

Kenya Pre Plan for Maji Plus: Climate Resilient Schools Project (Maji Plus – CRESP)

What is the Global Alliance implementation planning process?

This process aims to co-develop with implementing countries, a high-level, strategic pre-plan for a national scale programme linked to the Alliance's Policy Basket.

The Global Alliance will use these pre-plans to identify concrete partnership opportunities among its members, looking at providing financial, technical or knowledge support in alignment with the country's programme priorities.

The pre-plan provides an outline of how the country intends to translate a national policy commitment into practice and move forward at programme level. The Pre-plan is intended to be a living document. After being drafted and validated by the implementing country, it will be revised and expanded through subsequent steps of the Alliance process, in collaboration with relevant partners (Alliance members), into an implementation roadmap. The Global Alliance's Support Mechanism, along with other members, will provide support throughout these steps.

Front page information

Country:	Kenya
Title of the programme:	Maji Plus: Climate Resilient Schools Project (Maji Plus – CRESP)
Date of last update:	September 7, 2026
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Executive Summary

- a) **Country:** Kenya
- b) **Programme name:** Maji Plus: Climate Resilient Schools Project (Maji Plus – CRESP)
- c) **Policy Instruments:** [Access to basic drinking water and sanitation services, and hygiene facilities](#); [School meals programmes](#); [Pro-poor access to agricultural inputs, and climate resilient technologies](#); [Public works, employment guarantee schemes and direct job creation including community development programmes](#);
- d) **Core challenge:** Kenya's 23 ASAL counties, covering 89% of the country, face persistent water crises that undermine education, health, and livelihoods. Approximately 60–70% of ASAL schools lack reliable water access, forcing dependence on costly emergency trucking. Children spend 1–3 hours daily collecting water, driving absenteeism; waterborne diseases account for 30–40% of illness-related school absences. Schools fail to meet SPHERE minimum WASH standards.
- e) **Main objective/vision:** This project, which focuses on rainwater harvesting for schools in these regions, aims to provide a sustainable and reliable water source. Improving access to water in educational institutions seeks to reduce the vulnerability of local communities to the impacts of drought, ensuring that schools have enough water for drinking, sanitation, environmental conservation and other essential needs. In the long term, this initiative will contribute to reducing the overall burden of drought in the ASALs, improving health outcomes, supporting local economies, and fostering greater resilience in the face of climate change.
- f) **Programme description** The programme installs climate-resilient rainwater harvesting and storage systems (including low cost, community reproducible, and easily maintained cisterns built with local construction materials, alternatively 100-150m³ cisterns, elevated tanks, solar-powered pumping), rehabilitates and drills boreholes, constructs WASH and handwashing facilities, establishes school kitchen gardens and tree nurseries, deploys digital climate information hubs, and builds institutional capacity through training of water management committees and coordination structures across all 23 ASAL counties.
- g) **Programme status:** New programme. Concept submitted by NDMA on 23 March 2026. Feasibility study and detailed design pending, work ongoing for a small-scale pilot and learning phase to develop cost assessment, methodology, train-the-trainer capacity building, and protocol development.
- h) **Programme policy reference:** Aligned with Kenya Vision 2030 (Social Pillar), MTP IV 2023–2027, the Bottom-Up Economic Transformation Agenda (BETA), NDMA Strategic Plans 2023–27, and the Constitution of Kenya (Articles 43 and 53). Supports County Integrated Development Plans (CIDPs) across ASAL counties.
- i) **Target population:** Approximately 320,000 primary pupils and 80,000 secondary learners across 1,400 schools in 23 ASAL counties. Secondary beneficiaries include 20,000 school staff and surrounding communities. Special emphasis on girls and adolescent learners (menstrual hygiene management) and children with disabilities.

- j) **Implementation timeline:** Pre-implementation learning pilot and feasibility study in Year 1. Full scale-up 3 years after full approval and financing, with phased implementation: front-loaded infrastructure installation in Years 2-3; capacity building, monitoring, and institutionalization throughout.
- k) **Total financial envelope and domestic financial commitment:** Learning, design and pilot Phase 1 estimated around 600.000 to US\$ 800.000 to be provided by Alliance partners as financial grants and/or in-kind contributions. Scale-up Phase 2: estimated at KES 10,537,560,000 (approximately USD 81 million). Phased as FY2: US\$ 32m, FY2: US\$ 27m, FY4: US\$ 22m. Source of financing for Phase 2: Government of Kenya and AfDB, especially through multilateral finance.
- l) **Key financial support needs** Concessional lending from MDBs for capital-intensive water infrastructure; grant financing or direct assistance and in-kind contributions for learning pilot implementation, feasibility studies, detailed design, capacity building, and M&E. Initial pilot and learning phase estimated at US\$ 600.000 to 800.000 with an indicative extra USD 2-4 million for extension of the pilot to full set of interventions and a larger subset of target schools.
- m) **Key technical support needs:** Specialized expertise in low-cost, community reproducible cisterns, community mobilization, renewable energy systems, smart monitoring technologies, climate-resilient water infrastructure engineering, WASH design (gender-sensitive/disability-inclusive), hydrogeology, climate-smart agriculture, and environmental/social safeguards.
- n) **Key knowledge support needs:** Capacity building for 700 water management committees, county implementers, and school communities. Peer learning on school-based rainwater harvesting at scale and school feeding linked to local production. Reference model: Brazil's Cisterns Program.
- o) **Partners already involved in the initiative (where relevant):** (potential financing, pending National Treasury approval); African Development Bank, Green Climate Fund (GCF). UNICEF (WASH in schools assessments in ASAL counties). Pilot learning and capacity building: FAO, Government of Brazil, Government of India, WFP, Rockefeller Foundation.
- p) **Alignment with 2030 Sprints (when applicable):** This program directly advances the Water Access and School Meals 2030 Sprints commitments under the Global Alliance against Hunger and Poverty, and by its cross-cutting nature It addresses multiple SDGs simultaneously (SDGs 1, 2, 3, 4, 5, 6, 7, 8, and 13).
- q) **Strategic importance:** Water insecurity in ASAL schools perpetuates intergenerational poverty cycles, as educational disruptions undermine human capital development in Kenya's most marginalised regions. This programme enables a strategic shift from reactive, costly emergency water trucking to long-term climate resilience at the community level through durable low cost infrastructure which the community can replicate spontaneously beyond schools, to farmsteads and households. It reflects strong national ownership across multiple government frameworks and generates meaningful youth employment. The programme is scalable and, if successful, could serve as a model for climate-resilient school infrastructure across Sub-Saharan Africa.

Section 1: “The destination” - Plan Intent

1.1 Programme objectives and outcomes

a) Vision and objective:

The programme aims to strengthen climate-change resilience and boost food security, health and education outcomes in Kenya's 23 Arid and Semi-Arid Land (ASAL) counties by using schools as an strategic entry point for scalable, low cost, climate resilient, and community-reproducible water access technologies, unlocking the largely untapped potential of rainwater harvesting and sustainable water management systems.

In so doing, Maji-Plus will reduce the vulnerability of local communities to the impacts of drought, ensuring that schools have enough water for drinking, sanitation, nutritious and locally prepared school meals, environmental conservation and other essential needs. It will also foster inclusive socio-economic development, youth employment, an improved learning environment and support local economies.

b) Program Relevance and theory of change

This programme directly addresses drought risk management by enabling a strategic shift from reactive, costly emergency response to proactive, long-term climate resilience. It aims to address critical gaps in water access and climate-resilient infrastructure in ASAL schools by unlocking the largely untapped potential of rainwater harvesting and sustainable water management systems.

By investing in durable rainwater harvesting and storage infrastructure, the programme will reduce the significant public resources currently spent on emergency water trucking during drought periods, which often exceeds KES 5–10 million annually per county.

This infrastructure will ensure schools have reliable year-round water access, mitigating the education disruptions, learner absenteeism, and health burdens caused by water scarcity and waterborne illnesses. In addition, a consistent and reliable water supply is essential for sustaining school meal programmes, which are frequently disrupted by water shortages.

In doing so, the programme tackles poverty and hunger by strengthening the foundational human capital development that breaks intergenerational poverty cycles. Improved water access enhances learner health and reduces time spent on water collection, thereby improving educational outcomes and future economic opportunities for children in marginalized ASAL communities, ultimately contributing to national targets on drought resilience and inclusive development.

