with the other government entities to ensure that bids submitted by the private sector are evaluated in a timely, transparent, justified and standardized manner. This will help in reducing delays and risks related to judicial proceedings, bad press, political interference, unforeseen investigations, or any kind of discretionary decisions.
- **Action 8: Develop an Institutional policy on PPP.** The NIA Strategic Plan 2019-2023, already identifies the development of an institutional PPP policy as a means of strengthening its capacity to engage the private sector.

3.4.4. Strategy 4: Aligning Irrigation Projects for Green Climate Financing (GCF)

Since the GCF adopted its initial Strategic Plan in 2016, its operating context has evolved significantly. Green finance represents a positive shift in the global economy's transition to sustainability through the financing of public and private green investments and public policies that support green initiatives. Two main tasks of green finance are to internalize environmental externalities and to reduce risk perceptions in order to encourage investments that provide environmental benefits.

Developing countries, Kenya included, are the primary partners of the GCF. The GCF 2020-2023 programming depends, at its core, on fully implementing and strengthening country ownership. It provides a clear approach for countries to access the Fund by empowering them to identify, design and implement projects and programmes that support paradigm shift in the areas that will have the greatest climate impact. This supports results that build ambition toward long-term climate goals as provided within national climate strategies (NDCs, ACs, NAPs) and the Paris Agreement. It also ensures that GCF programming capacity and pipeline development are guided by a country-driven prioritization of the most impactful investments both nationally and regionally as guided by high mitigation potential and adaptation needs; focus on the most vulnerable people and communities.

The GCF funds both adaptation and mitigation activities on a 50:50 basis. The GCF focuses on eight (8) strategic areas of funding among them food security and water. Key financing instruments include Grants (with or without repayment contingency); Concessional loans with low interest rates; Equity; and guarantees. Nevertheless, mobilizing capital for green investments is limited by several microeconomic challenges such as problems in internalizing environmental externalities, information asymmetry, inadequate analytical capacity and a lack of clarity in the definition of "green". In addition, financial and environmental policy approaches have often not been coordinated.

Water and Irrigation is as one of the five (5) priority areas under the national adaptation plan likely to mitigate the impacts of climate change; which provides an opportunity for NIA to tap into the GCF. It also falls within the eight (8) priority investment areas for GCF among them health, water and food security and livelihoods of people and communities. To increase its chances of accessing the GCF, NIA will implement the following Actions:

- **Action 1: Conduct informal and formal meetings with the GCF Unit at the National Treasury** to understand the conditionality for GCF projects, the guidelines and the processes thereof. Previous engagement with the GCF unit has identified that discussing the project ideas before the development of concepts and proposals helps to develop an even better concept and increases the chances of financing, given that many competing proposals are shared with the GCF unit.
- **Action 2: Develop GCF finance ready projects.** In compliance with the GCF guidelines, NIA will review its current feasibility studies and identify projects that fit the conditions for GCF and discuss the ideas with the GCF unit before developing the concept notes and the detailed proposals. Upon agreement with the National Treasury on the general idea, NIA will go ahead and share concepts with GCF unit (in the format provided), before advancing to the full proposal stage. NIA understands that projects should have a strong climate rationale; show beneficiaries impacts; bankability; value for money and sustainability. It must also fall within the categories identified i.e. micro projects (Kshs.1B or below); small (Kshs. 1-1.5B); medium (Kshs.5-25B); or large (Kshs.25 B and above). NIA understands that GCF Concept Notes (CN) should comprise the following:
 - o A brief climate context and baseline
 - o A project description, including project components;
 - o The project size, suggested financial instruments and other financial information;
 - o Brief information on how the concept note meets the GCF investment criteria;



- o Information on engagement with the National Designated Authorities (NDAs) and relevant stakeholders
- o Optional annexes to be included at the CN stage may include (a Map indicating the location of the project/ programme; Diagram of the theory of change; Economic and financial model with key assumptions; Pre-feasibility study, if applicable; Evaluation report of previous project(s), if any; and Results of E&S risk screening)
- o The following elements are excluded at the CN stage: Project logical framework; detailed budget; and project appraisal report.
- **Action 3: Understand and follow the laid down GCF application process:** NIA understands that following the laid down process is critical to access GCF financing. The general process for applying for GCF includes the following:
 - o Implementing Agencies identify projects or programmes to be financed;
 - o The Implementing Agencies forwards proposal to the National Treasury;
 - o The National Treasury receives, reviews, scrutinizes, and analyses the concept note/proposal to ensure it meets the Government objectives and is in line with Vision 2030;
 - o The National Treasury forwards the proposal to Green Climate financing;
 - o Development Partners review and analyse the proposal and respond.
 - o Upon favourable response from the GCF, appraisal missions are organized between the National Treasury, Implementing State Agencies and the DPs to visit proposed project sites and consultations with be stakeholders to gather more information to improve on the project document by the implementing agencies
- **Action 4: Enhance internal capacity for GCF proposal development and project management:** Through the process of developing this RMS, NIA started strengthening the capacity of its staff to conceptualize and develop project concepts by undertaking training of its staff on the same. NIA will look into ways of conducting similar trainings periodically. The GCF guidelines require that an implementing agency demonstrates its internal capacities to implement projects.

3.4.5. Strategy 5: Implementing Co-financing/cost-sharing and Cost Recovery approaches in Irrigation Development

Co- financing/cost-sharing

Co-financing dictates that project beneficiaries are responsible for part of the project costs while the funding agencies supplies finances for the remainder (often-higher portion) of the funding gaps. In a different definition, it may also imply a type of financing in which the different lenders agree to fund under the same documentation and security packages, but may have different interest rates, repayment profiles, and terms. In the context of this RMS, the first definition is applied.

NIA foresees a condition where irrigation beneficiaries (mainly smallholder farmers) will meet part of the costs relating to development of irrigation infrastructure. This approach is key towards creating project ownership and sustainability.

Depending on the arrangement, farmers' contributions may take various forms, e.g., contribution in cash, provision of unskilled casual labour and provision of land for drains and access roads. In Kenya, the Smallholder Irrigation Program Mount Kenya Region (SIPMK) has been implementing a project based on the co-financing model since 2006.

While NIA has not been implementing cost sharing/co-financed projects, it foresees that involving farmers will increase ownership and thus better management and successes of the projects. Additionally, farmers can fetch high returns from schemes that are commercially oriented. The following Actions are foreseen:

- **Action 1: Develop guidelines for cost-sharing/co-financing projects.** NIA will develop guidelines for engaging farmers, financiers, County governments and other stakeholders with regard to the co-financing model.
- **Action 2: Identifying possible project locations and communities.** Co-financing (similar to cost recovery) projects work better in areas where irrigation is commercially oriented. In Kenya, these areas include the Mt. Kenya region, parts of Rift Valley and parts of Western. The level (per cent of financing) of co-financing may vary from one region to another. Beneficiaries may be those that approach NIA on their own through unsolicited community proposals or those forming part of larger irrigation projects.
- **Action 3: Mobilize farmers to form appropriate legal entities:** Depending on the form of organization of the target beneficiaries, NIA will focus on mobilizing farmers to form legally binding entities including but not limited to cooperative societies and IWUAs.

- **Action 4: Build capacities of established legal entities:** Lack of administrative, financial, and accounting skills in farmer organizations, including cooperatives and IWUAs, is a considerable obstacle to better service management and a considerable source of sustainability risk. NIA will pay greater attention towards strengthening the skills of partnering farmer organizations for long-term sustainability. IWUAs and cooperatives strengthened to among others, manage the irrigation infrastructure, enter into contracts and improve their financial management.

Cost-recovery

Most farmers in Kenya have traditionally supported their public water and irrigation providers through budgetary grants (from taxes) and low-cost loans (supported via transfers), not expecting or requiring full cost recovery. The result has usually been a poor quality of service, accessed mainly by higher-income households with government support nearly always less than anticipated leading to weaknesses in operations and maintenance. In addition to the subsequent poor quality of service, the lack of sufficient revenue always impacts upon long-term capital maintenance such that the next generation of consumers will have to fund an even greater proportion of rehabilitation costs. Moreover, absence of a credible cost recovery system means that the service provider cannot deliver needed maintenance, leading to deterioration of services.

The concept of cost recovery generally implies recovering the costs of any given expense. There are two key steps in cost recovery:

- **Full cost recovery-** Applies where all costs are recoverable. These may include both infrastructural development costs (CAPEX), O&M costs as well as any other services fees. It implies all costs whether financial or economic.
- **Partial cost recovery-** Applies where only part of the costs are recoverable. The design could incorporate recovery of either CAPEX or OPEX costs or part of both or only part of either cost components. It could also be recovery of either financial or economic costs.

In its current operations in the public schemes, NIA recovers part⁶ of its operational costs by charging farmers O&M costs. An essential part of any cost recovery is in its implementation and it will require the following Actions:

- **Action 1: Develop guidelines for cost recovery projects.** NIA will develop guidelines for identifying and engaging farmers, financiers, County governments and other stakeholders with regard to the co-financing model.
- **Action 2: Identifying possible project locations and communities.** Cost recovery (similar to co-financing) projects work better in areas where irrigation is commercially oriented. In Kenya, these areas include the Mt. Kenya region, parts of Rift Valley and parts of Western Kenya. The level (percent of financing) of co-financing may vary from one region to another. Beneficiaries may be those that approach NIA on their own through unsolicited community proposals or those forming part of larger irrigation development projects.
- **Action 3: Mobilize farmers to form appropriate legal entities.** Depending on the form of organization of the target beneficiaries, NIA will focus on mobilize farmers to **form** appropriate legal entities including but not limited to cooperative societies and IWUAs.
- **Action 4: Identify and engage relevant intermediary bank.** This is because NIA's core mandate does not include onward lending and loan recovery.
- **Action 5: Design a pricing mechanism that covers the appropriate costs.** In irrigation, typical costs include feasibility, planning and design costs; construction and acquisition costs including construction supervision; replacements, rehabilitation and modernization costs; operation and maintenance costs; disposal costs etc. A key policy for cost recovery for an irrigation system based upon a sense of equity among the beneficiaries. The traditional approach to cost recovery considers only the financial costs of a project or programme, such as operations and management (O&M) costs, capital costs and possibly investments for future growth and rehabilitation (which includes accounting for depreciation of assets over time). The question is whether part or all of these costs recoverable from consumers, making tariff design and billing a crucial element in the recovery of financial costs. NIA will decide on the type of costs recovered on a case-by-case basis upon discussions with target beneficiaries.
- **Action 6: Assessment of the Partner's willingness to pay and ability to pay for services:** Setting the level/ percent of cost share/co-finance based on farmers' income levels and/or general demographic indicators. NIA will therefore look into options of how appropriate cost sharing proportions and flexible payments can be encouraged both for O&M costs and for capital costs.

⁶ O&M costs are currently heavily subsidized and do not meet the total operational costs (partial recovery). NIA does not charge for investment costs, construction or acquisition costs, rehabilitation and modernization costs, disposal costs etc.

- **Action 7: Promote flexible payment structures and service levels for consumers:** Because incomes from irrigation activities are seasonal, NIA will adopt appropriate payment structures that reflect the seasonality (cycles of income), and the level of incomes of the project beneficiaries.

