LEGAL NOTICE NO. 144

THE WATER ACT

(Cap 372*)*

IN EXERCISE of the powers conferred by section 22 of the Water Act, the Water Resources Authority makes the following Order—

THE SIANY WETLAND CATCHMENT PROTECTION ORDER, 2024

Citation.

1. This Order may be cited as the Siany Wetland Catchment Protection Order, 2024.

Interpretation.

2. In this Order, except where the context otherwise requires—

Cap. 372.

"Act" means the Water Act;

"association" means a water resources users association registered by the Authority in accordance with the Act;

"Authority" means the Water Resources Authority established under section 11 of the Act;

"basin area" means the area designated by the Authority as a basin area under section 24 of the Act;

"Plan" means the Siany Wetland Catchment Management Plan set out in the Second Schedule;

"Protected Area" means the area declared to be a protected area under paragraph 4 and is demarcated for protection and conservation within the Siany Wetland Catchment Management Plan;

"riparian reserve" means land in respect of which management obligations are imposed on users or owners by the Authority due to its proximity to the Protected Area;

"soil and water conservation plan" means soil and water conservation plan as defined in regulations relating to water resources; and

"sub-basin area" means the area designated by the Authority as a basin area under section 24(2) of the Act.

Application of the Order.

3. This Order shall apply to the National Government, national government entities, county governments, county government entities and any other person being a user of water resources and the riparian reserve of the Protected Area.

Declaration of protected area.

4. (1) The Siany Wetland Catchment Protection Area is declared to be a Protected Area for purposes of the Act.

(2) The Siany Wetland Catchment Protection Area shall be as per the extent and description set out in the First Schedule and is demarcated for protection and conservation within the Siany Wetland Catchment Management Plan.

Siany Wetland Catchment

5. (1) The Plan set out in the Second Schedule shall, without prejudice to the provisions of the Regulations made pursuant to the Act,

be the basis for protection, conservation and use of the water resources within the Protected Area. Management Plan.

(2) The Authority shall place signboards and beacons in or near the Protected Area or in appropriate public places frequented by land and water users and at the Authority's offices; displaying up-to-date information about the condition of the water resources of the Protected Area.

(3) The public notices shall contain information regarding the action required of water and land users to conserve and protect the water resources of the Protected Area.

6. A person who contravenes this Order commits an offence and shall, on conviction, be liable to the penalty prescribed under section 147 of the Act. Offence.

FIRST SCHEDULE

THE SIANY WETLAND CATCHMENT PROTECTION AREA

(p.4)



Figure 1: General location of Siany Wetland

SECOND SCHEDULE

THE SIANY WETLAND CATCHMENT MANAGEMENT PLAN

(p. 2,5(1))

PART I: INTRODUCTION

1.1 Citation

This Plan may be cited as the Siany Wetland Catchment Management Plan.

1.2 Acronyms

The following acronyms shall have the following meanings as:

LVSBA	Lake Victoria North Basin Area
RQO	Resource Quality Objective
WRA	Water Resource Authority
WRUA	Water Resource Users Association

1.3 General objectives

The general objectives of this Management Plan are to ensure:

(a) sustainable management and use of water resources within the sub catchment while promoting equitable sharing of water resources;

(b) the conservation of the catchment areas to improve on the water quantity and quality.

1.3.1 Specific Objectives

The specific objectives of this Management Plan are to:

(a) enhance implementation of existing regulations to protect the rights of all users;

(b) promote water, use efficiency that is hydrologically and economically beneficial to domestic, agricultural, and industrial water users and the environment;

(c) identify funding sources to implement water conservation programs that help to enhance water resources; and

(d) provide a framework for undertaking prescribed and proscribed activities within the conservation area that would sustainably protect water resources use and uses.

1.4 Background information on catchment and wetland areas

In the context of water resources, a catchment area is an area of land from which water naturally flows into a water course. A catchment area provides a natural water storage mechanism or facility. During rainfall, the vegetation cover allows the water ample time to infiltrate through the soil and form sub-surface flow that recharges the rivers, springs and groundwater aquifers. Often, sub-surface flow is a relatively slow process, which explains the existence of permanent (perennial) rivers in various areas.