Further, **schools present a strategic entry point for scalable climate-resilient solutions.** As demonstrated by Brazil's successful Cisterns Program, parents, teachers, and the overall community can become investment in the installation, construction, maintenance and water management of the school installations, and acquire the interest, knowledge and motivation to spontaneously replicate low-cost solutions (i.e.

subsurface cisterns paired with roof rainwater harvesting systems) in their homes and farms.

In the long term, this initiative will contribute to reducing the overall burden of drought in the ASALs, improving health outcomes, supporting local economies, and fostering greater resilience in the face of climate change.

Expected Impacts on youth employment and socioeconomic inclusion. This programme will generate meaningful youth employment across Kenya's ASALs through multiple interconnected pathways. Young people will gain direct employment in constructing rainwater harvesting and water development infrastructure as masons, plumbers, electricians, technicians and labourers, acquiring valuable technical skills while earning immediate income.

The community-supported school meals programmes enabled by reliable water access will create ongoing jobs for youth in food production, food preparation, kitchen management, and meal distribution. Youth will also establish agribusiness enterprises supplying fresh produce and food to schools, leveraging on-site water to cultivate kitchen gardens and enter into supply contracts that guarantee market access. Livestock and poultry value chains present additional opportunities, with youth raising indigenous chickens or small livestock to meet school feeding demand for protein.

The programme further creates roles in the digital economy, training young people as Community Digital Champions who monitor water systems, manage digital payment platforms, and provide ICT support to schools.

Beyond construction, youth can form maintenance enterprises offering routine cleaning, repair, and water testing services to schools, generating sustainable self-employment while ensuring infrastructure longevity. By strategically linking youth to complementary initiatives the programme ensures participants access mentorship, financing, and business development services. Through this comprehensive approach, water infrastructure investment becomes a catalyst for economic transformation, creating dignified work that keeps youth engaged in their communities while building long-term climate resilience.

c) ***Intended outcomes*** (a full program logical frame is provided in Annex 1):

- **Outcome 1:** Targeted schools have year-round access to safe and adequate water for drinking, sanitation, and productive uses, reducing learning disruptions and health risks associated with water scarcity. *Indicator:* "Percentage of schools with functional, climate-resilient water systems providing a reliable year-round water supply."
- **Outcome 2:** Improved hygiene practices and sanitation standards in schools, resulting in reduced incidence of waterborne and hygiene-related illnesses and improved student attendance. *Indicator:* "Percentage of targeted schools with functional handwashing facilities and safe water management practices in place."

- **Outcome 3:** Schools adopt sustainable food production and greening practices that enhance nutrition, environmental learning, and local climate adaptation capacity. *Indicators:* percentage of schools operating functional kitchen gardens, local meal preparations and tree nurseries; tree survival rate after 12 months; climate hubs established.
- **Outcome 4:** School and community management structures effectively operate and maintain water, sanitation, and environmental systems, ensuring sustainability beyond the project lifecycle. *Indicator:* "Percentage of schools with trained and functional management committees overseeing operation and maintenance."
- **Outcome 5:** Improved access to safe water, sanitation, and climate-resilient infrastructure enhances participation, retention, and wellbeing of girls, children with disabilities, and vulnerable learners. *Indicator:* "Increase in attendance rates among girls and vulnerable groups in targeted schools."

d) *Link to national strategies and frameworks:*

The Maji Plus–Climate Resilient Schools Programme directly contributes to Kenya's national development priorities as articulated in the Kenya Vision 2030, which identifies access to quality education, water security, and climate resilience as key drivers of socio-economic transformation. The programme supports Vision 2030's Social Pillar objective of improving education outcomes while enhancing equitable access to basic services in marginalised regions, particularly the Arid and Semi-Arid Lands (ASALs). Moreover, education and access to safe water are constitutional rights under the Constitution of Kenya 2010, obligating government institutions to ensure equitable service provision.

The project is also aligned with the Fourth Medium Term Plan (MTP IV) 2023–2027, and the Bottom-Up Economic Transformation Agenda (BETA), which prioritise climate-resilient infrastructure, sustainable water resource management, and human capital development. By strengthening water access in schools, the programme will contribute to national targets on drought resilience and inclusive education aligning with NDMA strategic plans 2023-27. The top priority of BETA is jobs for the youth.

At county level, the intervention supports County Integrated Development Plans (CIDPs) across ASAL counties, which consistently prioritise expansion of water harvesting and storage infrastructure; improvement of school learning environments; climate adaptation and drought risk reduction; and reduction of expenditure on emergency water trucking.

The proposed programme aligns with the education and water sector strategic objectives. Within the education sector, the project advances objectives outlined under the Ministry of Education (Kenya) sector strategy, particularly: improving learner retention and completion rates; enhancing equitable access to education in ASAL counties; and providing safe and inclusive learning environments.

Within the water and climate resilience sectors, the programme aligns with priorities of the Ministry of Water, Sanitation and Irrigation (Kenya), including increasing access to safely managed water services; promoting rainwater harvesting and decentralized water systems; strengthening climate-resilient community infrastructure. Expected sector outcomes include increased access to safe water in schools; reduced climate-related education disruptions; improved gender parity and learner wellbeing; and strengthened institutional resilience to drought.

Finally, the plan delivers on Kenya's Statements of Commitment to the Global Alliance against Hunger and Poverty, through which Kenya recognized the need to mobilize partnerships and institute mechanisms towards ending climate related crises such as development of in situ and ex situ rainwater harvesting innovations, initiatives and investments boosting drought preparedness, response and resilience.

1.2. Programme interventions and focus

a) ***What are the intended interventions/outputs for this programme?***

Key activities include the design and installation of climate-resilient water supply systems such as water harvesting infrastructure, storage and distribution systems, water treatment solutions, and handwashing facilities to improve health and hygiene outcomes. The project will also support school kitchen gardens, tree and vegetable nurseries, and tree planting initiatives to enhance ecosystem restoration, nutrition, and environmental learning. Renewable energy solutions and smart monitoring technologies will be deployed to improve the efficiency and sustainability of water and sanitation operations.

The project further includes strengthening school and community management structures through capacity building, establishing digital climate information hubs, and enhancing coordination, partnerships, monitoring, evaluation, learning, and knowledge management systems. The scope is limited to delivering and operationalizing school-based water, sanitation, environmental restoration, and climate resilience interventions, while excluding large-scale infrastructure development beyond these areas.

A detailed list of activities and outputs is provided in Section 3.

b) ***Target population:***

The primary beneficiaries of the Maji Plus–Climate Resilient Schools Programme are learners and school communities located in public primary and secondary schools within ASAL counties experiencing chronic water shortages and climate-related disruptions. The specific target groups include pupils and students enrolled in public primary and secondary schools; teaching and non-teaching staff working within beneficiary schools; school management committees and Boards of Management. Also surrounding communities will benefiting indirectly from improved water availability and climate-resilient school environments.

Approximately 320,000 primary school pupils and 80,000 junior secondary learners across 1,400 schools will directly gain from rainwater harvesting systems that

provide consistent water for drinking and sanitation. Secondary beneficiaries include an estimated 20,000 school staff, neighbouring households, and wider communities who will benefit from improved water availability, healthier sanitation conditions, and enhanced local resilience. The programme is scalable and may expand in subsequent phases across additional ASAL counties.

Special emphasis will be placed on girls and adolescent learners requiring adequate WASH services for menstrual hygiene management, and schools located in drought-prone and water-insecure areas. The availability of safe water supply will support vulnerable households dependent on school feeding and education support systems.

From a preliminary assessment, it is estimated that 1400 schools will be targeted by the programme in counties facing extreme and recurrent water shortages, namely Turkana, Mandera, Wajir, Marsabit, Garissa, Baringo, and West Pokot. It also covers semi-arid counties, including Kitui, Machakos, Makueni, Embu, Tharaka Nithi, Kajiado, Samburu, and Elgeyo Marakwet, which experience pronounced seasonal water stress. In addition, the project will extend to coastal counties, including Kwale, Kilifi, Tana River, and Lamu, where increasing climate variability is intensifying dry spells despite proximity to the ocean.

Additional clusters include Narok, Taita Taveta, Meru, and Machakos, which face a combination of semi-arid conditions and recurrent drought stress, as well as relatively fertile counties such as Nakuru and Nyeri that nonetheless experience periodic water scarcity affecting agricultural productivity.