3.4.6. Strategy 6: Engaging and Securing Increased Funding from the Government (i.e. Increasing GoK Budget Allocations)

NIA relies on the active and continued support of the GoK in the course of the 2021- 2026 RMS. While NIA's Strategic Plan also recognizes the risks posed by increasing the burden on the already strained public resources, it seeks to engage GoK on securing additional resources through improved capacity for budget formulation and implementation. The improved capacity will lead to better utilization and increased absorption of resources and credible budgets with better alignment between plans, appropriations and actual disbursements. The GoK has remained the single most importance source of funding for NIA. Over the last three years, GoK has provided NIA with between Kshs. 4.1 billion and Kshs. 6.4 billion annually (***NIA relies on the active and continued support of the GoK in the course of the 2021- 2026 RMS. While NIA's Strategic Plan also recognizes the risks posed by increasing the burden on the already strained public resources, it seeks to engage GoK on securing additional resources through improved capacity for budget formulation and implementation. The improved capacity will lead to better utilization and increased absorption of resources and credible budgets with better alignment between plans, appropriations and actual disbursements. The GoK has remained the single most importance source of funding for NIA. Over the last three years, GoK has provided NIA with between Kshs. 4.1 billion and Kshs. 6.4 billion annually (Table 31). NIA received the highest amount in the year 2018/2019, a momentum that if sustained would enable the Authority achieve its objective. More importantly, NIA will seek to increase the actual share of GoK funding to its total portfolio based on its importance to the economy by attracting more funds from a wide array of sources.***). NIA received the highest amount in the year 2018/2019, a momentum that if sustained would enable the Authority achieve its objective. More importantly, NIA will seek to increase the actual share of GoK funding to its total portfolio based on its importance to the economy by attracting more funds from a wide array of sources.

Table 3-1: Actual GOK Disbursements to NIA

	2019/2020	2018/2019	2017/2018
Development-GoK	6,146,180,663	5,770,665,379	3,811,821,113
Recurrent	260,300,000	950,137,272	308,000,000
Other grants	35,757,590	-	25,777,404
Total	6,442,238,253	6,720,802,651	4,145,598,517

Source: Environment Protection, Water and Natural Resources Sector Report for the MTEF Period, 2021/22-2023/24

Development budget allocations to NIA increased by **54.5%** from Kshs. 4.14 Billion in 2017/2018 to Kshs. 6.4 Billion in 2019/2020. In between the referenced period, there were marked changes, with the highest being Kshs. 6.72 Billion in total allocations in the fiscal year 2018/2019. However, the proportion of the budget allocated to the Environment Protection, Water and Natural Resources Sector from 2017/2019- 2019/2020 is relatively low ranging from 5% to 7% (***NIA relies on the active and continued support of the GoK in the course of the 2021- 2026 RMS. While NIA's Strategic Plan also recognizes the risks posed by increasing the burden on the already strained public resources, it seeks to engage GoK on securing additional resources through improved capacity for budget formulation and implementation. The improved capacity will lead to better utilization and increased absorption of resources and credible budgets with better alignment between plans, appropriations and actual disbursements. The GoK has remained the single most importance source of funding for NIA. Over the last three years, GoK has provided NIA with between Kshs. 4.1 billion and Kshs. 6.4 billion annually (Table 31). NIA received the highest amount in the year 2018/2019, a momentum that if sustained would enable the Authority achieve its objective. More importantly, NIA will seek to increase the actual share of GoK funding to its total portfolio based on its importance to the economy by attracting more funds from a wide array of sources.***). This is approximately 2% of the total Government budget.

Table 3-2: Approved Budget to the Environment Protection, Water and Natural Resources Sector

Description	2019/2020	2018/2019	2017/2018
Recurrent	25,519,000,000	25,194,000,000	22,581,000,000
GoK-Development	35,081,000,000	22,958,000,000	18,173,000,000
Loans	30,245,000,000	22,888,000,000	31,278,000,000

Description	2019/2020	2018/2019	2017/2018
Grants	4,138,000,000	2,534,000,000	3,282,000,000
Total Development	69,465,000,000	48,380,000,000	53,303,000,000
Total Development + Recurrent- Environment Protection, Water and Natural Resources Sector	94,984,000,000	73,574,000,000	75,884,000,000
Total Development + Recurrent- NIA	6,442,238,253	6,720,802,651	4,145,598,517
Proportion of Sector Funds Allocated to NIA	7%	9%	5%

Source: *Environment Protection, Water and Natural Resources Sector Report for the MTEF Period, 2021/22-2023/24*

Absorption capacity remained a key challenge averaging 60%-70% especially for donor-funded projects. The main reasons for reduced absorptions include delayed disbursements of donor funds, donor conditionalities, procurement, inadequate capacity and lack of records on funds expended directly by donors on behalf of government.

Recurrent expenditure has also registered mixed performances during the review period but grew by 22.9 % between 2015/2016 and 2019/2020. Absorption capacity has consistently been over 90% due to the ability of NIA to target planned activities in their annual work plans. The sub sector's share of total government budget has generally remained low over the review period.

From the above analysis, a key strategic objective of this strategy therefore, is to enhance mobilization of funding from public sources (i.e. increased budgetary allocation). In order to achieve this strategy, NIA intends to undertake the following actions:

- **Action 1: Strict adherence to budget calendar events:** The budget making process is a strictly timed process all year round. NIA targets to adhere to the calendar of events as scheduled by the Treasury Circulars, which is of paramount importance. NIA will also develop institutional understanding of the concept of Medium-Term Expenditure Framework (MTEF) and rationale and the benefits of adopting the three-year rolling budget (MTEF).
- **Action 2: Collaboration in budget making:** A key opportunity for attracting more resources includes executing a realistic budget process synergized with the strategic plan and aligned with the national development goals and policies. Internally, planning and budgeting duties must be collaboratively undertaken while involving employees from relevant departments such as technical, finance, operations, human resources and the entire executive leadership. The budget can benefit through input from all cost centres about what is important to them in the budget process. NIA plans to execute a collaborative communication process that addresses all pertinent issues relevant to departments and decision-makers in the organization, as well as to have a feedback system across the departments. This will minimize conflicts of interest or misunderstanding when making vital decisions about the budget.
- **Action 3: Identifying and developing high priority projects:** Identifying, prioritizing and developing projects with tangible and quantifiable benefits is key. This is achievable through engaging and aligning with Government development policies, communities' participation and other stakeholder's needs and priorities, and projects that must promote inclusive economic and social benefits. The prioritized projects will also be included in the Lead Ministry's master list and NIA's Strategic Plan. The following criteria shall underpin the process:
 - Prioritisation- focussing on the more critical projects that are most relevant and affordable within the available resources;
 - Appropriate sequencing of major projects or actions;
 - Simplicity and realism of the measures to be implemented and the need to focus on the basics in view of the limited capacity and the need to ensure affordability;
 - Ownership and sustainability, including increasing leadership by the Authority's Departments or units and their capacity to implement the projects; and,
 - Partnerships and participation increasing collaboration with development partners within a coordinated framework while assuring government leadership.
 - *Relevance* - how efficient the outcome of the project will be with respect to a given goal.
 - *Effectiveness*- is the extent to which the project was able to meet its objectives.
 - *Efficiency*- is the extent to which the project incurred the lowest possible expenditure to meet the objectives of the project.

In Kenya, the Smallholder Irrigation Program Mount Kenya Region (SIPMK) funded by KFW (German Development Bank) has been financing projects based on cost sharing. In its current and fourth phase (Phase IV), farmers pay up-to to 50% of the total investment costs. The model involves mobilizing farmers to form and register a cooperative society. Farmers' cost-share (co-finance) by catering for 50% of the project investment costs. As a show of their commitment, farmers elect office bearers who then open a bank account in the selected intermediary bank (Currently working with Equity Bank Ltd). Farmers then deposit an amount equivalent to 10% of the expected value financed by farmers. The balance of 90% of the costs met by farmers provided as a loan by an intermediary bank. Farmers will repay the loan after the construction period and when operations have started. Repayments are matched to the cropping seasons. In addition, the bank provides farmer and cooperative management trainings focusing on leadership and governance, financial management, bookkeeping and good agricultural practices (GAP). The SIPMK project provides overall management as well as coordination between farmers, the design consultants, contractors and the intermediary bank. The appointment of an intermediary bank facilitates the collection of future contributions by the farmers, helping the project secretariat to concentrate on its role.

Once the projects implementation is complete, the O&M functions are entirely the responsibility of the beneficiaries who are farmers.

- Cost - certainly be responsible for ensuring that the budget is not overspent and that income (if appropriate) increases according to plan.
- *Timeline* – Projects have a start and finish time. There is definite relationship between the budget and the deadline, given that certain activities must be completed within a particular period of the financial year.
- **Action 4: Improve the level of detail included in the feasibility studies and align to financiers needs:** Feasibility studies determine the viability of a project or business venture by identifying the factors that can lead to its success. These studies also shows the potential return on investment and any risks to the success of the Project. Most feasibility studies and detailed design studies are either incomplete or lack important information that is needed for decision making by financiers including GoK. Some of this information not included are the number and type of beneficiaries, the financial and economic benefits from the project, the cost of the project, the implementation plans and crosscutting issues such as environment and gender studies. Therefore, NIA through collaboration between planning and technical departments must streamline the outline and content of the feasibility study reports as well as design reports for all projects ensuring that the final products will contain all the information required while developing project concepts and proposals.
- **Action 5: Continuous informal and formal discussions with DPs, development and submission of project concept notes through The National Treasury:** The National Treasury continuously receives project concepts through the Accounting Officers (Principal Secretaries) from the line Ministries which oversight the Government entities. Alongside developing the RMS, NIA will continuously develop the initial project concept notes for already completed studies in the format provided by The National Treasury, forwarded by the line ministry. It is important for the Government and Development Partners have more technical round-table discussions to firm up project concepts to avoid back and exchange of letters. This will require capacity building for NIA key staff to upgrade their skills to enable them continuous development and submission of comprehensive project concept notes to the National Treasury (NT) for review and necessary action.
- **Action 6: Continuous monitoring and reporting of the key achievements for improved project management and implementation:** Reviewing and reporting on the implementation of the previous budgets while noting the key lessons learnt, best practices and the key challenges is important. Key activities will also include organized visits to the project sites to showcase progress to the Key stakeholder including ministry staff, sector participants, Treasury staff, Development Partners and the political class, as well as joint technical backstopping of projects with relevant stakeholders. NIA will seek to implement on-going and future projects with minimum delays and contractual challenges to enhance resource absorption and improve its image at the National Treasury. It will develop a monitoring and evaluation (M&E) framework to ensure proper setting of indicators, targets and reviewing results. This will require participation, building consensus, commitment and maintaining effective relationships with intended users for ownership purposes.
- **Action 7: Establishing efficient and coordinated procurement plans and work plans and better planning of financial plans (consistent MTEF expenditure plans) for on-going and other identified projects:** NIA will double its efforts to ensure accurate reporting of achievements, understanding and awareness of NIA activities, mandate, and contribution to national food security, resilience, social and economic development. This will provide a comprehensive view to the National Treasury on the expenditure outlook of NIA, allowing for enhanced future allocations.