The environmental status and conditions of a catchment influences the quantity and quality as well as sustainability of its water resources; for instance, rivers in a well-maintained catchment often have higher base flows even during the dry season with boreholes in such areas recording good or high yields. However, in poorly maintained and degraded catchments, poor infiltration of rainwater results into rapid surface run-off flowing into the river courses. This often causes flash-floods and large volumes of suspended solids which may aggravate siltation of water infrastructure. Furthermore, rivers in degraded catchment have unsustainable base flows during the dry season, hence prevalence of seasonal rivers.

From the foregoing, catchment areas are vital components in water resource management whose protection is imperative. Particularly, vulnerable catchment areas or water resources such as wetlands and those which serve critical purposes such as groundwater recharge areas require more targeted conservation and protection interventions. Such areas need to be formally and legally delineated and protected from encroachment, pollution, overexploitation and destruction to ensure sustainable management, exploitation and ecological integrity.

1.5 Legal and Policy Framework for Catchment and Wetland Protection

1.5.1 The Constitution of Kenya, 2010

Article 66 of the Constitution provides that the State may regulate the use of any land, or any interest in or right over any land, in the public interest, or land use planning. Furthermore, Article 69 (1) obligates the state to, *interalia*, ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and equitable sharing of the accruing benefits; encourage public participation in the management, protection and conservation of the environment; and eliminate processes and activities that are likely to endanger the environment. Article 69 (2) on the other hand places responsibility on every person the duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources. Further, Article 70 provides a legal framework through which any person may seek redress in case of violation of their environmental rights.

1.5.2 The Water Act (Cap. 372)

The Water Act provides a framework for the regulation, management and development of water resources, water and sewerage services. The Act establishes the Water Resources Authority (WRA) to regulate the management and use of water resources. The Act defines Catchment Area as an area that is part of a basin designated as such under the Act. In particular, section 22 and 23 provides for protection of catchment areas and conservation of ground water. Regulations relating to water resources made pursuant to the Act addresses the management and use of water resources including the manner of identification and protection of vulnerable catchment areas.

1.5.3 The Environmental Management Coordination Act (Cap. 387)

The Environmental Management Coordination Act generally provides for sustainable management and exploitation of wetlands. Specifically, section 42 of the EMCA proscribes certain activities from wetlands and empowers the Minister responsible for environment to declare wetlands as

protected areas and issue specific orders and standards for sustainable management of wetlands.

1.5.4 The Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs), were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. Different countries including Kenya have adopted the SDGs as part of its international obligation, prioritizing the SDG targets as integral part of its development agenda. With regard to water resources, SDG 6 which aims to ensure availability and sustainable management of water and sanitation for all is critical by 2030 in catchment protection agenda.

1.5.5 The Ramsar Convention on Wetlands

The Ramsar Convention on Wetlands is the international Convention that focuses on development of the wetlands policy. Kenya ratified the Convention in 1990. Since then, six Kenyan wetlands have been listed as wetlands of international importance. The convention provides a framework for national action and international cooperation for the conservation and prudent use of wetlands and their resources.

1.5.6 National Policies

The water and wetland resources management and use is also guided by various policies including:

(a) The National Water Policy, 2021 (Sessional Paper No.1 of 2021) which provides a framework for sustainable management and financing of water resources; water harvesting and storage; and for equitable, efficient, and universal access to water supply and reasonable standards of sanitation, for domestic, economic use and ecosystem sustenance.

(b) The National Wetlands Conservation and Management Policy, 2014 (Sessional Paper No.12 of 2014) whose goal is to ensure wise use and sustainable management of wetlands in order to enhance sustenance of their ecological and socio-economic functions for the present and future generations of Kenya.

PART II: BACKGROUND INFORMATION ON SIANY WETLAND

2.0 Siany Wetland

The Wetland was known as a secluded grazing area for the community with no settlements in it. Over the years it has been encroached and degraded by human activities majorly land reclamation for subsistence agriculture, human settlement and set up of investments of varying scope and character. Sections of the Wetland have permanent structures built on it. All these activities have contributed to the degrading of the Wetland with resultant effect of not only polluting the water resources but also drying of springs emanating from the Wetland and deterioration of water quality.

Therefore, this Management Plan shall curb further encroachment on the Wetland and ensure sustainable use of the resource while taking into consideration the environmental and human requirements depending on the Wetland.

