THE WATER SECURITY ACTION AND INVESTMENT PLAN FOR GREATER KAMPALA

An Integrated Plan for a Water-Secure Metropolitan Area

The Water Security Action and Investment Plan (WSAIP) is a multi-stakeholder plan delivered through a participatory stakeholder empowerment process to address the water security challenges facing Greater Kampala Metropolitan Area (GKMA). The WSAIP presents a framework of approaches and tools designed to support collective planning with evidence to catalyse action and investments. The three overarching objectives of the plan are to:

- Empower stakeholders to understand, prioritise, and monitor environmental threats and the changing landscape of water security
- Provide evidence to catalyse actions and investments that systematically reduce water security risks and increase resilience to water security threats
- Set the agenda for water security to inform environment and water resource goals, actions, and strategies at local and metropolitan level

THE STATE OF WATER SECURITY IN GREATER KAMPALA

- Rapid urbanisation and industrial development within GKMA have contributed to the degradation of environmental assets and ecological services

- Wetland coverage has reduced by 48% from 194 square kilometres in 1996 to just over 100 square kilometres in 2019/2020; and lowland forest coverage has reduced from 7.6% to 0.4% of the total land area

- Over **1.4million** people have no access to adequate clean safe water and sanitation

90% of the population rely on on-site sanitation solutions with limited capacity and infrastructure to manage faecal sludge

- There is deterioration of water quality in the Inner Murchison Bay mostly due to industrial wastewater discharge, the Biochemical Oxygen Demand (BOD) levels averaging around **7.62 mg/l** representing significant levels of pollution

- Flooding is a major risk to livelihoods due to the widespread disruption of economic activities, destruction of property, loss of lives, and outbreak of waterborne diseases following each flooding event. Flood risk is highest in catchments facing severe wetland loss, and is exacerbated by urbanisation which creates impervious surfaces and poor solid waste management practices

- About 4,000 tonnes of solid waste is generated per day but only 50% is disposed of properly; the other 50% is indiscriminately disposed into the environment

- The geographic boundaries of catchments overlap the existing administrative boundaries, creating a difficult regulatory environment which obstructs major advancements in water security

- Availability from water resources surpasses current water demand, however cases of insufficient water supply exist as a result of inadequate infrastructure. Water supply coverage ranges from **85%** in central Kampala to **23%** in western parts of the GKMA

THE CASE FOR IMMEDIATE INTERVENTION

In 20 years, the consequences of inaction are predicted to include: further deterioration of water quality resulting in a **142%** increase in BOD levels across metropolitan river catchment systems, rendering Inner Murchison Bay hypoxic; further reduction in wetland coverage to **64km^2;180%** average increase in flood risk and subsequent economic costs and another 11,000 tonnes of solid waste in the environment, exacerbating surface water pollution and flooding.

THE WSAIP DEVELOPMENT PROCESS

Stakeholder Mobilisation: Over 1,500 stakeholders representing the public sphere (.gov), private sector (.com) and civil society (.org), were consulted, engaged and empowered throughout the plan preparation process.

Situational Analysis: Past and present water security risks, drivers of water insecurity in addition to gaps in the legal and institutional framework, were identified before selecting priority water security action areas.

Socioeconomic Analysis: The benefits of a water-secure future were weighed against the cost of investment to make a case for action vis a vis inaction. By 2040, investment in a water secure future results in GDP increases of **$152** per capita for GKMA residents and $52 per capita for all Ugandans per year. GDP benefits are eight times higher than investment costs; with cumulative benefits of GDP **$22 billion** from 2018 to 2040, compared to cumulative costs of $4.3 billion.

ECONOMIC BENEFITS OF INTERVENTION (US$ MILLION PER YEAR) AT METROPOLITAN SCALE

Intervention Level	Era	Flood Reduction	Wetlands Value	WASH	Water Quality	Total Benefits
50%	Current	11.3	131	717	3.8	864
	Future	13.4	184	1,098	4.0	1,298
100%	Current	16.3	262	1,434	7.7	1,721
	Future	13.4	184	1,098	4.0	1,298

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WATER SECURITY ASSESSMENT, SCENARIO DEVELOPMENT AND TOOLS

- An evidence-based decision support framework was developed to help stakeholders make transparent and informed decisions regarding investments in water security
- The decision support framework consists of two tools:

The Scenario Planning Tool (SPT) is a visual spatial tool designed to provide screening-level information on key water security threats

The Water Security Investment Model (WaSIM) is a multi-criteria Decision Analysis Screening Tool that utilises an Excel-based platform to present information available in the SPT, along with information on the characteristics of selected investment actions to allow stakeholders to make informed decisions about prioritisation of investment projects

STRATEGIC GOALS

The WSAIP sets six strategic goals to support the realisation of a water-secure future in the short (2025), medium (2030) and long (2040) term.

Goal 1 Institutionalise water security and decision support tools in order to translate the concept of water security into practice	**Goal 2** Reduce amount of pollution loadings entering Inner Murchison Bay in order to increase Dissolved Oxygen by 85% by 2040	**Goal 3** Increase water supply and sanitation coverage in poorly served areas by 50% by 2030
Goal 4 Dampen flood peak flows in flood hotspot areas by 40% by 2040, through sustained conservation and rehabilitation of natural ecosystems, and investment in blue-green infrastructure	**Goal 5** Reduce the volume of solid waste entering the environment by increasing the current rate of solid waste collection and recycling by 50% by 2030	**Goal 6** Strengthen the institutional framework to enable multi-sectoral inter-institutional collaboration to address water security risks at the hydrologic/environmental systems scale

PRIORITISED PIPELINE OF INVESTMENT OPPORTUNITIES

Type	Project	Duration (Years)	Investment (US$ Million)
Core Projects	Greater Kampala integrated urban catchment management	5	23.2
	Scaling up solid waste management options in Greater Kampala	5	70.23
	Accelerating access to adequate and equitable water supply	10	151.8
	Greater Kampala urban forest ecosystem management	5	12.43
	Public private partnerships for faecal sludge management	10	98.77
	Greater Kampala wastewater management project	5	50.00
	Sustainable management of urban wetland systems	5	81.96
	Strengthening industrial compliance to laws, regulation-sand standards	5	8.51
	Retrofitting informal settlements to enhance water security	5	30.14
	Integrated urban flood risk management	5	84.12
Enabling-Projects	Greater Kampala water security observatory	5	12.40
	Citizens environmental monitoring and reporting app – Spot it? Say it!	5	2.20
	Operationalising payment for ecosystem services in urban setting	5	6.81

RECOMMENDATIONS

- Create a permanent inter-governmental secretariat on water security
- Invest in research and data acquisition to support evidence-based planning
- Establish a Water Security Observatory
- Establish a framework for the funding and implementation of multi-stakeholder water security investment actions and projects

NEXT STEPS

- Operationalise the proposed multi-sectoral water security governance structure committees
- Establish a framework for the funding and implementation water security investment actions and projects
- Invest in the enhancement and expansion of the Water Security Decision-Support Tools
- Invest in capacity building for the Water Security Technical Unit and local analysts
- Establish a bi-annual Water Security Forum to foster dialogue

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