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- **Action 8: Aggressive sector bidding and Lobbying through** the process of developing the RMS, NIA has interrogated the budget making process and identified the opportunities along the budget calendar. This will target all the relevant levels along the national budgeting process (i.e., Internally, within the Ministry of water, Sanitation and Irrigation, the Environmental Protection, Water and Natural Resources sector working groups, the National Treasury, National Parliament (budget sector committees), and the Cabinet, among others). Lobbying relevant parliamentary committees including sites visits will be a key part of this strategy. This is in addition to continuous technical meetings with relevant national treasury officials and Presidential Delivery Unit (PDU).
- **Action 9: Strategic planning, budget formulation and efficiency in budget execution:** NIA is cognizant of the need to improve the quality of planning across departments by integrating a results framework and properly costing planning documents (Vision 2030, MTP, sector plans, the Strategic Plan and County strategies). These are well within the medium-term fiscal framework, strengthening the link between these strategies, the MTEF and the budget. NIA also recognizes the need to strengthen efficiency in budget execution by introducing quarterly cash planning and cash flow practices in the Authority as provided in the Public Finance Management (PFM) regulations, implementing comprehensive cash management reforms, strengthening commitment control and reporting, and enhancing in-year budget monitoring and reporting.

3.4.7. Strategy 7: Growing Internal Sources

NIA realizes internal revenues or Appropriation in Aid (A-in-A) ranging from Kshs. 250 million to Kshs. 450 million annually. Internally generated funds have varied from a low of Kshs.218 million to a high of Kshs. 432 Million in the last 5 years. These revenues mainly emanate from its operations through collection of operation and maintenance (O&M) fees from farmers. Other sources are sale of farm produce (mainly Maize and rice), provision of staff housing, auctions and sales of non-strategic assets/obsolete equipment and provision of conference and guesthouse facilities.

Table 3-3: A -I- A Funding for NIA

	2019/2020	2018/2019	2017/2018	2016/2017	2015/2016
A-I-A	304,456,919	221,943,021	365,938,793	432,441,279	218,238,427

Source: NIA Financial Statements

Notably, the internal revenue generation is not optimal and is insufficient to meet NIAs operational expenses. Collection of O&M fees for example has remained a challenge owing to the public nature of NIA, unwillingness of farmers (IWUAs) to pay for O&M and political interference. In almost all the schemes, O&M fees are highly subsidized. On the other end, NIA face financial shortages resulting in poorly maintained infrastructure and equipment, thus higher maintenance and operating costs. Some schemes have very high operating costs, as they are pump-fed.

NIA intends to improve the performance of internally generated revenues through the following:

- **Action 1: Strengthened IWUAs for effective collection of O&M.** The Irrigation Act of 2019 provides that IWUAs will play a more important role in the management and maintenance of irrigation infrastructure, collection of O&M fees, produce marketing, and linkages, among others. To be able to undertake these increased roles, the capacity of IWUAs needs strengthening. NIA will seek to develop the capacity of IWUAs through training and continuous mentoring in collaboration with County governments. NIA will also help IWUAs to establish appropriate linkages, and enter into contractual agreements with service providers such as financiers, off-takers, equipment suppliers, input suppliers among others.
- **Action 2: Improved internal financial management and processes. This includes internal auditing, use of electronic/** online platforms for simple transactions/collections; analysis of opportunities to close revenue loopholes; and creating external checks that enforce compliance. It is therefore important to rationalize and regulate expenditure through strict fiscal controls.
- **Action 3: Strengthen internal audit processes.** This will ensure proper checks and balances as far as the use of financial resources and staff performance contracts is concerned.
- **Action 4: Capacity building for key staff involved in revenue collection:** It is important to train key NIA staff in revenue collection to enhance effectiveness and efficiency in revenue collection.

3.4.8. Strategy 8: Provision of Irrigation Services

The new Irrigation Act 2019 foresees that NIA will provide “irrigation services”. By definition, irrigation services may include design, installations, replacements, repairs, and maintenance. This would imply that NIA will charge (at market costs) for services rendered.

Currently, the re-organized NIA includes a fully-fledged Department of Operations and Irrigation Management Services. This department serves as the technical arm responsible for both operation and management of installed irrigation and water storage infrastructure from assumption, commissioning to optimal utilization. The Department will also provide irrigation management services including but not limited to operations, maintenance, technical and advisory services.

A few foreseen challenges with regard to provision of irrigation services on a commercial basis. While the principle of paying for utility services such as power supply and telecommunications is relatively well established, this is not so with respect to water services – including irrigation. Predominantly, the widespread belief that water is a free good, provided by nature and therefore free to consumers, provided free or subsidized, results in user charges on water often been resisted. Additionally, water is termed as a basic human need. Irrigation provides direct financial benefits to users therefore irrigation providers perceive the provision of dams and bulk water transfers to be free.

To maximize gains under this strategy, NIA will explore the following Actions:

- **Action 1: Developing a framework for provision of irrigation management services.** The framework will identify possible services on commercial basis and will include systems, procedures, terms and conditions for providing such services. Key services may include the following:
 - O&M services. In collaboration with the strengthened IWUAs, NIA will continue offering O&M services especially for farmers in public irrigation schemes;
 - Offering training and capacity building. Include training of IWUAs, private farms on irrigation management, maintenance. The service centres and especially, research centres (MIAD & AIRS) will include a strong training centre for farmers, IWUAs, County government staff, and private individuals on matters irrigation and irrigation management. This should also include demonstrations farms and models farms.
 - Design support. NIA can be a centre for advising County government, private farms, IWUAs, and farmer organizations on matters regarding irrigation design, at a cost.
 - Operation, Management and Maintenance (OMM) contract: NIA can be engaged to undertake operation, management and maintenance of infrastructure services for defined recipients; either IWUAs or large private farms. In this way, NIA will charge a contract fee.
 - Farm service agreement: NIA can partner with smallholder farmers and communities for the provision of farm-level services. Services might be on-farm, such as planting, harvesting and water application; or off-farm, such as storing, processing and marketing (e.g., out-grower services). Such farm services, by improving the agricultural performance of water users, are likely to improve the viability of irrigation infrastructure.
- **Action 2: Developing and availing guidelines, systems and procedures for operation and maintenance of irrigation schemes.** For purposes of standardization and commercialization, and given the expanded roles of IWUAs under the new Irrigation Act, NIA needs to review and update its current O&M manuals for various types of irrigation technologies. This will also help to improve the pricing of O&M.
- **Action 3: Design an appropriate method for costing water:** There are three major methods for pricing water: (a) Area-based pricing; (b) Volumetric pricing; and (c) Market equilibrium pricing. The Area-based water charges comprise fixed charges, based on the area irrigated or “supposed” to be irrigated; calculated by dividing the total area irrigated into the costs (CAPEX, OPEX or both) of providing irrigation water, which follows the average cost pricing principle. Sometimes the area-based charges are adjusted to account for crops grown and season of the year. The volumetric charge is based on the amount of water delivered. The economic optimal pricing rule requires that price should be set equal to the marginal cost of providing the water, and it requires accurate measurement of water through meters. The market equilibrium is based on the willingness to pay as the point where demand balances with the supply.
- **Action 4: Capacity building of NIA Technical staff:** To offer services effectively, NIA will need to build the capacity of its own staff including technical staff and operations staff. Training approaches may include exchange visits for training at demonstration centers.

3.4.9. Strategy 9: Seeking and Strengthening Technical Collaborations and Partnerships

Technical partnerships may indirectly save on costs that would have otherwise be required by an organization to execute its mandate. Key areas of collaboration include in irrigation research and capacity building. Some of these include:

- Seconded staff from organizations and government departments. Currently NIA benefits from seconded staff from the line ministries.
- Collaborative research projects. This saves on costs while encouraging sharing of resources owned by other organizations and that may not be available at NIA.
- Collaborative capacity building projects. NIA staff has previously benefited from trainings and exchange visits in country and outside country offered by partnering organizations such as JICA.

Fruitful collaborative relationships result from routine interactions between organizations and between stakeholders. Through such interactions, potential partners learn about one another, identify each other's expertise and interests and begin to build the essential foundation of trust and respect for one another.

Some of the guiding principles that NIA will explore include:

- **Action 1: Starting with the end in mind.** This involves being clear on what particular collaborations will help accomplish. This opens opportunities to seek out the right resources and collaboration partners in line with NIA's objectives. More importantly, NIA will seek partners aligned with its values, plans and policies to avoid very costly expenses later.
- **Action 2: Being open to new opportunities.** NIA will be open to new ideas that can result in bigger prospectus than initially envisaged.
- **Action 3: Look out for shared/common vision.** NIA will look out for collaborations where partners essentially have a shared vision; thus, enhancing effective working relationships. The basis for collaboration partners' will be alignment with NIA's vision and mission.
- **Action 4: Set out clear roles and responsibilities for the collaboration.** Establishing areas that the organization is committed to in the collaboration is key. NIA will work to strengthen and have a clear action plan that guides activities for the collaboration. In so doing, NIA recognizes that others work in different ways and thus will be flexible to accommodate other working practices.
- **Action 5: Laying out the ground rules.** Having clarity over the ground rules such as time and money commitments is paramount. This is preferably done upfront thus avoid confusion at later stages. Codes on how resources for the collaboration sharing is also of key importance as often; this will not often be on a 50:50 basis.
- **Action 6: Establishing clear communication processes.** NIA will ensure open communication channels where each party's decisions and thoughts sharing as well as ability to provide feedback.

3.4.10. Strategy 10: Improving Strategic Communication and Visibility

NIA currently has a corporate communication department whose key role is to communicate to its stakeholders and partners, both public and private. Communication platforms currently include mainstream media (TV and newspapers), emails and websites including others. Given that previous performance may have tainted its image, NIA, through its revamped corporate communication department, seeks to improve its image and display its work to its partners especially farmers (beneficiaries), GoK (as a financier), other current financiers and potential financiers. In so doing, NIA seeks to improve its ratings and thus opportunities for increased financing. To achieve the foregoing, NIA will use the following Actions:

- **Action 1: Develop an overall and specific communication strategy.** Together with the line ministry (MoWSI) and other stakeholders, NIA will develop a communication strategy that will promote its image and brand. Key messages will focus on its roles, legacy, comparative advantages, achievements and key ambitions for the irrigation sub-sector. NIA will seek to enhance awareness, encourage action, build consensus, change behaviour and attitudes, promote community participation and resolve related conflicts in the irrigation sub-sector development and management. Operating in a highly political and misinformation environment, NIA will also seek to address concerns, misconceptions and misrepresentations of the Authority, including in relation to its mandate and roles in previous challenging projects such as the Galana Kulalu Food Security Project (GKFSP). The framework will also outline avenues for NIA to receive feedback from stakeholders at all levels.