2.1 Rationale for Siany Wetland Catchment Protection

The land that covers Siany Wetland was initially reserved as Sianyi grazing area, under Nyamira County Council (L.R NO N/M/MAWAWA/1/403). The community freely grazed their cattle in the area. Over time some members of the community began cultivating and building houses to live in the Wetland. In 2006, Nyamira GK prison was allocated 54 acres of the Wetland, part of which was already occupied by the members of the community. This led to protest by the community and forceful eviction of those who had constructed houses in the Wetland. Nyamira GK prison reclaimed the 54 acres and uses about 30 acres for cultivation of maize and finger millet which is distributed to other prisons. In addition, a case is pending in court in which a member of the community claims 9 acres of the Wetland.

2.2 Location and size

Siany Wetland is located in Nyamira County, North Mugirango Sub County, Mawawa Ward, Monyenkwe 2 Village and borders Nyamira G.K Prison. It is approximately 38 km from Nyamira County headquarters in Nyamira County. The Wetland covers an approximated area of 100 acres, stretching across UTM coordinates 716757.744e, 994782.251n; 716758.111e, 9947841.496n; 716114.615e, 9947929.941n; 716146.638e, 9947780.818n; 716659.853e 9947471.752n, 36m (0˚28 46" S 34˚57 51" e).

2.3 Watershed area

Siany Wetland is in Awach Kabondo, 1HD sub catchment, within WRA Kisii Sub Basin Area and Lake Victoria North Basin Area Kisumu. The Wetland is the source of many springs located all over the Wetland. There is a dendritic drainage system from various parts of the Wetland all flowing through natural and manmade channels that join /to form Sianyi stream that flows out of the Wetland to join Awach Kabondo River.

2.4 Physiography, climate and rainfall

2.4.1 Physiography

Nyamira county lies in two topographic zones between 1,250 m and 2,100 m above sea level. Siany Wetland lies in the low zones that consist of wetlands and valley bottoms while the upper zones are dominated by the hills. The high altitude has enabled the growth of tea which is the major cash crop and income earner in the county.

2.4.2 Climate

The Siany Wetland receives an average annual precipitation ranging from between 1200 mm-2100 mm per annum, the average temperature is 19.4C.

2.4.3 Rainfall

Siany Wetland experiences the bimodal pattern of annual rainfall that is well distributed, reliable and adequate for a wide range of crops. Annual rainfall ranges between 1200 mm-2100 mm per annum. The long and short rain seasons start from December to June and July to November respectively, with no distinct dry spell separating them. The maximum day and minimum night temperatures are normally between 28.7 C and 10.1 C respectively,

resulting in an average normal temperature of 19.4 C which is favourable for both agricultural and livestock production.

2.4.4 Vegetation

There is indigenous and exotic vegetation within the Siany Wetland.

PART III: SITUATIONAL ANALYSIS

3.1 The vulnerability of the water resource

There is intense agricultural practise and settlements that has led to degradation of Siany Wetland. Its riparian and catchment has been encroached by humans through cultivation, livestock grazing, harvesting of indigenous plants and planting of exotic tree species that has resulted into reduced recharge into the ground. The water springs on the Wetland come together to form Konyando Water Stream which drains into the Awach River, whose waters are being used by the larger community including schools and health facilities.

The water sources are polluted by contamination with waste material due to human activities, which poses a great risk to the health of the residents. The cultivation has led to loss of indigenous trees and the drying up of water springs. A spring whose collection box is on a private land neighbouring the Wetland, is used by the community members for water supply for domestic and watering the livestock. The Wetland table is so high such that the Nyamira GK prison dug water drainages to drain excess water within the premises.

3.2 The water resource quality objectives and the current status of the water resource

Section 20 of the Water Act empowers the Authority to prescribe criteria for classifying water resources for the purposes of determining water resources quality objectives for each class of water resource. The Resource Quality Objectives represent the desired status of the resource, covering all aspects of quantity, quality, timing and aquatic biota. The RQOs are different for different classes of water resource. The objectives generally relate to the extent to which the water body is allowed to be adversely impacted by water use with respect to its natural state. Conceptually the RQOs provide a "target" condition of the resources. Management decisions should be made such that the condition of the resource is progressively trending towards the RQO. The status of the resource is a measure of how far the condition of the resource is from the RQO. RQOs shall be determined at the nodes where the Reserve flows are being determined.

The focus for water resources management is the protection of the natural ecological characteristics for ecological, recreational and development of tourism with economic importance. Key water resources issues include:

(a) Water scarcity.

(b) Catchment degradation.

(c) Encroachment of riparian areas and the Wetland, and the land tenure around the Wetland.

(d) Human activities in Siany Wetland affecting the role of Wetland.

(e) Illegal and over abstraction.