1.3 Strategic relevance and links to the Global Alliance's mission, approach and other SDGs

- a) **Alignment with the Global Alliance's mission and approach:** The programme directly contributes to the Alliance's mission of eradicating hunger and poverty (SDGs 1 and 2) and reducing inequalities (SDG 10) by addressing structural water insecurity that perpetuates poverty cycles in Kenya's most marginalised communities. The intervention reflects the Alliance's principles: it is anchored in national ownership (aligned with Kenya's Vision 2030, MTP IV, NDMA strategic plans, and CIDPs), uses evidence-based policy design (drawing on the experience of Brazil ("Cisterns program") and other similar experiences, national drought early warning data, DHS surveys, and sector assessments), gives due consideration to people in vulnerable situations (specific focus on girls, children with disabilities, pastoral communities), and involves inclusive dialogue (stakeholder consultation at national and county levels, school management committees, community structures).
- b) **Policy Instruments:** The programme is linked to the following instruments from the Alliance's Policy Basket:
 - i. [Access to basic drinking water and sanitation services, and hygiene facilities](#)
 - ii. [School meals programmes](#)

- iii. [Pro-poor access to agricultural inputs, and climate resilient technologies](#)
- iv. [Public works, employment guarantee schemes and direct job creation including community development programmes](#)

The core of the programme is directly aligned with the WASH instrument through its large-scale investment in rainwater harvesting, water storage, distribution systems, and sanitation infrastructure across 1,400 schools. The school meals linkage arises from the programme's investment in school kitchen gardens, agroforestry, and sustainable water access that enables school feeding programmes which are currently frequently disrupted by water shortages. The agricultural inputs and climate resilient technologies instrument is relevant through the climate-smart agriculture components (kitchen gardens, nurseries, tree planting, irrigation scheme expansion) and the deployment of solar-powered systems and digital climate information hubs. The public works instrument is relevant as the programme's construction phase will generate direct employment for youth as masons, plumbers, electricians, technicians and labourers, with longer-term employment in maintenance enterprises, food production, and digital monitoring roles.

- c) ***Alignment with 2030 Sprints:*** While Kenya has not been an original subscriber of the Water Access sprint, its Statement of Commitment recognized the need to "mobilize partnerships and institute mechanisms towards ending climate related crises such as development of in situ and ex situ rain water harvesting innovations, initiatives and investments boosting drought preparedness, response and resilience". This program directly advances the Water Access and School Meals 2030 Sprints commitments under the Global Alliance against Hunger and Poverty.
- d) ***Critical synergies, impacts and interlinkages:*** The programme has significant linkages to climate resilience and adaptation (SDG 13), as it addresses drought vulnerability through durable infrastructure designed to withstand climate shocks, digital climate information hubs, and school-based environmental stewardship. It contributes to gender equality (SDG 5) through gender-responsive WASH facilities and menstrual hygiene management. Nutrition (SDG 2) is addressed through school kitchen gardens and enabling consistent school meal programmes. Clean water and sanitation (SDG 6) are a core outcome. Access to sustainable energy for all (SDG 7) is advanced through the solar panel installation component, bringing light and power to off grid schools and disadvantaged communities. Quality education (SDG 4) is advanced through improved attendance, reduced absenteeism, and healthier learning environments. Decent work (SDG 8) benefits arise from youth employment in construction, maintenance, agribusiness, and digital roles.

Section 2: “The point of departure” - Background and Current Status

2.1 Core Challenge and key drivers

Climate change and the worsening droughts in the ASALs. Kenya's Arid and Semi-Arid Lands (ASALs), which cover about 89%¹ of the country and host nearly 38%^{2,3} of the population, continue to experience persistent drought emergencies that regularly push vulnerable households into crisis or emergency food insecurity levels^{4,5}. Livelihoods are predominantly dependent on rain-fed pastoralism and subsistence agriculture, sectors highly sensitive to climate variability⁶.

Recent Climate Change trend analysis, based on government and NDMA drought early warning data⁷, **shows increasing temperature levels, more erratic rainfall patterns, and more frequent drought cycles over the past decades.** Particularly all 23 ASAL counties in Kenya showed a temperature increase of between 0.5°C and 1.9°C over the last 50 years, with Baringo County warming to 1.8°C between 1960 and 2014, surpassing the 1.5°C limit of the Paris Climate Agreement. **Failed or delayed rainy seasons repeatedly lead to livestock losses, declining agricultural productivity, water scarcity, and population displacement.** During the 2020-2022 drought, over 2.6 million heads of livestock died and crop losses in the 23 ASAL counties estimated at approximately Sh11 billion (about USD 80 million). In December 2025, worsening drought conditions have forced over 120,000 residents in Mandera County relied on emergency water trucking, with projections indicating this number could rise. Across the ASALs trekking distances to watering points are 89 percent longer than the long-term average⁸. These shocks directly affect education outcomes, as children, particularly in pastoral communities, miss school during migration periods or spend substantial time collecting water. Limited investment in water infrastructure, education facilities, and social services has further constrained adaptive capacity across ASAL communities.

¹ Akuja, T. E., & Kandagor, J. J. (2024). *Climate Smart Agriculture in Kenya's ASALS: Gaps and Barriers in Policy Development and Implementation*. *African Journal of Climate Change and Resource Sustainability*, *3*(1), 1–10. <https://doi.org/10.37284/ajccrs.3.1.1690>

² Ndung'u, R. M. (2023). *Challenges and Opportunities in Management of Intercommunal Conflicts in Kenyan ASAL Region*. *Journal of Central and Eastern European African Studies*, *3*(3), 111–124.

³ Africa Research and Impact Network. (2024, September 30). *Contextualising Pathways to Resilience in Kenya's ASALs under the Big 4 Agenda*. ARIN. <https://www.arin-africa.org/2024/09/30/contextualising-pathways-to-resilience-in-kenyas-asals-under-the-big-4-agenda/>

⁴ National Drought Management Authority. (2026, February 18). *Government Releases KSh 778 Million to Cushion Vulnerable Households Against Worsening Drought*. NDMA. <https://ndma.go.ke/government-releases-ksh-778-million-to-cushion-vulnerable-households-against-worsening-drought/>

⁵ World Health Organization Regional Office for Africa. (2026, January 22). *Drought leaves over two million vulnerable to health and nutrition crises in Kenya*. WHO Afro. <https://www.afro.who.int/pt/node/22733>

⁶ Alliance Bioversity International & CIAT. (2024, November 7). *Assessing Resilience Gaps in Kenya's Drought-Hit Turkana*. <https://alliancebioversityciat.org/stories/strengthening-future-assessing-resilience-gaps-kenyas-drought-hit-turkana-west-pokot>

⁷ NDMA. (2024). *Short Rains Food and Nutrition Security Assessment Report*

⁸ Kihaki, M. (2026, February 11). *Thousands of pupils skip class as drought deepens education crisis*. *The Standard*. <https://thestandard.ke/business/education/article/2001540702/thousands-of-pupils-skip-class-as-drought-deepens-education-crisis>

Despite sustained State interventions and investment, official data indicate that around 20 million Kenyans still lack access to basic drinking water, and many rural households continue to travel long distances or rely on seasonal and unreliable sources⁹. **According to UNICEF Kenya, only 59 per cent of Kenyans have access to safe drinking water, while 9.9 million people drink directly from contaminated surface water sources.** The situation is particularly acute in Northern Kenya, where large parts lack access to safe drinking water for both people and livestock, leading to population displacement as families' cross borders in desperate search of water and pasture. The widespread water insecurity directly translates into a crisis within the education system, where schools are not spared from the struggle for this essential resource.

Schools without water. In the ASAL context, schools should function as resilient community hubs that support learning, nutrition, health, and climate adaptation. However, schools remain highly exposed to climate shocks. Recurrent droughts frequently disrupt school feeding programmes and increase household vulnerability, leading to temporary withdrawals of children from school.

Recent sector assessments indicate that approximately **60–70 per cent of schools in ASAL counties lack reliable access to safe and sustainable water sources**¹⁰, forcing schools to depend on seasonal supplies, unsafe water points, or costly emergency water trucking during drought periods.

The absence of adequate water services directly affects learners' participation and performance. In many communities, children, particularly girls, spend **up to 1–3 hours daily collecting water**, resulting in lost instructional time, fatigue, and irregular attendance. Water scarcity also exacerbates gender inequalities: studies show that **girls' absenteeism increases significantly during menstruation** where schools lack adequate water, sanitation, and hygiene (WASH) facilities, contributing to higher dropout rates in upper primary and secondary education.