- **Action 2: Develop specific messages for specific stakeholders.** Based on the roles of the stakeholders, NIA will develop specific information briefs including project briefs (beneficiaries, project progress, impacts and challenges). In particular, NIA remains committed to provide adequate visibility to its donors, while showing transparency and accountability in the use of the resources provided.
- **Action 3. Improve communication channels.** NIA has recently updated its website reflecting its new roles, structure and mandates. To deliver on the above messages, as well as optimizing the visibility for its donors, NIA will develop quality, innovative and engaging products, such as videos, animations, infographics, impact and change stories (case studies) and statistics. It will make use of communication channels, including its website, social media accounts, press releases and targeted Q&A sessions. Other channels will include project briefs and site visits for specific donors and stakeholders. NIA will regularly update its website, aiming at communicating information more strategically and increasing its outreach.
- **Action 4: Tapping into NIA" friends".** NIA will continue using stakeholders who have for long believed in its vision and activities while showcasing achievements and benefits that have been created. This will also include amplified use of better performing projects and programs to stakeholders. NIA also needs to strengthen its engagement with key donors' through coordinated visits, informal meetings and discussions led by the CEO, DGM-P, RM staff, technical staff, and other senior management officials.

3.4.11. Strategy 11: Overall Institutional Internal Capacity Enhancement

One of the five key pillars of NIA outlined in its Strategic Plan is **Governance and institutional capacity development**. The performance of an organization is partially influenced by its human capacity. Currently, NIA has an establishment of 273 staff but requires up to 578 staff. Out of the 273 staff members, only 106 are permanent while 167 are on contracts; some as short as one (1) year contracts. NIA is largely understaffed and ill equipped as almost all departments rely on interns, casual staff, contractors (consultants) and seconded staff from its parent ministry. Part of the reason for its low staffing is NIA's current classification (category 6 A); which limits ability to attract high-level staff (experienced & skilled). Other challenges include low budget for staff training and capacity development.

Key Actions to improve its overall staffing capacity will include the following:

- **Action 1: Seek corporate re-classification of the organization.** NIA is currently in the process of seeking reclassification from 6A to 7C. Re-classification will not only allow for higher salaries, but also improve its ability to attract and retain staff. The fact that the new irrigation Act (2019) identifies NIA as a commercial entity implies that it will be easier to earn a higher categorization.
- **Action 2: Establish and/or strengthen regional offices to enhance outreach.** NIA has already established regional offices (6.No) that need strengthening.
- **Action 3: Strengthen planning and management functions.** NIA will strengthen M&E and impact evaluation activities as well as its planning, coordination and annual work programming, budgeting, and reporting. Better planning, budgeting and coordination found to be key to overall organizational success and efficiencies.

4 IMPLEMENTATION MONITORING AND EVALUATION FRAMEWORK

4.1. Implementation Framework

To achieve the outcomes set out in the RMS, an appropriate implementation framework derived from the preceding chapters translated into actions. This will depend on the harmonization, alignment, and coordination of efforts and will in no way adversely affect the on-going implementation of projects/programmes as RMS is expected to align its to the Strategic plan and other policy documents. The NIA with the support of its Parent Ministry will take the leadership role and put in place appropriate mechanism to implement the strategy in collaboration with other relevant stakeholders.

To operationalize the strategy, the NIA will lead the relevant stakeholders to implement the action plan for the strategy. The action plan will comprise a number of strategies and action areas as outlined in Annex 1.

4.2. Institutional Arrangements for Implementing the RMS

The development of this RMS was foreseen during the development of the Strategic Plan 2019-2023. The Strategic Plan (Pillar 5, Strategic Objective 5.2, and Results Area 3), recommended the establishment of a liaison and resource mobilization unit as part of the planning department.

Under the leadership of the CEO, the Deputy General Manager in the Research, Planning and Strategy Department (DGM-RP&S) and the Resource Mobilization Officer will manage and coordinate the RMS functions. Currently, NIA has a Resource Mobilization Unit, albeit with limited human resources. To implement this ambitious RMS, NIA will require a boost in its human resource capacities; by among others the following;

- Increasing staffing for the RM Unit;
- Training all relevant staff (including those from other departments) on the process of RM, budgeting, M&E, and project concepts development;
- Improving its databases and knowledge management platforms (MIS) for ease of sharing of resources;
- Strengthening the M&E unit to support reporting and evaluations for purposes of fundraising; improving strategic communication –so as to improve its visibility and outlook to potential funding agencies;
- Additional financial resources to the planning department for studies, staffing, capacity building, lobbying and outreach missions.

4.3. Stakeholders in Irrigation and their Roles

The RMS will be implemented under a multi-sectoral, multi-dimensional approach with cohesive implementation arrangements of various stakeholders whose roles and responsibilities are elaborated in **The RMS will be implemented under a multi-sectoral, multi-dimensional approach with cohesive implementation arrangements of various stakeholders whose roles and responsibilities are elaborated in Table 41 below.** Stakeholders in the irrigation sector can be categorised as public sector institutions (National and County governments and their departments and agencies), private sector, research institutions, Non-Governmental Organizations (NGOs), development partners, Community-Based Organizations (CBOs), Irrigation Water User Associations (IWUAs), farmer groups and cooperative societies. These stakeholders collectively bring together farmers to pool their resources and efforts in order to maximize their returns. Stakeholders' organizations also assist in facilitating access to inputs, credit, markets, and market information. below. Stakeholders in the irrigation sector can be categorised as public sector institutions (National and County governments and their departments and agencies), private sector, research institutions, Non-Governmental Organizations (NGOs), development partners, Community-Based Organizations (CBOs), Irrigation Water User Associations (IWUAs), farmer groups and cooperative societies. These stakeholders collectively bring together farmers to pool their resources and efforts in order to maximize their returns. Stakeholders' organizations also assist in facilitating access to inputs, credit, markets, and market information.



Table 4-1: Key Stakeholders and their Roles

Institution	Responsibilities
The National Treasury and Planning	Mobilize and allocate public financial resources for implementation of the irrigation schemes.
	Coordinate foreign direct investment including aid to irrigation subsector.
	Create an enabling environment for Producer Public Private Partnerships in support of irrigation development.
	Ensure that irrigation issues are captured and integrated in the National Development Plans.
	Assess the effectiveness of implementation of the National Irrigation Policy.
Ministry of Water, Sanitation and Irrigation	Undertake National Water Resources Assessment, Water control, Water Resources Planning, Allocation and Regulation.
	Support the operation and maintenance of off-farm irrigation infrastructures.
	Oversee implementation of the national irrigation policy including access to strategic inputs and demonstration materials, monitoring, evaluation and compliance to standards.
	Formulate policies, make legislative proposals to Parliament, provide sector regulation, coordination and guidance, and M&E.
	Develop general principles, guidelines and standards for promoting development and for the coordination of irrigation planning.
	Establish, through a gazette notice, national, public or strategic schemes of any category as defined in the Irrigation Act, 2019.
	Promote the use of efficient irrigation systems across the country.
	Subject to resource constraints, ensure availability and adequacy of water for irrigation.
	Receive and determine applications for any irrigation projects, including issuance of irrigation licences for irrigation schemes.
	Monitor and enforce conditions attached to licenses for all irrigation projects.
	Report to both Houses of Parliament annually, and from time to time as may be necessary, on the state of, and needs for, irrigation development and management in the country.
	In collaboration with county governments, gather information and maintain databases on irrigation development and management including data on irrigation water supplies, demands, projects, irrigated areas, management performance, potential for expansion and human resources.
	Conduct periodic technical and management audits of irrigation schemes infrastructure, governance, management and financing.
	Maintain storage investments for their proper use implementation, and,
	Carry out other mandate as may be specified in the Irrigation Act, 2019 or any other written law.
NIA Board and Board Committees	Board members have the responsibility to ensure sufficient State Corporations funding to meet both recurrent and development budget.
	Board Members have a fiduciary duty of due care of assets bestowed upon them.

Institution	Responsibilities
National Irrigation Authority	Develop and improve irrigation infrastructure for national or public scheme.
	Provide irrigation support services to private medium and smallholder schemes, in consultation and cooperation with county governments and other stakeholders.
	Provide technical advisory services to irrigation schemes in design, construction supervision, administration, operation and maintenance under appropriate modalities, including agency contracts, as may be elaborated in regulations to the Irrigation Act, 2019.
	Provide for sustainable irrigation project, identification, design, finance and implementation for small, medium and large-scale projects.
	Provide irrigation technical advisory services to all farmers; increase reliability of irrigation water through water harvesting and storage; (c) recognize farmers organizations mainly IWUAs; scheme management and dispute resolution committees.
	Provide a mechanism for effective coordination, linkage and collaboration and partnership for the promotion, development, with all stakeholders' particularly County governments.
	Provide mechanisms for Irrigation sector information management for effective decision-making and coordination.
Project Management Units (PMU)	Coordination of day-to-day activities and facilitation, fiduciary (procurement and financial management).
	Environmental and social safeguards supervision if necessary.
	Annual work planning and budgeting.
	Monitoring and evaluation (M&E), impact evaluation and reporting.
County Governments	Establish a county irrigation development unit.
	Formulate and implement county irrigation strategy in collaboration with relevant stakeholders, in line with national policies and strategies;
	Develop and maintain an irrigation database and integrate systematic M&E.
	Identify community-based smallholder schemes for implementation in line with national guidelines.
	Mainstream irrigation related statutory obligations such as those that relate to the environment, water and health.
	Provide capacity building for farmers and support establishment of viable farmer organizations, and in particular irrigation water users associations to develop and manage irrigation schemes including actively participating in conflicts resolution within irrigation schemes.
	Set up measures to implement adaptation and mitigation to climate change, and enhance sustainable environmental management.
Private sector	Provide capacity in planning, designing and implementation of irrigation projects in the private sector
	Mobilize funding for irrigation interventions and co-finance activities or investments with government.
	Offer professional services in sustainable planning, design, construction supervision, management, operation, and maintenance of irrigation schemes.
	Contribute to policy formulation, reviews, research and training.
	Perform self-regulation and control activities in irrigation related activities.
	Supply of inputs and other private sector services along commodity value chains.
	The private sector shall become more involved in irrigation activities that shall include carrying out studies, surveys, design and construction works.
Civil Society Organizations	Group formation and capacity building.
	Implementation of small-scale irrigation projects.
	Networking for the transfer of irrigation technology.
	Promotion and management of labour-saving technologies.
	Assistance to farmers/IWUAs in the distribution of agricultural inputs.
	Demonstration of irrigated agriculture.

Institution	Responsibilities
Development Partners	Share good practices and alternative approaches to irrigation development
	Provide financial and technical support for irrigation development.
	Participate in monitoring and evaluation of projects.
Farmers organization	Utilization of developed infrastructure through irrigated agriculture
	Irrigation water management and operation and maintenance of installed irrigation systems
	Assist in procuring farm inputs through groups.
	Help farmers market their farm products through contract farming, groups or cooperatives.