Sustainable water resources management will include the cooperation of key stakeholders within the Siany Wetland including state department, WRUA, community members and other stakeholders.

3.3 The class of water resource

The southern shoreline Gucha Migori sub-catchment which Siany Wetland is located can be classified as "Alert" as the available water is at times not of adequate quantity and quality to meet the demand. The water availability is relatively good in terms of quantity and quality in the upper parts of the river but deteriorates as the river flows downstream due to water pollution caused by agricultural chemicals and fertilisers used in farming, deforestation and soil erosion, and changes in precipitation patterns due to climate change.

3.4 Current land use and its adverse impacts

Various land use activities are undertaken in Siany Wetland which impacts it in diverse ways. To ensure protection and conservation of the Wetland, the strategic interventions have to be executed to control the activities and mitigate their impacts. The current status of such activities and impacts are described in the subsequent subparagraphs.

3.4.1 Utilization by public institutions

Nyamira GK prison has constructed structures on the Siany Wetland including iron sheet houses and huts. The facility has a capacity of 50 inmates, currently only 25 inmates present and a staff workforce of 99 workers. The inmate population is expected to rise to 500 when a facility under construction within the Wetland is completed. This is to support decongesting other nearby prisons such as Kisii GK Prison. The prison has a borehole within the Wetland however, the borehole is not operational at the moment.

Within the Wetland, there are public institutions that have been allocated land (i.e. Esianyi Primary School, Mogongo Primary and Girls Secondary Schools, Mogongo Dispensary and a Church). The dispensary, Mogongo Girls Secondary and Primary school are located at a corner of the Wetland which is less marshy, though there are plans to allocate more land to the schools inside the Wetland. Esianyi Primary School is inside the Wetland and is water logged. There are also abandoned construction sites and buildings inside the Wetland.

The developments in the Wetland have continually caused degradation of water resources. The intended expansion of the prison and expected growth of Esianyi Primary will cause further degradation of water quality and quantity.

3.4.2 Human settlement

Siany Wetland is within a predominantly rural setting where the main economic activity is agriculture. Due to the economic gains from agriculture due to low production costs, the area has attracted a lot of farmers with pressure increasing on land availability leading to encroachment on the Wetland and abstraction of water that led to reduced water resources availability downstream.

3.4.3 Exotic Species of Plants

There exist numerous exotic species of trees which are unsuitable in a water catchment area, especially in the Wetland, which include the eucalyptus trees.

PART IV: MEASURES FOR PROTECTION, CONSERVATION AND REHABILITATION OF THE AREA

4.1 Proscribed activities

According to the applicable legal framework, protected areas can be used in a sustainable manner. The activities to be undertaken within the Protected Area are those with zero impact on its ecological status and integrity. Unless specifically approved in writing by the Authority following an application in the specified form, the following activities shall not be undertaken within the Protected Area:

(a) Tillage or cultivation.

(b) Clearing of indigenous trees or vegetation.

(c) Building of permanent structures (especially boreholes and houses).

(d) Disposal of any form of waste.

(e) Excavation of soil or development of quarries.

(f) Planting of exotic species that may have adverse effect to the water resource.

4.2 Conservation Plan

The objective of the conservation plan is to protect the long-term environmental sustainability of the catchment for enhanced water resources yield and maintain its ecological functions in terms of flora and fauna. This will be achieved through:

(a) Demarcation of the Wetland and its riparian zone and fencing it off.

(b) Gazettement of Siany Wetland as a protected water catchment area.

(c) Enforcement of the Siany Wetland Catchment Management Plan.

(d) Control water resources abstraction from the Wetland.

Table 1 : Activities related to conservation plan

Activity	*Sub-activity*	*Timeframe*	*Cost*	*Responsibility*
Demarcate the Wetland and its riparian zone	Undertake cadastral survey of the area and place beacons along the boundary	1 Month	700,000	WRA, Survey of Kenya
	Develop the PDP for the demarcated wetland area	1 Month	350,000	CGL, MoLS, WRA
	Liaise with NLC for the revocation of any privately held title deeds and acquire a title deed (in trust) for the wetland	3 Months	550,000	WRA, NLC