Health impacts further compound the challenge. Waterborne diseases such as diarrhoea remain among the leading causes of school absenteeism in ASAL regions, where an estimated **30–40 per cent**¹¹ of **illness-related absenteeism** is linked to unsafe water and poor sanitation conditions. Consequently, many learners experience ineffective schooling, reduced concentration, and persistently low academic performance, reinforcing long-term cycles of poverty and vulnerability.

2.2. Relevant national experience:

Kenya has implemented a wide range of policy, infrastructure, and resilience interventions to address chronic water shortages in Arid and Semi-Arid Lands (ASALs).

⁹ World Health Organization Regional Office for Africa. (2026, January 22). *Drought leaves over two million vulnerable to health and nutrition crises in Kenya*. <https://www.afro.who.int/pt/node/22733>

¹⁰ UNICEF (2021–2023). *WASH in Schools and Climate Resilience Assessments in ASAL Counties, Kenya*. Government of Kenya & Ministry of Education Kenya (2018). *National School WASH Assessment Report*.

¹¹ 2022: UN-Water. Summary progress update 2021: SDG 6 – water and sanitation for all. https://www.un-water.org/sites/default/files/app/uploads/2021/12/SDG-6-Summary-Progress-Update-2021_Version-July-2021a.pdf

Despite measurable progress at national level, official statistics show persistent disparities in rural and ASAL counties, confirming that water insecurity remains a major development challenge.

According to the Kenya National Bureau of Statistics (KNBS) and the 2022 Kenya Demographic and Health Survey, about 80.4% of Kenyan households have access to improved drinking water sources, up from lower coverage levels in previous decades. However, access remains highly unequal: only 56% of rural households use improved water sources, compared to much higher coverage in urban areas, with ASAL counties among the least served.

Trend analysis further shows structural limitations in water service delivery. Access to piped water has stagnated or declined over time, falling from about **30% of households in 2009 to 25.3% in 2022¹²**, while rural piped water access remains as low as **15.3%**. This indicates that population growth and climate stress have outpaced infrastructure expansion, particularly in remote dryland regions.

To address these gaps, the Government of Kenya has prioritised water development under long-term national frameworks such as **Vision 2030**, which includes large-scale investments in dams, water storage, boreholes, and supply systems targeting ASAL areas. Planned interventions include construction of multi-purpose dams and water storage infrastructure with over 4 billion cubic meters combined capacity, aimed at supporting domestic use, livestock, and irrigation in drought-prone regions.

The government has recently accompanied the results of a small proof of concept experience using community-built cisterns in schools which has been implemented in collaboration with WFP, the Rockefeller Foundation and the government of Brazil. For Maji-Plus, NDMA has undertaken the programme concept development, preliminary assessments informing the school targeting, consultations with the Ministries of Water, Education and ASAL Development, and stakeholder engagement in proposal preparation. A pilot and learning phase, including partial implementation in up to 100 schools, detailed designs and feasibility studies are foreseen as the first implementation activities. (see section 4).

2.3 Existing environment, resources and capacities

- a) **Operating environment:** Kenya is implementing MTP IV (2023–2027) and the Bottom-Up Economic Transformation Agenda (BETA), both of which prioritise climate-resilient infrastructure. ASAL counties experience increasing climate variability, with drought cycles becoming more frequent and severe. The political environment is supportive, with water development prioritised under Vision 2030 and CIDPs. The Constitution of Kenya 2010 (Articles 43, 53) enshrines rights to water and education, providing a strong legal foundation. However, structural market and equity failures limit private-sector delivery in remote ASAL areas, making public investment essential. Counties face a growing fiscal burden of emergency water trucking, creating urgency for sustainable solutions.

¹² [Kenya in Data, 2022](#). Households with Access to Safe Drinking Water in Kenya

- b) **Key available resources and capacity:** NDMA possesses strong technical, managerial, and financial systems enabling effective planning, coordination, implementation, monitoring, and accountability. It has well-established institutional structures from national to county level across all 23 ASAL counties. NDMA operates established public financial management systems compliant with Government of Kenya regulations and development partner requirements and has strong experience managing donor-funded programmes involving multi-county implementation, fiduciary reporting, environmental and social compliance, procurement management, and audit compliance. Targeted schools have their own title deeds, avoiding land acquisition issues (in few instances, particularly when dealing with land ownership at community level, there could be a need to assess if compensations will be required). Existing large roof catchment areas in schools are capable of supplying substantial seasonal water storage, an underutilized resource to be leveraged by this program.

2.4 Current implementation status

Maji Plus – CRESP is a new programme, so the elements of this subsection concerning an existing programme's scale, coverage and performance are not yet applicable. Partnerships already operating in related areas in Kenya are recorded below.

Current partnerships in related areas:

Several multilateral and bilateral actors are already actively engaged in Kenya in areas that align closely with the Maji-Plus programme, providing a strong foundation for deepened collaboration. The **World Bank** is a strategic partner in social protection, labour, and youth inclusion, with active projects including the Second Kenya Social and Economic Inclusion Project (KSEIP2), Kenya Jobs and Economic Transformation (KJET) Project and the National Youth Opportunities Towards Advancement (NYOTA) Project. These initiatives support poverty reduction, human capital development, shock-responsive delivery systems, and skills training. The World Bank also recently supported parliamentary approval of the Kenya Social Protection Act 2025 through its Programmatic Fiscal and Inclusive Growth Development Policy Financing. Its primary counterparts are the National Treasury, the Ministry of Social Protection and Labour, and the Ministry of Youth, Creative Arts and Sports.

The **African Development Bank (AfDB)** maintains a robust portfolio of agriculture and food security investments in Kenya, aligned with its Feed Africa and Improving the Lives of Africans High 5s priorities, as well as the Kenya Country Strategy Paper. Its potential instruments include grants and concessional financing, with co-financing prospects through the Green Climate Fund, the Climate Investment Fund, and the Global Centre on Adaptation.

The **Food and Agriculture Organization (FAO) Kenya** has a country-wide presence across all 47 counties and works extensively on irrigation, livestock and fisheries systems, as well as assessments, design, and construction supervision of agricultural water infrastructure. FAO has particular expertise in building resilience of livelihoods

to drought and flooding in the ASALs, and has previously implemented rainwater harvesting in schools within ASAL host communities and refugee settings, often in joint delivery with WFP and UNICEF under UN Joint Programmes. FAO holds strong technical competencies in training on construction, operation, and maintenance of rainwater harvesting systems, including solar-powered and hybrid pumping, and in youth-in-agriculture programmes, including the 4-K Clubs model.

UNICEF is actively engaged in Kenya on school WASH, hygiene, nutrition, and education, including in ASAL counties, with established coordination mechanisms with FAO and WFP under UN Joint Programmes. Similarly, the **World Food Programme (WFP)** is active in Kenya on school feeding and food and nutrition security, also delivering jointly with FAO and UNICEF in ASAL counties.

Section 3: “The path” – Arrangements, capacities, planned activities, financing and needs to reach the programme’s goals

3.1 Planned implementation activities

a) **Core activities:**

The components below refer to the full, scaled-up implementation of Maji-Plus. A detailed draft implementation plan for that phase is present in Annex 2, and will be updated based on the results of the pilot implementation phase and feasibility study.