Table 4-2: Roles and Responsibilities of the NIA Staff in the Resource Mobilization Strategy

STAFF	RESPONSIBILITIES								
Position of staff	Project Identification	Funding and Development Partner Scoping	Development Partners Mapping	Follow up on Funding/ Partnering Opportunities	Project Proposal and Concept Note Development	Liaison, Negotiation and Financial Closure	Monitor Funding and Budgetary Allocation	Reporting and Accountability	Strategic Communication
CEO		✓		✓		✓	✓	✓	✓
Head of Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓
Head of Resource Mobilization	✓	✓	✓	✓	✓	✓	✓	✓	✓
Head of Infrastructure	✓				✓			✓	✓
Head of Operations & Irrigation Management	✓				✓			✓	✓
Head of Corporate Communication								✓	✓
Head of Finance							✓	✓	

4.4. RMS Monitoring and Evaluation Framework

This RMS implementation will be monitored internally by NIA and the Board and externally by the line Ministry (MoWS&I), the National Treasury and stakeholders that may include County Governments and farmers as guided by the National Monitoring and Evaluation Policy. A comprehensive system of M&E methodologies supported under the RMS and consisting of thorough review of progress and key processes and a rigorous impact evaluation (IE) is needed.. The RM unit within NIA will work together with the M&E unit to generate performance data at the institutional as well as at project levels. The implementation framework for this strategy has already identified key performance indicators (KPIs) reported as part of the organizational and the ministerial reporting under the Programme Based Budgeting and the Annual Progress Reports.

Periodic reporting of progress and any shortcomings will be undertaken on a quarterly and annual basis. A mid-term evaluation of the RMS will be conducted after 2.5 years of implementation and an end term evaluation at the end of the RMS period. To the extent possible, M&E data will be publicly available in order to improve transparency and project governance.

Table 4-3: Monitoring and Evaluation Framework

Goal: To contribute to increased stability and predictability of NIA revenue base		
Intervention Logic	Indicators	Sources of verification
Outcome 1. Stable & predictable revenue base for NIA	- Diversified sources (number of funders reached out) - Additional share of resources provided under the GoK Budget allocation - Additional share of resources pledged/or provided by traditional donors - Share of income pledged by new donors - Amount of funds in USD generated from non-donor revenue sources	- GoK Budget printed estimates & disbursements - Grant agreements in place
Outputs - Diversified sources of funding to NIA - Strengthened capacity of resource mobilization	- Number of new funding mechanisms offering support to NIA - Amount of funds in USD generated from new (non-traditional) revenue sources	- GoK Budget printed estimates & disbursements - Grant agreements - PPP agreements - GCF proposals funded
Activities - Develop a resource mobilization strategy - Develop targeted project concepts & proposals. - Building resource mobilization Partnerships - Lobbying and advocacy - Donor mapping to identify potential donors with a strategic focus on NIA's mandate - Resource mobilization capacity building for NIA's key staff and management	- RMS developed - Number of concepts developed - Number of proposals developed - MoUs/funding agreements signed with partners - Other collaboration MOUs	- Grant agreements - GoK Budget printed estimates & disbursements - Amount of funds in USD generated from non-donor revenue sources

4.5. The RMS Five years Budget

The overall departmental budget for resource mobilization is categorized into two i.e. development and implementation. The development of the RMS at an estimated to cost Kshs. 10 million; including consultancy fees and initial capacity building of NIA staff by the consultant was already budgeted for. The implementation budget is estimated to cost Kshs. 3 million for each of the 5 years; thus a total of Kshs. 15 million.

Table 4-4: RMS Development and Implementation Budget

Year	Description	Estimated Budget (Kshs)
1	Development of the RMS- Consultant (including initial training of NIA staff)	10,000,000
2	Implementing of the RMS	3,000,000
3	Implementing of the RMS	3,000,000
4	Implementing of the RMS	3,000,000
5	Implementing of the RMS	3,000,000
6	Implementing of the RMS	3,000,000
	Total	25,000,000

Notably, besides Planning department and the Resource Mobilization Unit, other units and departments have a role in the implementation of the RMS, especially the Technical Departments and the Corporate Services Department. The budget for these departments and units are included separately from the RM unit budget described above and estimated to cost Kshs. 35 Million during the implementation period. Key budgeted items are outlined in the *Table 4-5: Additional Budget by other Departments and Units* below. The five years budget for the RMS implementation is therefore estimated at Kshs. 60 million (excluding hire of new staff)

Table 4-5: Additional Budget by other Departments and Units

#	Other RMS Support Activities	Responsible unit or Department	Estimated 5-year Budget (Kshs)
1	Corporate communication actions for improved RMS	Planning/corporate services	4,000,000
2	Development of bankable proposals	Planning/Infrastructure/Operations	8,000,000
3	Institutional capacity development in Resource Mobilization	Planning/corporate services	4,000,000
4	Streamlining financial management and reporting	Finance/ Planning	0
5	Developing institutional policy on PPP	Planning	5,000,000
6	Field visits and review missions	Planning/Infrastructure/Corporate services	8,000,000
7	Staffing of liaison and RM unit	Corporate services	5,000,000
8	Others		1,000,000
	Total		35,000,000

NB: This budget does not include the costs of hiring new staff.

4.6. Enabling Environment and Cross Cutting Issues

The RMS assumes that the following key crosscutting issues will be mainstreamed in ways that ensure a progressive irrigation development:

- **Smallholder farmers as key target beneficiaries.** Targeting smallholder farmers by transforming both their production and consumption patterns in ways that point them to production of food home consumption and a surplus for sale. Irrigation will contribute to better nutrition outcomes and household incomes.
- **Alignment and integration to climate change adaptation.** Integrating national adaptation action plans for agriculture into irrigation systems and ensuring content for climate change adaptation and mitigation shall be emphasised at designing, planning and implementation of this policy. Promoting effective land utilization as well as maintaining land holdings in viable sizes shall be critical in curtailing land fragmentation.



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- **Integrating social aspects.** Integrated governance shall mainstream and integrate aspects of social protection and ensure that pertinent needs of women, youth, persons with disabilities and those living with HIV/AIDS are included in interventions for irrigation development.
- **Gender integration.** Concerted efforts are needed to address gender-related challenges in irrigated agriculture and seek to achieve equity and greater participation in irrigation planning, development and management. This will include focusing on activities that build capacity for engendered development across the agriculture value chains.
- **ICT integration.** NIA will deepen the use of ICTs in agriculture to facilitate information sharing, reduction of communication costs and easing monitoring and evaluation as well as reporting mechanisms which is critical for lessons sharing and scaling up of innovations.

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6 ANNEXES

6.1. ANNEX 1: RMS Action Plan

Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Strategy 1: Engaging and Securing Increased Funding from the Government (i.e., Increasing GoK Budget Allocations)				
Strict adherence to budget calendar events-Treasury Circulars, MTEF process.	a) Develop institutional understanding of the concept of Medium-Term Expenditure Framework (MTEF) and rationale; b) Irrigation financing gap of Ksh250 billion bridged by FY2025/2026	Budget reports; budget meetings minutes; Board approvals	annually	MoWSI, TNT, NIA
Collaboration/Synergized budget making process-strategic plan; national development goals/policies; BOM & departments	Improved efficiencies in Irrigation spending and financial investments	Minutes of technical meetings with relevant treasury officials and Presidential Delivery Unit (PDU); Budget reports; Budget meetings minutes; Board approvals	Quarterly	NIA
Identifying and developing high priority projects: affordable; high impacts; ownership & sustainability	Increased number of concept papers from current 38 to 100 prioritized, prepared and submitted to TNT and DPs	Concept notes developed and forwarded to The National Treasury	Continuous	NIA, MoWSI
Improve the quality of feasibility studies to meet the financiers' requirement	Increased No. of detailed feasibility studies from 38 to 100- prioritized, prepared and completed	Contracts awarded; procurement minutes, reports on technical meetings held with the consultants	Continuous	NIA
Continuous development and submission of project Concept Notes to TNT	a) Increasing Financial allocation by 50% by 2025/2026 disaggregated by source of funding b) No. of Concept Notes developed and submitted to TNT	Budget reports; concept notes developed and submitted to TNT	continuous	NIA, MoWSI, TNT
Efficient and coordinated procurement plans, work plans and cash flow projections	Consolidated procurement plan, work plans and cash flow projections prepared and approved by the BOM	Departmental procurement plans and work plans	Continuous	NIA
Strategic planning, budget formulation and efficiency in budget execution	No. of board papers prepared and decisions made	Board meetings minutes, management papers	Annual	NIA
Lobbying relevant parliamentary committees including site visits	Conduct 20 review lobby meetings and 5 site visits	a) Joint technical backstopping of projects with relevant stakeholders b) Reports & minutes prepared from the meetings/visits	Bi-annual	TNT
Ensure projects are included in the Ministry's master list and adherence to the implementation of the strategic plan	Development of bankable concept papers for promotional activities	Project Documents, Reports of projects submitted; list on the master list	Quarterly	NIA, MoWSI, TNT

Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Aggressive sector bidding and lobbying	a) No of reports prepared b) Number of site visits	a) Record of the sector reports submitted b) Budget justification reports submitted c) No. of reports on site visits and decisions made & implemented	Bi-annual	NIA

Strategy 2: Growing Internal Resources

Strengthened IWUAs for effective collection of O&M	a) Development of manuals to guide strengthening of IWUAs; b) No. of established appropriate linkages, and contractual agreements entered with service providers c) No. of IWUAs formed d) Increased O&M collections by 50%	a) Training manual b) Appropriate linkages established c) Contractual agreements entered with service provides d) Registration certificates e) O&M collection records	Continuous	NIA
Improved internal financial management and processes	a) No. of accurate financial reports prepared; b) Increase AIA from Kshs. 250 to Kshs. 450 million annually c) Improved transparency and accountability; d) Reduced audit qualifications e) Minimize revenue leakages f) Capacity building for key staff involved in revenue collection	a) Declared performance achievements and transparent accounting of expenditure b) Use electronic channels for simple transactions / collections c) Compliance reports d) Performance contracts enforced e) Timely release of reports	Quarterly	NIA
Strengthen internal audit processes	a) Proper book keeping per the financial procedures b) No. of audit reports	a) A simple and reliable audit system b) Timely preparation and release of reports	Quarterly	NIA
Capacity building for key staff involved in revenue collection	a) Training manual developed b) No of staff trained c) Increase AIA from Kshs. 250 to Kshs. 450 million annually	a) Training reports b) Financial status reports	Annually	NIA

Strategy 3: Leveraging and Deepening Financing from Current Development Partners (DPs)