Activity	*Sub-activity*	*Timeframe*	*Cost*	*Responsibility*
	Fence off the demarcated area	1 Month	6,000,000	WRA, Awach Kabondo WRUA
	Place signs and notices to warn the public that the area is a Protected Area	Continuous	250,000	WRA, Awach Kabondo WRUA
Gazette the Siany Wetland as a Protected Area	Assess the status of Siany Wetland	1 month	800,000	WRA
	Create awareness on the status of the wetland	Continuous	500,000	WRA, Awach Kabondo WRUA
	Develop guidelines and conservation plan through stakeholders' engagement	2024	2,500,000	WRA with all stakeholders
	Submit gazettement instrument to the Cabinet Secretary in charge of water	2024	150,000	WRA
Enforce Siany Wetland Catchment Management Plan.	Create awareness to stakeholders on the Wetland guidelines and conservation plan	2024	900,000	WRA
	Enforce Siany Wetland Catchment Management Plan and relevant legislations	Continuous	7,000,000	WRA, National Govt
Control water resources abstraction	Enforce requirements for acquiring water use permits for any abstraction from the Wetland as per the Water Act and the applicable water resources regulations.	Continuous	1,500,000	WRA, Awach Kabondo WRUA
Sub Total			21,200,000	

4.3 Rehabilitation Plan

The objective of the rehabilitation plan is to ensure the Wetland achieves its optimal performance level. This will be achieved through:

(a) removal of all inappropriate/invasive species of plants;

(b) re-vegetation of the Wetland with water friendly/native species of trees and vegetation; and

(c) development of alternative livelihoods to discourage farming within the Wetland.

Table 2 : Activities related to rehabilitation plan

Activity	Sub-activity	Timeframe	Cost	Responsibility
Removal of all inappropriate/ invasive species of plants	Identify and remove inappropriate and invasive tree species from the Wetland	1 Year	500,000	WRA, KFS, NGAO, WRUA
	Exotic species control	Continuous	300,000	WRA, KFS, WRUA
Re-vegetation of the Wetland with water friendly/native species of trees and vegetation	Establish indigenous plants nursery	Continuous	400,000	WRUA, WRA
	Grow live fence on the boundary of the Wetland	Continuous	2,500,000	WRA, KFS, WRUA
	Planting and growing of propagated seedlings (Watering and tending)	1 year	3,000,000	WRUA
Development of alternative livelihoods to discourage farming within the Wetland	Identification and Development of proposals for alternative livelihoods (eco-tourism, bee-keeping, agro-forestry, etc);	1 Year	5,000,000	WRA, WRUA
Sub Total			11,700,000	

4.4 Catchment and Water Resources Monitoring

The objective of the monitoring plan is to collect and analyse catchment and water resources data to provide information on water discharge, water quality and catchment health as a response to human activities within the neighbourhood. This will be achieved through:

(a) Where feasible, establishment of telemetric weather station to monitor precipitation, evaporation, humidity and temperature in the catchment.

(b) If feasible, establishing a miscellaneous river gauging station an upstream River Awach to monitor discharge levels.

(c) Regular monitoring of water quality and discharge of River Awach Kabondo.

Table 3 : Activities related to catchment and water resources monitoring plan

Activity	*Sub-activity*	*Timeframe*	*Estimated Cost (KSh.)*	*Responsible lead*
Where feasible, establish telemetric weather station to monitor precipitation,	Procurement, installation and operationalization of telemetric stations	1 year	600,000	WRA

Activity	*Sub-activity*	*Timeframe*	*Estimated Cost (KSh.)*	*Responsible lead*
evaporation, humidity and temperature in the catchment.				
If feasible, establishing a miscellaneous river gauging station an upstream River Awach to monitor discharge levels		1 year	200,000	WRA
Regular monitoring of water quality and discharge of River Awach Kabondo	Flow measurements and water quality analysis	Continuous	800,000	WRUA, WRA
Sub Total			1,600,000	

4.5 Establishment and operationalization of management structure for Siany Wetland

The objective of the management structure is to ensure that Siany Wetland Catchment Protected Area is managed in a sustainable manner with the involvement of all stakeholders under the leadership and coordination of WRA - LVSBA. This Management Plan envisage a budget of KSh. 21.2 million to implement in the medium term (approximately 5 years). The management will need to raise the funds through various activities and events. This will be achieved through:

(a) Setting up the management structure with defined ToRs and mandates.

(b) Development and implementation of resource mobilization strategies to raise funds for the management and conservation of the Protected Area.