Activities related to the preparatory roadmap, including a preceding Pilot and Learning Phase, and the development of feasibility studies prior to large-scale financing are set out in Section 4.5 and reflected in the partnership requests in Sections 4.2 to 4.4:

Component 1: Water Infrastructure Development

- Comprehensive surveys and assessments in 850 primary and 550 secondary schools
- Rehabilitation of 230 existing boreholes and drilling of 50 new high-yield boreholes
- Installation of 700 water cistern systems (48-150m³ capacity per school, to be built according to one of the two models under study, based on the results of a pilot learning phase.
 - Model a) a number of low cost, community reproducible, and easily maintained 16 – 52 m³ cisterns built per school with local construction materials.
 - Model b) 100-150m³ cisterns, using reinforced cistern technology that needs to be procured and installed and cannot be community-reproducible.
- Both models are to include, 700 guttering systems, 700 rainwater harvesting systems, 700 solar-powered pumping systems, and 700 water distribution systems
- Installation of alternative in-situ rainwater harvesting structures (semi-circular bunds, Zai pits, negarims)
- Water quality enhancement through smart monitoring and treatment systems

Component 2: Sanitation and Hygiene

- Construction of 700 raised handwashing stations
- Development of WASH maintenance and management structures
- Hygiene promotion campaigns and behaviour change communication

Component 3: Climate-Smart Food Production and Environmental Restoration

- Training of school and community on integrated agricultural practices incorporating tree growing
- Establishment/revival of 700 school kitchen gardens
- Establishment of 700 tree and vegetable nurseries
- Growing 140,000 tree seedlings at school and community level
- Agroforestry and nursery inputs for 700 schools
- Support for 4K and environmental clubs

Component 4: Institutional Capacity and Climate Resilience

- Establishment of 700 digital weather and climate information hubs with linkages to county meteorological departments
- Training of 700 water management committees
- Development of 700 maintenance and operations plans
- Installation of automated routine maintenance systems in 700 sites
- Development of water sharing agreements with neighbouring communities
- Formation and capacity building of programme coordination structures at national and county levels
- Training of programme implementers at national and county level
- Continuous stakeholder engagement forums

Component 5: Knowledge Management, Partnerships, and Programme Coordination

- Continuous documentation, reporting and sharing
- Research for continuous improvement and replication
- Programme repository integrated with institutional knowledge management system
- Programme verification audits, feasibility studies, study tours, exchange and learning visits
- Development and implementation of partnership agreements
- Linkages for learning, resource mobilization financing and upscaling
- Programme visibility, publicity and communication
- Programme management, operations and maintenance, technical support, supervision, M&E

b) *Monitoring & Evaluation:*

The M&E system will track implementation of project activities and delivery of outputs, measure progress toward achieving outcomes and the overall project goal, provide timely feedback to enable adaptive management, and document lessons learned for replication and scaling. It includes continuous tracking of activities, outputs, and resource utilization through field visits, technical inspections, and reporting by schools and county teams, using standardized checklists, digital monitoring platforms, mobile data collection applications, and real-time smart monitoring systems for water and sanitation infrastructure.

The programme will conduct a feasibility study and baseline survey during the inception phase, a mid-term evaluation to assess progress and adjust strategies, and a final evaluation to measure overall impact outcome achievement, and sustainability of interventions. Lessons from monitoring and evaluations will be systematically recorded, analysed, and shared through quarterly and annual M&E reports, learning workshops with stakeholders and knowledge products such as case studies and technical briefs, which can be fed back into the Policy Basket of the Global Alliance against Hunger and Poverty.

The NDMA Project Implementing Unit will oversee overall M&E, consolidating reports from counties and ensuring compliance with the results framework. County Programme Implementation Teams will collect data from schools, verify activity completion, and submit monthly reports. Schools/community-level committees and trained community monitors will maintain records of WASH functionality, kitchen garden outputs, tree planting, educational and school attendance outcomes, and inclusivity measures.

*c) **Consultation processes:***

Extensive consultations have been undertaken with the Ministry of Water, Education and ASAL Development in the preparation of the proposal. The programme's governance will include a National Project Steering Committee (NPSC) bringing together NDMA, the Ministry of Education, the State Department for Social Protection, and the State Department for ASALs and Regional Development. At county level, County Programme Implementation Teams (CPITs) will ensure participation of county departments of Education, Water and Sanitation, Agriculture, and Social Development. Community engagement is embedded through school management committees, Boards of Management, Water Resource Users Associations, parent associations, and community-based organizations. Continuous stakeholder engagement forums are planned throughout implementation.

3.2 Institutional Arrangements

- a) **Leading implementing Ministry/Agency(ies):** National Drought Management Authority (NDMA), under the Ministry of East African Community, Arid and Semi-Arid Lands and Regional Development (State Department for the ASALs and Regional Development). The project will be domiciled within the Resilience Directorate of NDMA and managed by a dedicated Project Management Unit (PMU) led by the Director, Resilience, serving as Project Coordinator. Day-to-day operations will be overseen by the Deputy Director of Climate Change Adaptation and Social Protection as Project Operations Manager. The PMU includes four Technical Officers, a GIS Expert, an M&E Officer, an ESS Officer, a Project Accountant, and a Project Procurement Officer. At county level, 26 temporary Technical Project Officers and 20 drivers will be engaged.
- b) **Lead financing/budget decision maker:** The National Treasury of Kenya.

- c) Main coordination bodies (if applicable):** Programme coordination at the *national level* will be anchored in a National Project Steering Committee (NPSC), which shall provide strategic leadership, policy guidance, and overall oversight for implementation. The Committee will be chaired by the National Drought Management Authority (NDMA) and brings together representatives from the Ministry of Education, the State Department for Social Protection, and the State Department for ASALs and Regional Development.

The NPSC's membership will draw from key technical and leadership positions across these institutions. From the State Department for ASALs and Regional Development (SDARD), members include the Head of the Accounting Unit, the Chief Finance Officer, the Head of Strategic Projects, and the Planning Officer. The NDMA is represented by the Director of Planning, the Director of Finance, the Director of Resilience (who serves as Chairperson), as well as the Head of Finance, the Head of Corporate Communications, the Head of Procurement, and the Legal Officer. The committee is further complemented by designated representatives from the Ministry of Education and the State Department for Social Protection.

Supporting the Committee, the NDMA National Secretariat will function as the programme's technical and administrative hub. In this capacity, it will oversee critical functions including fiduciary management, procurement, Environmental and Social Safeguards (ESS), monitoring and evaluation, reporting, and partner coordination.

At the county levels, County Programme Implementation Teams (CPITs) chaired by NDMA County Coordinators will ensure the participation of the County Director of Education; County Department of Early Childhood Education; County Director of Social Development, County Departments of Water and Sanitation; County Department of Agriculture and related technical officers. These structures will ensure alignment with County Integrated Development Plans (CIDPs); day-to-day implementation and supervision; community engagement and stakeholder coordination; technical backstopping and monitoring of project activities. This national-county coordination model builds on NDMA's existing operational structure across all ASAL counties, significantly reducing implementation risks.

- d) Other stakeholders in the country:** *this is the national stakeholder mapping and engagement plan for Maji Plus:*

Stakeholder	Level of Influence	Engagement Strategy
National Drought Management Authority (NDMA)	High	Lead coordination and implementation; regular programme review meetings; oversight of planning, monitoring, and reporting
Ministry of Education / State Department for Basic Education	High	Policy alignment; integration into school programmes; participation in national steering and technical committees

County Governments (Education, Water, Agriculture, Environment Departments)	High	Joint planning through County Programme Implementation Teams; integration into CIDPs and annual work plans; technical supervision and co-implementation
State Department for Water and Sanitation	High	Technical guidance on water infrastructure standards; regulatory compliance; coordination with county water programmes
Water Resources Authority (WRA)	Medium-High	Water abstraction approvals where required; compliance with water resource management regulations
National Environment Management Authority (NEMA)	High	Environmental safeguards compliance; Environmental and Social Impact Assessment (ESIA) approvals where applicable
Public Health Department (National and County)	Medium	Guidance on sanitation and hygiene standards; monitoring school health compliance
School Boards of Management and School Administrations	High	Day-to-day implementation support; facility management; monitoring functionality of systems
School Management Committees / Community Project Committees	Medium-High	Community mobilization; operation and maintenance of infrastructure; local monitoring and ownership
Teachers, Students and Parent Associations	Medium	Participation in awareness programmes; adoption of hygiene and climate-smart practices; feedback mechanisms
Non-Governmental Organizations (NGOs)	Medium	Technical assistance, community engagement, capacity building, and knowledge sharing
Private Sector and Technology Service Providers	Medium	Supply and maintenance of construction materials, water harvesting parts and systems, renewable energy, smart monitoring, and water technologies; service agreements
Research and Academic Institutions	Low-Medium	Support research, innovation, impact studies, and knowledge management
Regulatory and Procurement Oversight Bodies (Public Procurement Regulatory Authority, Auditor General)	High	Ensure compliance with public procurement laws, financial accountability, and audit requirements
Local Communities and Community-Based Organizations	Medium	Participation in planning, safeguarding infrastructure, and sustaining project benefits

3.3 Estimated costs and long term financing strategy (2 pages max)

a) **Projected implementation costs:**

The total estimated project cost is **KES 10,537,560,000** (approximately USD 81 million at current exchange rates) over a 3-year implementation period (April 2026 – April 2029). Note: detailed costs are indicated as tentative, based on previous experiences in rainwater harvesting and borehole sinking. A feasibility study is envisaged to refine these estimates.