Reporting of projects progress	a) Develop an accompanying communication, visibility and engagement strategy, b) No of progress reports	Timely preparation and submission of Progress reports	Continuous	NIA
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Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Aligning the strategic plan and other planning documents (where possible) to the donor's thematic areas	a) Explore potential DPs and private sector partners, b) No of projects prepared	a) Reports / Documents of projects identified b) Participation in preparation of Country Partnership Frameworks	Continuous	NIA, MoWSI, TNT, DPs
Prepare of an external resources' manual	Manual developed, completed and launched	Manual approved and in use	End of Fiscal year 2021/22	NIA
Hold informal and formal meetings with DPs	a) No of projects prioritized and agreed; b) No. of MoUs signed; c) No of reports and minutes	a) Projects agreed b) MoUs signed c) Back to office reports / minutes	Continuous	NIA
Strategy 4: Building Relationships and Diversifying the Donor Base through New Funding Streams				
Mapping of new donors	Increased development partners	a) Resource tracking reports b) Improved donor accessibility c) Feasibility and reports from meetings	Continuous	NIA, MoWSI, TNT, DPs
Identify and align with the strategic interests of the specific donors	Financing gap narrowed to 50% by 2025/26 disaggregated by source of funding	Strategic meetings, decision made and implemented	Continuous	NIA, DPs
Develop a donor specific solicitation campaign	a) Preparation of donor specific concept notes and business case templates b) No. of engagement meetings	a) Social events participation b) Setting up informal meetings c) Sending out emails or even personal connections to staff at the organizations. d) Meeting reports/ minutes	Continuous	NIA, DPs
Aggressive and continuous advocacy and networking	a) No of lobbying and advocacy meetings b) Financing gap narrowed to 50% by 2025/26 disaggregated by source of funding	a) Resource tracking reports b) Advocacy and meeting reports	Continuous	NIA, DPs
Showcasing achievements and sustainability of previous projects	a) No of impact evaluation reports b) Documentary to show economic and social changes/ impacts c) Sustainability strategies integrated in projects	a) Impact Evaluation reports b) Airing of documentaries of national TVs, newspaper pullouts, press reports, brochures etc. c) integrating sustainability strategies in all projects	Continuous	NIA, TNT, MoWSI, DPs and the public, media



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Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Join and advance Authority's interests in the relevant development partners working groups (DPGs)	a) Financing gap narrowed to 50% by 2025/2026 disaggregated by b) source of funding c) No of DPGs meetings attended and presentations	a) Reports presented; decisions made b) Minutes of DPG meetings	Biannual	NIA, MoWSI & DPs
Strategic communication for donor visibility	Develop an accompanying communication, visibility and engagement strategy, No of reports	Improved supervision and focus on development effectiveness and sustainability	Continuous	NIA, DPs
Conformity with the legal and regulatory framework	Increase in the number of requests for legal clearance and opinion	Letters communicated to Attorney General, TNT, MoWSI, NIA legal team, NEMA and other regulatory bodies	Continuous	NIA
Compliance with PFMA and attendant regulations	Improved and prudent utilization of resources disaggregated by source of funding	Timely release of financial reports and Strategic decision made and implemented	Continuous	NIA, DPs
Strategy 5: Harnessing PPP Opportunities				
Conduct informal and formal meetings with the PPP Unit (under TNT) and the PPP committee	a) No of meeting reports b) 30% increase in PPP contribution towards irrigation financing by 2026	a) Back to office meeting reports b) Projects prepared and signed c) Financial reports	Continuous	NIA, PPP Unit
Develop Bankable PPP projects	No of irrigation feasibility studies and detailed designs completed	Bankable projects prepared;	Continuous	NIA
Understanding the interests of private vs public partner	No of Memoranda of understanding (MoUs) between private vs public partners	MoUs between private vs public partners	Annually	NIA, PPP unit
Follow the laid down PPP processes	No of circulars and guidelines	a) Notices and letters to heads of departments b) Communications with PPP Unit	Continuous	NIA
Develop the PPP disclosure online portal under the NIA website	PPP disclosure online portal under the NIA website	PPP disclosure online portal under the NIA website in place	One year after publication of the RMS	NIA
Enhance internal capacity for PPP project management	No of trainings carried out	a) Training reports; b) Utilization of the training knowledge	Continuous	NIA
Institutional PPP policy	Development of a policy on collaboration with PPP unit	Record of decisions generated and implemented	continuous	NIA
Strategy 6: Aligning Irrigation Projects for Green Climate Financing (GCF)				
Informal and formal meetings with the GCF Unit at TNT	a) Increased support from donors by 50% by 2025/2026; b) No of consultation meetings	Record of consultation meetings	Continuous	NIA, GCF

Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Develop GCF finance ready projects	a) Proportion of investment priorities b) Budget raised c) No. GCF projects prepared	Record of bankable projects prepared and submitted;	Continuous	NIA, GCF
Application funding under the GCF	Proportion of financing contributed through GCF	Funding records	Continuous	NIA
Enhance internal capacity for GCF proposal development and project management	No of trainings carried out	Record of training and utilization of the training knowledge	Continuous	NIA
Strategy 7a: Co-financing/cost-sharing approaches in Irrigation Development				
Develop guidelines for cost-sharing/co-financing projects	a) Development and adoption of guidelines, b) Publication and dissemination of the guidelines	Record of guidelines developed and adopted	One year after launch of the RMS	NIA, Consultant
Identifying possible project locations and communities-commercial orientation; unsolicited proposals	a) No of unsolicited proposals b) Acreage under cost financing approach c) No of farmers engaging in co-financing/cost-sharing approaches in irrigation development	a) Record of proposals and concept notes developed b) Projects developed for co-financing/cost-sharing approaches in irrigation development	Continuous	NIA, Consultant
Mobilize farmers to form appropriate legal entities	No of farmers' legal entities formed and registered	Record of legal entities mobilized and registered	Continuous	NIA, consultant
Build capacities of established legal entities	No of farmers' legal entities capacity built	Training reports	Continuous	NIA
Develop guidelines for cost recovery projects	a) Development and adoption of guidelines, b) Publication and dissemination of the guidelines	Record of guidelines developed and adopted	One year after launch of the RMS	NIA, Consultant
Identifying possible project locations and communities-commercial orientation; unsolicited proposals	a) No of unsolicited proposals b) Acreage under cost recovery approach c) No of farmers engaging in cost recovery approaches in irrigation development	Projects developed for cost recovery approaches in irrigation development	Continuous	NIA, Consultant
Mobilize farmers to form appropriate legal associations	No of farmers' legal entities formed and registered	Record of legal entities mobilized and registered	Continuous	NIA, consultant
Build capacity of established legal entities	No of farmers' legal entities capacity built	Training reports	Continuous	NIA
Identify and engage relevant intermediary financial institutions	No of intermediary financial institutions identified	MOUs with financial institutions	Continuous	NIA, Consultant

Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Assessment of the Partners' willingness to pay and ability to pay for services	a) Willingness to pay index b) Ability to pay index	Survey on willingness to pay and ability to pay for services	FY2022/2023	NIA, Consultant
Promote flexible payment structures and service levels for consumers	Development a policy to regulate pricing models and revenue collection	a) Consistent policy developed, b) Sensitization of communities on the policy	FY2022/2023	NIA

Strategy 8: Provision of Irrigation Services

Developing a framework & guidelines for provision of irrigation management services	Framework & guidelines for provision of irrigation management services	Framework & guidelines for provision of irrigation management services in place	FY2021/2022	NIA, consultant
Design an appropriate pricing model for irrigation services	Pricing model for irrigation services in place	Pricing model for irrigation services developed and disseminated	End of 2021/2022	NIA, consultant
Capacity building of NIA Technical staff	a) Training needs assessment b) No. of trainings conducted c) No. of staff trained disaggregated by type of training	a) Training needs assessment b) Training reports	Continuous	NIA

Strategy 9: Seeking and Strengthening Technical Collaborations and Partnerships

Starting with the end in mind	No of documents reviewed and integration of irrigation priorities into the country strategy programmes by donors	Review the most recent Bilateral/Multilateral Aid Review Reports done by Donors to get their views on irrigation priorities	Continuous	NIA, DPs
Leverage on shared/common vision	Improved efficiencies in irrigation spending and financial investments	Improvement in in irrigation service provision	During review of country assistance strategy	NIA, DPs
Clear roles and responsibilities for the collaboration	MOUs on roles and responsibilities	MOUs on roles and responsibilities in place	By end of 2021/2022 fiscal year	NIA
MOUs on roles and responsibilities	MOUs on communication processes	MOUs on communication processes in place	By end of 2021/2022 fiscal year	

Strategy 10: Improving Strategic Communication and Visibility

Development of communication strategy	Develop an accompanying communication, visibility and engagement strategy	a) Record of communications sent out; b) Biennial workshops on communication procedure for stakeholders c) Communication strategy	Continuous	NIA
Develop specific messages for specific stakeholders	a) No of specific messages developed for donors b) No of stakeholders reached	a) Record of messages developed b) Records of stakeholders engaged	By end of 2022/2023 fiscal year	NIA

Action	Key Performance Indicators	Means of Verification	Time Frame	Responsible
Improve communication channels-innovation, key achievements	a) Innovative communication channel in place b) Feedback mechanisms in place	Review of communication channels and feedback mechanisms	Continuous	NIA
Collaborations and partnerships- Tapping into NIA “friends”	Identification of joint Initiatives that have real and sustainable collaboration between NIA and IFIs and focus partnership for resource mobilization efforts.	Joint initiatives developed	Continuous	NIA

Strategy 11: Overall Institutional Internal Capacity Enhancement

Corporate re-classification of the organization: 6A to 7C	Development of re-classification paper	Monitor progress of classification and make necessary adjustment; Reclassification through Gazette notice	FY 2021/2022	NIA, SCAC
Strengthen regional offices to enhance outreach	a) Increase in staff establishment, b) Provide adequate tools & equipment	Improvement in service provision	FY2022/2023	NIA
Strengthen planning and management functions	a) Revised ToRs, b) Invest in training and development	Fully functional NIA planning and management functions	FY2022/2023	NIA

Monitoring and Evaluation

Monitoring of RMS	Monitoring activities	Monitoring reports	Quarterly and annually	NIA
Mid Term Evaluation of RMS	Mid-term evaluation study	Mid-term evaluation study report	After 2.5 years of RMS implementation	NIA, Consultant
End Term Evaluation of RMS	End term evaluation study	End term evaluation study report	End of RMS implementation	NIA, Consultant

6.2. Annex 2: Guidelines for Co-financing, Cost Sharing and Cost Recovery

GUIDELINES FOR IMPLEMENTING CO-FINANCING, COST-SHARING AND COST RECOVERY MECHANISMS IN IRRIGATION DEVELOPMENT

RATIONALE AND PURPOSE OF THE GUIDELINES

The National Irrigation Authority (NIA) intends to widen and deepen its current sources of finances to finance its 10-year plan that targets to raise Kshs. 300 billion.

Among the key-targeted strategies are cost-sharing and cost-recovery approaches to finance irrigation. These two minimize the amount of capital expenditure that NIA will be required to mobilize and increase beneficiaries ownership and participation in irrigation development. They ultimately result to higher probabilities of future project sustainability.

DEFINITIONS

- **Co-financing:** A type of financing in which the different lenders agree to fund under the same documentation and security packages but may have different interest rates, repayment profiles, and terms.
- **Cost sharing:** Cost sharing or matching is that portion of the project or program costs not met by the funding agency. Costing sharing includes all contributions, including cash and in-kind, that a recipient makes to an award. Depending on the funding agency policies, the cost sharing can be mandatory (a fixed fee for all) or voluntary (suggested by the beneficiaries)
- **Cost recovery:** Generally, cost recovery is simply recovering the costs of any given expense (CAPEX or OPEX, or both). This can be the initial start-up costs (CAPEX) or the operating expenses (OPEX) of the project. Cost recovery is often applicable after meeting and exceeding the breakeven point. It may also include the cost of an investment through evaluating the return on investment, or even the cost of capital taken to finance the project (debt or equity).