Table 4: Activities related to establishment and operationalization of management structure

Activity	*Sub-activity*	*Timeframe*	*Cost*	*Responsibility*
Setting up the management structure	(vi) Establishment of management committee			
	1 year	100,000	WRA	
	Training of management committee	1 year	300,000	WRA, WRUA
	(vi) Development of resource mobilization strategy	1 year	200,000	WRUA, WRA
Sub Total			600,000	

4.6 Terms of reference (ToR) and mandate of the Management Committee

4.6.1 The terms of Reference (ToR) of the Management Committee shall include but not limited to:

(a) To manage the catchment prudently on behalf of other stakeholders.

(b) To submit quarterly reports to WRA-Athi on all planned and implemented activities.

(c) To develop by-laws and submit a copy to WRA-Athi for approval before implementation.

4.6.2 Mandate and responsibilities of the Committee shall be to:

(a) promote the conservation and protection of the catchment;

(b) promote equitable distribution of the resources within the catchment;

(c) promote socio-economic and environmental sustainability of the catchment;

(d) map out stakeholders and potential donors; and

(e) develop and market resources mobilization strategies.

4.6.3 Source of funds

The Committee shall be non-profit making and non-commercial venture. Therefore, to realize its objectives and execute its mandate, the Management Committee will solicit for funding from well-wishers and other sources to supplement the income that may be derived from activities permitted in a protected area. The envisaged sources of funds include bee keeping, tree nurseries, eco-tourism, sponsors and well-wishers, development partners, WRA/WRUA - (WDC), cultural/sports events amongst others.

4.6.4 Committee linkages and coordination

WRA as the agent of the National Government in the regulation of use and management of water resources will be the coordinator of the Management Committee. The members of the Management Committee will serve on honorary basis as the Committee is a non-commercial venture. The Figure 2 presents the proposed linkages between various stakeholders and the Committee. The arrows indicate the information flow direction. The dotted lines indicate the WRUA can communicate directly to all the stakeholders and vice versa.

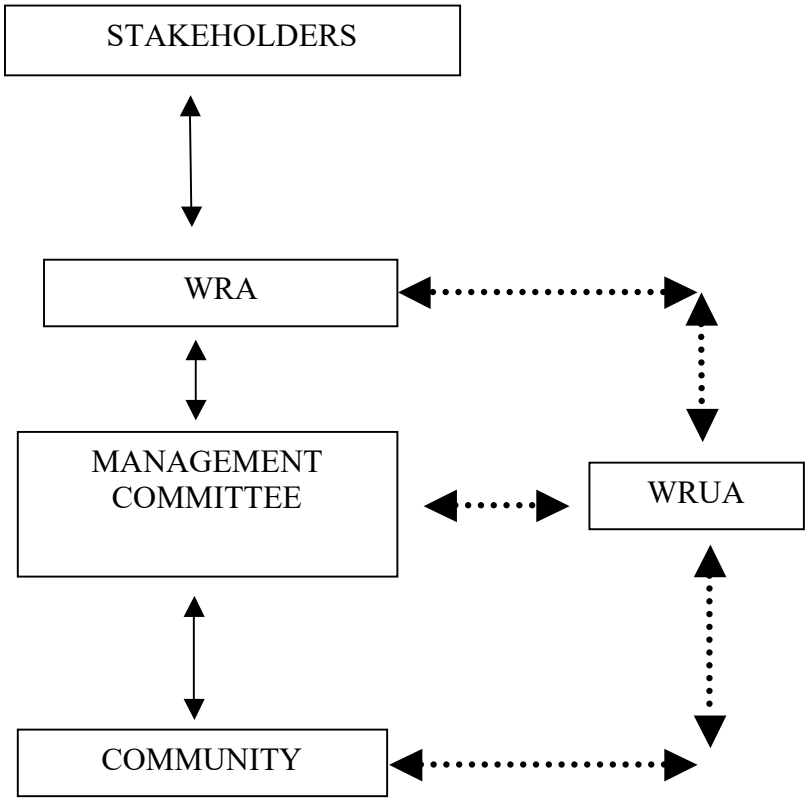


Figure 2: Reporting Linkages for the Management Committee

4.7 Monitoring and Evaluation Matrix

The following matrix will be used for Monitoring and Evaluation to capture detail of the progress of implementation of the planned activities.

Table 4: Monitoring and Evaluation matrix template

Activities	Implementation Schedule		Status (% completion)	Planned Cost Ksh.	Total expenditure to date	Source of funds	Output	Comments
	start date	End date						

Made on the 12th August, 2024.

MOHAMED M. SHURIE,
Chief Executive Officer,
Water Resources Authority.