Capital Costs: KES 6,489,400,000

- Consultancy, detailed design and legal fees¹³: KES 730,500,000
- Construction (civil works)¹⁴: KES 5,128,900,000
- Plant and equipment¹⁵: KES 560,000,000
- Other capital costs¹⁶ (vehicles, visibility): KES 70,000,000

Recurrent Costs: KES 4,220,700,000

- Labour costs¹⁷ (personnel, training): KES 785,700,000
- Operating costs¹⁸: KES 217,500,000
- Maintenance costs¹⁹: KES 350,000,000
- Others²⁰ (M&E, management, supervision): KES 1,737,000,000

Subtotal: KES 9,579,600,000 + Indirect costs (10%): KES 957,960,000 = **Total:** KES 10,537,560,000

Annual phasing:

- FY2: KES 4,193,259,700
- FY3: KES 3,534,002,755

¹³ Covers all pre-construction professional services. This includes the comprehensive surveys and assessments in 850 primary and 550 secondary schools (KShs. 700M), the development of 700 maintenance and operations plans (KShs. 70M), and legal fees for developing water sharing agreements and partnership agreements (KShs. 35M combined)

¹⁴ This line item covers all physical civil works. It includes the rehabilitation of 230 boreholes (KShs. 345M), drilling of 50 new boreholes (KShs. 225M), installation of 700 cisterns (KShs. 1,050M), 700 guttering systems (KShs. 455M), and 700 rainwater harvesting systems (KShs. 245M). It also funds in-situ water harvesting structures like bunds and Zai pits (KShs. 4.9M), 700 elevated steel tanks (KShs. 2,450M), water distribution systems (KShs. 70M), and raised hand-washing stations (KShs. 84M).

¹⁵ Accounts for the purchase and installation of major mechanical and electronic systems. This includes solar-powered water pumping systems (KShs. 350M), automated routine maintenance systems for 700 sites (KShs. 350M), and digital weather and climate information hubs (KShs. 210M).

¹⁶ Encompasses capitalizable expenses not covered elsewhere, specifically the purchase of vehicles, laptops and programme's visibility, publicity, and communication materials (KShs. 70M), which include signage, branding, and informational campaigns that have a lasting asset value.

¹⁷ Costs for the personnel and training costs for project implementation. This includes training on integrated agricultural practices (KShs. 350M), establishing and reviving kitchen gardens (KShs. 14M) and nurseries (KShs. 4.9M), supporting 4K/environmental clubs (KShs. 14M), and tree growing (KShs. 2.8M) with inputs (KShs. 70M). It also funds training for 700 water management committees (KShs. 140M), hub management training (KShs. 35M), Hire of staff and all capacity building for programme coordination structures and implementers (KShs. 120M combined).

¹⁸ Covers the day-to-day expenses required to run the programme. This includes creating linkages with CBOs and meteorological departments (KShs. 70M), continuous stakeholder engagement forums (KShs. 70M), partnership and resource mobilization efforts (KShs. 140M), documentation and research (KShs. 105M), and establishing a programme repository (KShs. 35M). It also includes study tours and audits (KShs. 20.5M), general operational support (KShs. 7.5M), and a portion of the programme management budget (KShs. 130M) allocated for office operations, logistics, and supplies.

¹⁹ Specifically allocated for the "Installation of automated routine maintenance system in 700 sites." While the installation is a capital cost (Plant & Equipment), the operation, consumables, and minor repairs of these systems over the 2.5-year period are considered maintenance. This amount is drawn from that original budget line.

²⁰ This is a consolidated line for activities that do not fit neatly into the other recurrent categories. It includes the comprehensive programme M&E plan development and routine monitoring (KShs. 1,057M), the substantial work of undertaking participatory learning forums and continuous stakeholder engagement, and crucially, the bulk of the "Programme Management, Operations & Maintenance costs, technical support, Training & Capacity Building, supervision, Monitoring and Evaluation" line (KShs. 400M). From this, KShs. 130M was allocated to Operating Costs, leaving KShs. 270M for technical support, supervision, and overall management oversight.

- FY4: KES 2,810,297,545

Post-implementation annual recurrent costs (sustainability):

- Annual personnel/labour cost: KES 57,000,000
 - Annual operation and maintenance cost: KES 97,200,000
 - Other costs: KES 23,000,000
 - Revenue sources: Country budgets; Community-generated revenue (user fees, nursery sales, Green Centre); national government/ex-chequer (gap funding)
- b) **Domestic financial resources:** Subject to financial negotiations under the responsibility of Kenya's National Treasury, the scaled-up implementation of the program will be financed by sovereign budget, possibly including finance from multilateral financing, supplemented with grants. Long-term financial sustainability will be reinforced by incorporating operation and maintenance costs into county budgets, complemented by community participation and development partner collaboration.
- c) **Other secured or potentially available financing sources:** Through the Global Alliance against Hunger and Poverty process, Rockefeller Foundation has aligned a small grant to support the pilot and learning phase of the program (see Section 4), through WFP's Center of Excellence. The School Meals Accelerator (SMA) has also been identified as a potential source of finance for the pilot phase. For the scale-up phase, the African Development Bank has been identified as potential financing partner, subject to contact, interface, negotiations and approval by Kenya's National Treasury.
- d) **Rationale for additional resource mobilisation:** the catalytic potential of external financing in this programme is concentrated at the front end. A comparatively small grant and direct technical assistant provision tranche of < USD 1 million funds the engineering designs, pilot installations, protocols, and the ensuing impact assessment. That evidence, together with the programme-scale feasibility study, will empower Kenya's government to take a scale-up determination and unlock around USD 81 million in core multilateral finance through AfDB. External financing at the pilot stage therefore carries a transformational impact potential multiple times its size.

3.4 Assumptions, risks and sustainability (1 page max)

Key Assumptions:

- Sufficient rainwater during wet season to be harvested for use in the drought season in targeted areas.
- Community ownership sustained throughout and beyond project lifecycle
- Adequate and timely disbursement of funds by financing partners
- Continued government support and stakeholder engagement

- Favourable seasonal conditions for agricultural and tree planting components

Key Opportunities:

- Acquire relevant experiences for a “low-hanging fruit”, low-cost program with expected high social returns in health, education and climate resilience, and high potential for spontaneous community-replicability
- Leverage the Global Alliance against Hunger and Poverty, launched in 2024 by the G20, to increase political buy-in and external partnerships for the project.
- Take advantage of already publicly announced preliminary intention from the African Development Bank to provide up to US\$ 81 million in grants and concessional financing to the programme (subject to Kenya's National Treasury engagement, negotiations, approval, and AfDB's Board Approval).
- Leverage provision of knowledge and technical assistance by already committed partners, including Brazil, India, WFP, Rockefeller Foundation, and FAO.

Key Risks:

Risks	Likelihood / Probability	Risk Impact	Mitigation Strategy
Domestic and multilateral finance not secured for the project.	Medium	High	Project concept developed by NDMA and under review by the Government of Kenya for full buy-in and ownership. Preliminary pilot and learning phase to be implemented with the support of Global Alliance members will acquire evidence of positive impact and explore most cost-efficient options, which strongly mitigate the chances of the program not being financed.
Inadequate or insufficient experience or knowledge in the specific project implementation	Medium	High	The government of Kenya inaugurated in April 2026 a multilateral Maji Plus Implementation Group, including interested Global Alliance members (Brazil, India, WFP, SMA, ASA-Brazil and the Global Alliance Support Mechanism). This group facilitates provision of knowledge, experience sharing, and provides guidance to NDMA in a consultative role. A pilot and learning phase will test assumptions and develop protocols, measure impact.
Delays in procurement and installation of infrastructure	Medium	High	Develop detailed procurement plans early; apply NDMA and partner procurement procedures; conduct advance market assessments
Weak operation and maintenance of installed systems	Medium	High	Establish and train school/community management committees; develop clear O&M plans; allocate maintenance funds and conduct periodic technical supervision
Limited technical capacity at school level	Medium	Medium	Provide continuous capacity building; engage technical service providers; implement mentoring and on-the-job training programmes
Insufficient stakeholder coordination among implementing partners	Medium	Medium	Strengthen coordination through NPIG and CPIT structures; conduct regular coordination meetings and joint planning reviews
Damage or vandalism of infrastructure and equipment	Low	Medium	Promote community ownership; establish local oversight committees; introduce safeguarding measures and routine monitoring
Climate shocks such as floods damaging infrastructure	Medium	Medium	Apply climate-resilient infrastructure standards; proper site selection; integrate disaster risk reduction measures
Funding disbursement delays	Medium	High	Establish clear financial planning and reporting schedules; maintain strong donor coordination; phased implementation planning

Gender and inclusion barriers limiting access for vulnerable learners	Low	Medium	Apply inclusive design standards; conduct gender and disability assessments; continuous social safeguards monitoring
Policy or institutional changes affecting implementation priorities	Low	Medium	Maintain strong engagement with national and county governments; align project with CIDPs and national development priorities

Sustainability strategy:

The sustainability of the project will be ensured through strong institutional ownership, integration into government systems, and sustained technical and financial capacity at national and county levels. All assets developed under the programme, including water infrastructure, renewable energy systems, WASH facilities, and monitoring equipment, will remain publicly owned. The National Drought Management Authority (NDMA) will retain overall coordination and oversight, while operational responsibility will be coordinated by County NDMA offices, the implementing institutions, schools, and community management structures.