KEY CONSIDERATIONS FOR CO-FINANCING AND COST-RECOVERY

The following are the key considerations before implementing irrigation projects under co-financing and cost-recovery approaches:

- **Well defined costs and revenues.** The project costs both capital expenses (CAPEX) and operational expenses (OPEX) needs to be well defined from the beginning of the project. Similarly future revenue streams and levels need to be well estimated.
- **Willingness to pay-** Willingness to pay (WTP) is an expression of demand for a service. It is a strong prerequisite for cost recovery being a measure of user satisfaction of a service and of the desire of users to contribute to ongoing access to that service. Willingness and ability to pay are regularly confused. It is often stated that people are not able to pay the required contributions because they are too poor. This may perhaps be true in a few individual cases, but in many cases people are able to pay but not willing to put a priority on spending their resources on improved water supplies or sanitation facilities.
- **Ability to pay and perceived economic benefits: Are community/household contributions affordable?** Involving users in the design of projects, and hence dealing with both the domestic and productive aspects of a water supply project at inception, it is much easier to convince communities of the need to pay for services. Particularly in rural areas, productive uses of water have a crucial role to play in converting water consumption into the funds needed to buy spare parts and to pay for routine maintenance. establishing the link between water supply and economic benefits seems to increase people's willingness to pay. Benefits include agriculture incomes from irrigation: vegetables, fruit trees, livestock, poultry, goats and sheep, cows.

CO-FINANCING AND COST SHARING AGREEMENTS

The cost-sharing agreement should specify the following:

- **The type of cost sharing-** In cash or in-kind, or both
- **The costs to be shared or co-financed-** (CAPEX, OPEX, or Both)
- **The percentage of sharing-** between the different funders or the funders and the beneficiaries
- **The period/time of sharing-** The point at which the funds will be availed and the proportions to be availed each time.



National
Irrigation
Authority



COST RECOVERY MECHANISMS

A great number of communities and municipalities lack the financial management skills to organise, implement and efficiently control a revenue collection and cost recovery system. External support in this area is crucial if cost recovery strategies are to be effectively implemented. The cost recovery mechanisms should clearly define the following:

- **The costs to be recovered:** The modality of recovery i.e whether partial or full recovery. Whether the CAPEX or OPEX, or both; or a percentage of either in the case of partial recoveries.
- **The length of the recovery period:** eg Months, quarters, years, or seasons
- **Unit of billing:** In irrigation, this could be per household, per acre, per unit of water used etc. A single billing method should however, be agreeable to all for ease of administration
- **How to collect money?** This could be a check-off system at the group level or individually linked loan accounts would work better. A check-off account with a produce offtake would also work as long as the produce is marketed communally
- **When to collect money?** In irrigation projects seasonal based collection is more appropriate as it is aligned to the production cycles
- **Who collects the money?** Since NIA is not in the business of loaning, collection of costs can be done through an agent especially a reputable bank.
- **Where to keep the money?** A designate loan account for individual farmers or a group check-off account is used to collect the money. Once this is done and the collecting agency deducts its dues, the money is transferred to the loaning institution (say NIA in this case)
- **How to share out collected monies?** The recovery agent deduct its fees at source once collections have been consolidated. The balance of monies is transferred to. Other costs incurred can also be paid out to service providers at this point.

6.3. Annex 3: Institutional Guidelines for PPP projects

GUIDELINES FOR IMPLEMENTING PUBLIC PRIVATE PARTNERSHIP (PPP) MECHANISMS IN IRRIGATION DEVELOPMENT

INTRODUCTION

The Government enacted the Public Private Partnerships (PPP) Act, 2013 and the amended PPP Act 2021 to guide the mobilization of funds for infrastructure and other development projects under PPP arrangements adopting lower-cost technologies. The Act provides for National and County Governments to approve and undertake PPP projects which do not pose contingent liabilities to the National or County Governments. In this context, the Government of Kenya (GOK) has made infrastructure development through Public Private Partnerships (PPPs) a priority as a mechanism that can help it address the major infrastructure gaps in the country. PPPs, is a contractual relationship between a public sector entity and a private sector entity where the private sector entity undertakes some combination of design, construction, operation, and financing of an infrastructure asset.

The GoK is confident that through the PPP modality, the private sector can offer a dynamic and efficient way to deliver and manage public infrastructure. These efforts are geared towards achieving Vision 2030, so that future generations can gain from the benefits of modern services, improved living standards and reduced poverty.

The Directorate of PPP Unit has therefore been established to replace PPP Unit, as a specialized unit within the National Treasury, to promote and oversee the implementation of the GoK PPP Program. The Directorate of PPP Unit as the resource centre for best practice and guardian of the integrity of the PPP process, plays the role of identifying problems, making recommendations to the PPP Committee regarding potential solutions, and ensuring that projects meet such quality criteria as affordability, value for money, and appropriate transfer of risk.

RATIONALE AND PURPOSE OF THE GUIDELINES

This Project guidelines describes what work the **(insert project name)** will do, what results will be achieved, and how project work will be executed and managed. It describes team roles and responsibilities and deliverables. It identifies assumptions, constraints, dependencies, risks, and issues, and it provides high level schedule and budget information. The national irrigation Authority (NIA) intends to widen and deepen its current sources of finances to finance its 10 year plan that targets to raise Kshs. 300 billion.

Among the key targeted strategies are PPP approaches to finance irrigation. Heavy infrastructure investment is thus paramount. Implementation of the irrigation projects requires heavy financing that invites concerted efforts from government funding, development partners support, Public Private Partnerships (PPP) as well as through private sector engagement. With these approach in place, the projects mapped out the Vision 2030, MTPs, Big Four Agenda, NIA Strategic plan 2018-2023 shall be implemented making Kenya a model country on Public Private Partnerships by:

- Additional funding from private sector, hence reduction of funding gap
- Reduce Government sovereign borrowings
- Enabling more investment in infrastructure, by accessing private finance
- Encouraging a whole-life-cost approach to infrastructure
- Putting a greater focus on the quality of service to the end-user
- Accessing additional management capacity through private operation of infrastructure
- Achieving value for money in the provision of infrastructure and public services
- Improving accountability in the provision of infrastructure and public services
- Harnessing private sector innovation and efficiency
- Stimulating growth and development in the country
- Utilize private sector efficiency & innovation to deliver public services
- Utilize private sector efficiency & innovation to deliver public services

All new project proposals should be:

- aligned to Government development policies and guidelines,
- Socially acceptable,
- Environmentally desirable,

- Economically, financially and technically viable,
- Sustainable,
- Subjected to an appraisal/approval by a competent authority e.g the –MDAs, Country Governments and team Directorate of PPP Unit.

BACKGROUND: This section will describe the problem or opportunity the project seeks to address and provides other relevant background information like change in legislation that requires action, current technology is outdated and not meeting needs, service levels are low, resulting in frequent customer complaints and demand for services is changing. Be consistent with the *problem / opportunity* section of the Project Definition Document and Business Case if one or both of these was written. Update the problem / opportunity and provide more detail as required and be concise. Focus on information relevant to the project rather than providing a lot of background information on the organization undertaking the project. Try to keep this section to half a page or less.

GOAL AND OBJECTIVE: This section lists one project goal and the project objectives. The project goal is a clear, concise statement of the project's purpose and desired results. Project objectives are concise statements of what the project must achieve to realize the project goal. Objectives can be thought of as *sub-goals*. Be consistent with the *project goal* and *project objectives sections* of the project definition document and business case if one or both of these was written. The project goal and objectives should not change if they have already been approved. Be concise. Goal statements and objectives are typically each one sentence long.

Identification of goals for PPPs and the prospective benefits from individual projects is expected to provide more certainty in particular, for those local communities whom PPP projects are expected to serve.

These goals and benefits include the following:

- Speedy, efficient and cost effective delivery of projects.
- Value for money for the tax payer, thorough optimal risk transfer and risk management.
- Efficiencies from the integrated design and construction of public infrastructure.
- Creation of added value through synergies built between the public entities and private Sector companies, in particular through integration and cross-transfer of public and private Sector skills, knowledge and expertise.
- Alleviation of capacity constraints and bottlenecks in economy through higher productivity of labor and capital resources in the delivery of projects.
- Competition and increased construction capacity including participation of local investors through joint venture or partnerships with foreign companies.
- Innovation and diversity in the provision of public services.
- Effective utilization of state assets to the benefit of all users of public services.

SCOPE: This section summarizes the scope of the proposed project by providing a list of key activities and deliverables. List (i) the activities the team will do and (ii) the activities the team will not do. Be consistent with the scope section of the Project Definition Document if one was written, but update the scope and provide more detail as required. Check that all work in scope supports the project goal, objectives, and outcomes.

ASSUMPTIONS AND CONSTRAINTS: List the project assumptions and constraints. Be consistent with the Assumptions and Constraints section of the Project Definition Document and Business Case if one or both of these was written, but update the assumptions and constraints and provide more information as required. An assumption is a circumstance or event outside the project that can affect its success and that you believe will happen. Constraints are restrictions or boundaries placed upon the project that limit the choices of the project team.

DELIVERABLES: List each deliverable name with a brief description. This will provide a shared understanding of what is being produced by the team. Deliverables are tangible items that must be produced to complete the project. These can include generic project management deliverables such as weekly status reports as well as items specific to the project.

STAKEHOLDERS: This section lists project stakeholders, or people with an interest in or influence over project work and results. This section also indicates how stakeholders will be impacted on and engaged by the project. Examples of key stakeholders are as follows:

- **Decision-makers:** People with authority and decision-making power over the project.
- **Influencers:** People who influence and advise decision-makers.
- **End users:** People who will use the end product of the project.

OUTCOMES/SUCCESS MEASURES: Provide a list of statements about the impact the project must have on those outside the project to be considered successful and how those impacts will be measured. Be consistent with the *Outcomes / Success Measures* section of the Project Definition Document and Business Case if one or both of these was written. Outcome statements must be consistent with the project goal.

BUDGET SUMMARY: Provide a summary of the project costs detailed in your Project Budget.

HUMAN RESOURCES PLAN: This section contains the results of human resource planning activities completed to support this project. This section describes the roles and responsibilities of the project team, provides their start and finish dates, and provides an organizational chart for the project. Note that standard role descriptions and a standard organization chart are provided in the job aids section. Start and finish dates for resources must be consistent with the project. Try to reflect the overall composition of the team over the life of the project in the Project Plan – not just the team composition for the first stage of work.