County Departments of Water, Sanitation, and Education will manage routine operation and maintenance, supported by NDMA's asset management system, formal handover procedures, and established operation and maintenance plans. Community structures such as school management committees and Water Resource Users Associations will support local stewardship and monitoring, strengthening ownership and accountability.

NDMA's established technical, managerial, and fiduciary systems, together with national oversight through the National Programme Implementation Group and implementation support from County Programme Implementation Teams, will ensure institutional continuity. Integration of project investments into County Integrated Development Plans will enable long-term financing through county budgets.

Capacity gaps will be addressed through technical assistance, on-the-job training, and knowledge transfer to county staff, ensuring sustained local expertise. Financial sustainability will be reinforced by incorporating operation and maintenance costs into county budgets, complemented by community participation and development partner collaboration. Overall, the programme's institutionalized national-county model will enable continued delivery of services and benefits beyond the project lifecycle.

Section 4: Partnerships for implementation

4.1 Identified gaps

Gaps initially identified: Despite the programme's strong strategic foundation, its full implementation is constrained by several interconnected obstacles. The most prominent challenge is insufficient financing, as the projected budget of KES 10.54 billion (approximately USD 81 million) for the three-year scale-up phase requires substantial external co-financing, consistent with the National Treasury's policy direction. Beyond funding, there are significant technical capacity gaps within the National Drought Management Authority (NDMA) and county governments, particularly in the areas of renewable energy systems, smart monitoring technologies, engineering design, and advanced WASH infrastructure. These gaps are compounded by knowledge deficits, especially regarding the integration of community-reproducible, low-cost water harvesting technologies into a programme of this scale, as well as the effective deployment of digital climate information hubs and automated maintenance systems.

Furthermore, the programme cannot proceed to full implementation without a comprehensive feasibility study, which must include detailed designs, site readiness assessments, and regulatory approvals. Finally, the inherent coordination complexity—spanning 23 counties, multiple ministries, and diverse agencies—demands a robust mechanism for aligning national and county-level planning and financing systems, adding another layer of operational challenge.

Actions since the pre-plan review: Ten of the thirteen partnership requests below already have partners against them: five fully matched, five partially. The first phase is under way. The knowledge exchange with Brazil opened with a webinar in July 2026, a technical study visit follows in October, grant financing for the first pilot activities is secured, and the requests covering pilot feasibility, engineering design and institutional training are matched.

A few critical gaps and conditional approvals are yet to be filled before full implementation financing is secured. The pilot phase has enough traction to move forward, but fulfillment of remaining technical and financial gaps will determine how fast it moves and how complete the evidence is when the scale-up decision is taken.

Financing for pilot installation sets the scope of that evidence. The catalytic tranche starts the first installations; the balance of the envelope carries the pilot from an initial group of schools toward the 30-100 schools that would let it be assessed across the range of conditions the ASAL counties present. Additional support here widens the pilot and strengthens what it can demonstrate.

The still unfilled gaps in embedded coordination capacity and in financing major pre-implementation workshop would bring delivery forward. The workshop aligns national and county implementers on protocols, safeguards and monitoring before construction starts, at an indicative US\$ 40 thousand (excluding venue costs to be

provided by Kenya and the technical content contributed in kind). Dedicated coordination capacity inside NDMA's Programme Management Unit is what allows the partnerships behind thirteen requests, across 23 counties and several ministries, to be managed in parallel rather than one after another. Both are small asks with an effect on delivery speed out of proportion to their size.

Pilot evidence will inform that consideration and strengthen the case for external financing, alongside the programme's alignment with MTP IV, the Bottom-Up Economic Transformation Agenda and the County Integrated Development Plans, and the financing interest already expressed. Partners joining now are joining a programme with a schedule, a delivery structure and most of its requests already answered. Their contributions will feed into how much the pilot proves, into properly codifying its lessons, amplifying training programs, and enabling specific coordination capacity.

4.2 Implementation Strategy

Implementation approach:

As explained in previous sections, there is a sizeable opportunity to mobilize untapped rainwater harvesting potential in schools and community roofs to significantly increase community resilience to intensifying droughts in the ASALs. Brazil's Cisterns Program has successfully scaled up to more than 4 million cisterns across the country's semi-arid northeast region using a low cost, community-reproducible model which combines bottom-up community mobilization with government incentives and support.

India's Atal Bhujal Yojana program, while devoted to empowering communities to better manage local groundwater resources, has relevant experience to share, including on achieving large scale replicability through cascading training approaches, community sensitization, gender inclusion and leadership development in water management, and water data generation, monitoring & analysis.

Maji-Plus is inspired on those experiences, while based on Kenya's context and needs, and incorporating several additional elements, including the targeting of schools as the strategic entry point, the linkages to school gardens and school meals programs, and adding components related to youth employment, sanitation, water and environmental education, renewable energy installation, and others.

Being a program untested in Kenya at large scale, the planned implementation approach will call for two main phases:

- a) a pilot, learning and program development phase, including knowledge learning and exchange with Brazil and India, protocol development and pilot installation, during which 50-100 schools will be contemplated with such water harvesting systems, and workers and county officials will be trained. As part of this phase, initial impact assessment will be made, and a full feasibility study for the next phase will be conducted leveraging the learning and data from the pilot implementation.

- b) A scaled-up phase, to unfold for three years starting from final approval and securing of the full financial envelope, with front-loaded infrastructure installation and training.
- c) A maintenance and mainstreaming phase will give full continuity and support to the program, making sure benefits are lasting and installations are serviced for their intended lifetime of 20-30 years.

The financing strategy will follow the same phased approach, with distinct models:

- a) The pilot and learning phase will be financed with grants and in-kind support and contributions from external partners, paired with NDMA and Kenya Government human resources and budget allocation.
- b) The scaled-up phase — to be carried out subject to the determination of the Government of Kenya and its National Treasury, informed by evidence from the pilot phase, will be mainly financed by domestic resources, possibly secured through financing from the African Development Bank supplemented by additional technical assistance and grants from other partners.

Implementation timeline:

The programme advances along the phased strategy set out in the pre-plan, while individual Partnership Requests can be implemented as partners and resources are confirmed. Dates beyond 2026 are indicative..

Phase 1 — Pilot, Learning and Programme Development (2026–2027).

Period	Milestone
July 2026	Brazil Cisterns Programme webinar — delivered 15 July
September 2026	Field visits to reference installations in Kenya; online partner roundtable on this Roadmap; technical study visit (10 days, TBC) India technical study visit (10 days, TBC)
October 2026	Technical study visit to Brazil (five working days) October 4-10, 2026
October–December 2026	Initiation of pilot design work (Request 4) and initial institutional training (Request 2), resources permitting; Roadmap finalization with national agencies and Alliance partners in Kenya (November–December)
January–April 2027	Operational readiness workshop (Request 5); pilot installation in initial schools (starting ~30, expanding through community replication), as Requests 4 and 6 activate; train-the-trainer delivery through the build (Request 8); baseline and impact monitoring (Request 3); documentation (Request 9)
Through 2027	Pilot completion and evidence consolidation; initial impact assessment

Transition to scale (indicative, evidence-driven).

Programme-scale feasibility study and safeguards frameworks (Request 11), incorporating pilot evidence; National Treasury determination on the domestic financing framework; MDB appraisal processes (AfDB, World Bank) toward scale-up financing (Request 10).