KEY CONSIDERATIONS FOR PPP PROJECTS

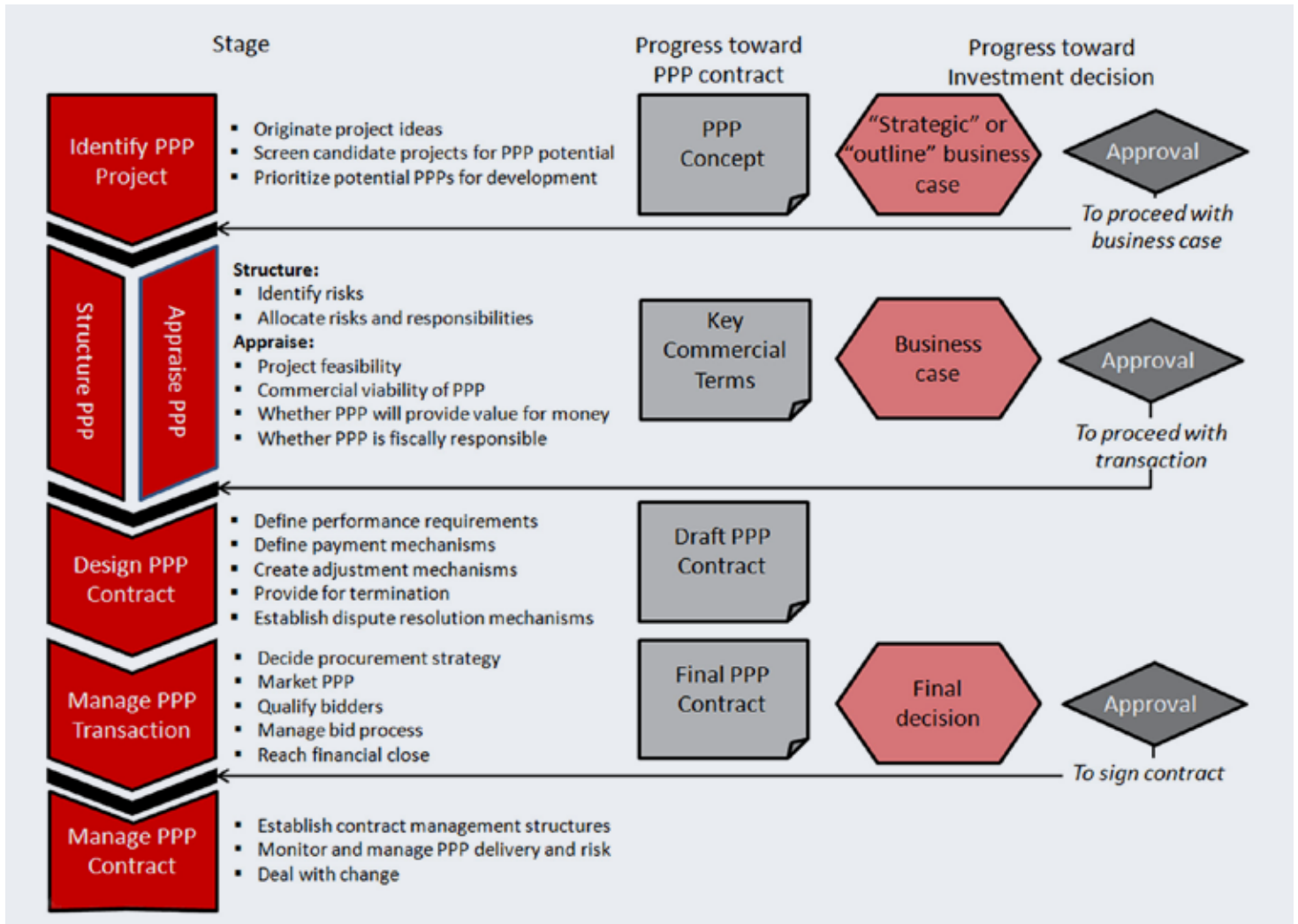
It is important to stress that the project finance structure should be designed to optimize the costs of finance for the project. It should also underpin the allocation of risks between the public and private sectors, as agreed in the PPP contract. In particular, the project financing should ensure that financial and other risks are well managed within and between the PPP Company shareholders, sponsors and its financiers. This should give comfort to the government that the private partner, and particularly its funders, are both incentivized and empowered to promptly deal with problems that may occur in the project. Indeed, to a very large extent, the project finance structure should ensure that the interests of the main lenders to the project are aligned with those of the government. The following are the key considerations before implementing irrigation projects under PPP Projects:

- An agreement to complete the project and a commitment to provide all the funding necessary to complete the project;
- Established demand for the project outputs such that the project will generate sufficient cash to meet all its operating expenses and debt servicing requirements, even if the project fails to perform because of force majeure or for any other reason. This could also be in the form of an agreement by a party purchasing the project output; and
- Assurance for the availability of adequate funds during the Operations Phase of the project to maintain and restore the project in operating condition.

THE PROCESSES IN THE PPP PROJECT LIFECYCLE

As shown in the diagram below, typical stages in developing and implementing a PPP project include:

- **Identifying the potential project**—the first step is to identify projects with PPP potential. Where the Government has already developed sector or infrastructure plans, these could provide the starting point. Often this stage involves developing the proposed PPP to a “concept” stage, and initial screening analysis to assess its potential to create value for money as a PPP. Approval may be required to continue to prepare a more complete “business case” for the project.
- **Structuring and appraising the project**—once a potential project has been identified and initially approved, the next step is typically to study its feasibility from technical, economic, financial, legal, and environmental perspectives. On the basis of that information, the key commercial terms can be developed—including the proposed contract type, risk allocation, and payment mechanisms. A “business case” is often also developed, to demonstrate why the PPP is a good investment decision. The typical appraisal criteria include technical and economic viability, value for money as a PPP, and affordability, as well as likely marketability as a PPP. Approval is typically needed at this stage, based on the analysis in the business case, before going on to prepare for and implement the PPP transaction
- **Designing the PPP contract**—the final step to prepare the PPP for procurement is to draft the PPP contract and other agreements. This involves developing the commercial principles into contractual terms, as well as setting out the provisions for change and how the contract will be managed, such as dispute resolution mechanisms. Often the design of the draft contract is completed in the early stages of the procurement process, to allow for consultation with potential bidders
- **Implementing the PPP transaction**—in the transaction stage, the Government selects the private party that will implement the PPP. This usually involves preparing for and conducting a competitive procurement process. Bidders submit information detailing their qualifications and detailed technical and financial proposals, which are evaluated according to defined criteria—often in a multi-stage process—to select a preferred bidder. The transaction stage is complete when the project reaches financial close.
- **Managing the PPP contract**—once the PPP has reached financial close, the Government must manage the PPP contract over its lifetime. This involves monitoring and enforcing the PPP contract requirements, and managing the relationship between the public and private partners.



The PPP act has laid down a straight forward process for implementing PPP projects to ensure quick execution of projects. The steps are as shown in the diagram below:

- Step 1  **Project Identification, Prioritization and Conceptualization**
- Step 2  **Feasibility Study**
- Step 3  **Tendering**
- Step 4  **Negotiations and Approval by Cabinet**
- Step 5  **Award and Project Signing**
- Step 6  **Financial Close and Project Development**
- Step 7  **Monitoring and Evaluation**



EVALUATION CONSIDERATION FOR PPP PROJECTS

- Is the proposal technically viable? Technical viability will assess technical design and specification of proposed structures, adequacy of soil and hydrological surveys, topographical estimates of irrigable area etc.
- Is the proposal environmentally viable? Does the project design (forthcoming amendments) comply with national and local environmental and planning standards? i.e., prediction, evaluation and mitigation of environmental impacts and address issues specific to an irrigation project (for example, over-exploitation of ground water and accessibility of surface water).
- Is the proposal socially viable? Project must present clear social benefits for the farmers, community, and the society. Identify social risks and propose a risk management.
- Is the proposal economically beneficial to the users? There should be a clear economic rationale for the project where the needs bring larger benefit to the farmers. i.e., the net income effect of an irrigation scheme for farmers, and the economic benefits associated with improved livelihoods and nutrition.
- Is the proposal legally possible? Are there any legal barriers to the project? e.g., legal constraints on the Government's ability to enter into a PPP contract.
- Is there sufficient institutional capacity and capability to undertake the project? e.g. Does the granting authority need to complement the existing institutions with external technical, legal and financial advisers?
- Is the project bankable? Project's suitability for commercial financing that typically includes factors related to the service charges that can be levied by the irrigation service provider on users of the irrigation service and whether project risk allocation protects the irrigation service provider sufficiently.
- Is the project sustainable? The long-term abilities of all parties to the contract (i.e., the public authority which has granted the PPP, the private firm(s) that provide the services, and the beneficiaries of the services) to benefit in a sustained way from the project. For the private sector in particular this implies being able to operate and maintain the scheme profitability.

PPP PROJECT IMPLEMENTATION PRINCIPLES

PPP policy sets out principles that should yield value for money for the Government and its citizens. The key characteristics of PPP projects will include:

- **Value for Money:** the public service provided by the private actor must offer better quality for a given cost or lower costs for a given quality outputs. This is how the policy seeks to maximize user satisfaction and optimize the use of public resources.
- **Transparency:** all quantitative and qualitative information used to make decisions during the evaluation, development, implementation and monitoring stages of a PPP must be made public in accordance with Article 3 of the Transparency and Public Information Access Law.
- **Competition:** competition must be sought to ensure efficiency and lower costs in the provision of public infrastructure and services. Maximizing the benefits of private sector efficiency, expertise, flexibility and innovations. The government must avoid any anti-competitive or collusive behavior.
- **Adequate Risk Allocation:** there must be adequate risk allocation between the public and private parties. This means that the risks must be assigned to the party that has the greatest capacity to manage the risks at a lower cost, considering both the public interest and the project's characteristics. Allocating risks to the party best able to control them.
- **Budgetary Responsibility:** this is defined as government capacity to assume the firm and contingent financial commitments related to the implementation of PPP contracts without compromising the sustainability of public finances or the regular provision of the public service. Achieving long-term affordability within the constraints of budgetary sustainability, potential for returns for the private party and affordability by the users and managing fiscal risks created under PPP contracts within the Government's overall fiscal management framework.
- **The types of PPP arrangements,** as provided in annex 1 of the PPP policy, shall include, but not limited to, management contracts, leases, concessions, Build-Own-Operate-Transfer (BOOT), Build-Own Operate (BOO), Build-Operate-and-Transfer (ROT), Build-Lease-and-Transfer (BLT), Build-Lease Maintain-Transfer (BLMT), Build-Transfer-and-Operate (BTO), Develop-Operate-and-Transfer (DOT), Rehabilitate-Operate-and-Transfer (ROT), Rehabilitate-Own-and-Operate (ROO), Land Swap and output based maintenance contracts.

- **Risk Allocation Structure:** In order to be viable, PPP projects must carefully allocate all relevant risks to specific parties and must determine if a project is financially and commercially viable for the project's given risk allocation structure. The principle that Government will follow in allocating the risks of a PPP project will be to optimize, rather than maximize, the transfer of project risks to the private party. Government will seek to allocate risks to the party that is best able to manage controllable risks; or best able to insure uncontrollable but insurable risks; or best able to bear the financial consequences of uncontrollable and uninsurable risks. This allocation is defined in detail in the contract.

IMPLEMENTATION FRAMEWORK

The Government, in collaboration with other stakeholders, has developed an implementation framework that will include enactment of a new PPP Act 2021, establishment and reconstitution of PPP Committee and the project facilitation fund, creation of PPP Directorate, adoption of appropriate regulations, a prioritized PPP projects implementation program and PPP operating guidelines together with standard bidding documents.

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