Phase 2 — Scale-up (three years from financing effectiveness).

Front-loaded infrastructure delivery across ~1,400 schools per the pre-plan's phased output plan, with capacity building, monitoring and institutionalization throughout, and the at-scale technical assistance (Request 12) financed largely within the programme envelope. A maintenance and mainstreaming phase follows, with assets serviced for their 20–30 year design life under county and community management.

Partnership model and coordination:

The Government of Kenya will retain complete ownership of implementation, and all actions will be aligned with the Implementation Roadmap. All activities will be co-designed, agreed upon, and co-implemented with the Government of Kenya through its main implementing agency, the National Drought Management Authority (NDMA), and its Programme Management Unit (PMU), or any entity designated by the government for that purpose. Even when an activity is executed directly by a partner using its own resources or those of a third party (trilateral partnership), the partner is expected to assess and promptly communicate implementation status, results, lessons learned, and any potential consequences for other components of the roadmap to the Government of Kenya and implementing partners. Crucially, all on-the-ground activities must involve the participation of national or local officers, practitioners, and/or service providers, and must include explicit measures to transmit knowledge and procedures and/or train local capacity to ensure long-term sustainability.

The Government of Kenya invites all members of the Global Alliance against Hunger and Poverty to consider being part of this transformative programme, which sits at the critical interface between climate resilience, nutrition, water access, school meals, and education. Your support will not only contribute to improving the lives and learning outcomes of over 400,000 learners in a lasting and sustainable manner but, by leveraging community-reproducible, low-cost technologies and social engagement protocols, it can also help nurture the seed of a much wider transformation across Kenya's ASALs and beyond.

A Maji Plus Implementation Group, convening NDMA, National Treasury, the Ministry of Education, the interested Global Alliance members and — during the initial stages — the Support Mechanism, serves as the standing forum for partner coordination during the pilot and inception phase: confirming request fulfillment, reviewing progress against this Roadmap, and surfacing gaps for further match-making. Each request fulfillment is recorded with its confirmed scope, resources and responsible parties. Partnerships are formalized bilaterally between the Government of Kenya (or its designated implementing agency) and each partner, through the partners' own instruments — technical cooperation agreements, project documents, grant agreements and financing arrangements. Consistent with the desired partnership model stated in the pre-plan, all actions are aligned with this Roadmap and co-designed, agreed and co-implemented with the Government of Kenya; activities executed di-

rectly by partners are promptly reported to the Government and implementing partners; and all field activities involve national or local officers, practitioners or service providers, with capacity transfer built in.

4.3 Financial support needs

Request 5 – Operational readiness workshop for pilot implementation

Before the pilot phase can be launched, all implementing stakeholders must be aligned on protocols, coordination mechanisms, and operational procedures. An operational readiness workshop will bring together NDMA, county governments, technical partners, and frontline implementers to finalise implementation plans and build shared understanding of roles and responsibilities.

What is being asked: Financing for the in-country operational readiness workshop preparatory to pilot implementation, bringing together national and county officials, school management, the Ministry of Education, the National Drought Management Authority, the State Department for Social Protection, the National Treasury and community stakeholders (approximately 80 participants over five days). The workshop reviews engineering designs, technology options and costings; trains implementers on environmental and social safeguards compliance, monitoring and baseline protocols, gender mainstreaming, disability inclusion and child protection; agrees stakeholder coordination protocols; and settles pilot implementation planning, including school selection and risk management. Indicative cost KES 5 million (approximately USD 38,500) covering, accommodation, meals, facilitation, materials, daily subsistence allowances at Government of Kenya rates and logistics. The Government of Kenya will supply the venue, and the Kenya Institute of Curriculum Development has been identified as a possible venue. Technical content is offered in kind by all partners involved.

Indicative amount: Indicative cost KES 5 million (approximately USD 38,500) covering, accommodation, meals, facilitation, materials, daily subsistence allowances at Government of Kenya rates and logistics.

Reference to the pre-plan: Sections 3.1 (Component 4) and 4.5.

Request 6 – Catalytic grant financing for pilot installation

The pilot phase must demonstrate the feasibility, cost-effectiveness, and impact of the Maji-Plus model in real-world school settings. To achieve this, catalytic grant financing is required to install water harvesting and climate-resilient infrastructure in 10–15 pilot schools, generating the operational evidence needed to inform the national scale-up.

What is being asked: Grant financing to complete the pilot envelope: an immediate catalytic tranche in the range of USD 400,000–600,000 to fund initial installations and first implementation activities; and, progressively, the balance of the pilot installation envelope — in the range of USD 2–6 million depending on final school count

(30–100) and component mix — beyond what is already covered by secured grant financing and by in-kind contributions. Kenya will contribute NDMA staffing, administrative support and domestic budget as can be mobilized.

Indicative amount: USD 400,000–600,000 (immediate catalytic tranche); USD 2–6 million (balance of the pilot installation envelope, depending on final school count (30–100) and component mix).

Reference to the pre-plan: Sections 3.1 (Component 1) and 4.5.

Request 10 — Concessional financing for climate-resilient school water infrastructure at scale

The national scale-up of the Maji-Plus programme requires substantial capital investment to deliver climate-resilient water infrastructure to approximately 1,400 schools across Kenya's ASAL counties. With a projected total cost of USD 81 million over three years, this financing request addresses the core infrastructure needs of the scale-up, including cistern systems, boreholes, elevated tanks, solar pumping, and distribution networks. The African Development Bank has expressed strong interest in providing those USD 81 million through a combination of grants and concessional financing, with potential co-financing from climate funds. This financing is subject to National Treasury engagement and AfDB Board approval and is contingent on the successful completion of the feasibility study and the government's scale-up determination.

What is being asked: Concessional lending and blended finance for the capital-intensive core of the scale-up: cistern systems, guttering and rainwater harvesting across ~1,400 schools, borehole rehabilitation and drilling, elevated storage tanks, distribution systems, solar-powered pumping, and associated water infrastructure. The total projected cost of the scaled-up programme is KES 10,537,560,000 (approximately USD 81 million) over three years, as projected by NDMA in the pre-plan; the domestic financial commitment is under consideration by the Government of Kenya, with external financing to be secured through concessional lending and blended approaches. The scale-up programme's budget will also carry the components required for delivery at scale: safeguards compliance, capacity building programmes, and the programme-wide monitoring, evaluation and learning system.

Indicative amount: KES 10,537,560,000 (approximately USD 81 million) over three years.

Reference to the pre-plan: Sections 3.1, 3.3 and 4.5.

Request 13 — Catalytic grant financing for technical assistance activities

A number of critical technical assistance activities require dedicated grant financing to proceed. These include impact assessment expertise, embedded coordination capacity, train-the-trainer delivery, and any elements of institutional training and feasibility studies not confirmed as in-kind contributions.

What is being asked: Grant financing for the delivery of the technical assistance requests of this Roadmap that are not covered by in-kind contributions.

This includes:

- Request 3 (impact assessment expertise);
- Request 7 (embedded coordination capacity);
- Request 8 (train-the-trainer delivery);
- Any elements of Requests 2 and 4 not confirmed as in-kind.

Indicative amount: KES 26 million, approximately USD 200,000, plus impact-assessment expertise to be costed.

Reference to the pre-plan: Sections 3.1 and 4.3.

4.4 Technical support needs

Request 2 — Institutional training of NDMA staff and stakeholders

The long-term sustainability of the Maji-Plus programme hinges on the institutional capacity of national and county-level implementers to plan, deliver, and maintain interventions long after external support concludes. While technical assistance from partners will provide essential expertise during the pilot and scale-up phases, this knowledge must be systematically transferred to local institutions to ensure programme continuity and national ownership. The following request seeks to establish a structured training framework that embeds technical and social competencies within NDMA and its county-level partners, creating a durable foundation for programme delivery.

What is being asked: Technical support to build the institutional capacity of NDMA and implementing stakeholders: train-the-trainer curriculum (technical and social content), initial training of master trainers among NDMA county drought coordinators, project officers and county implementers, training materials, and mentorship structures.

Reference to the pre-plan: Sections 3.1 (Component 4) and 4.5.

Request 3 — Monitoring, evaluation and impact assessment framework

The pilot's value to the scale-up decision rests on what can be credibly measured. The monitoring, evaluation and impact assessment framework must therefore be designed and its baseline established before installation begins in the pilot schools, so that results are measured against a documented starting point. The evidence it produces will feed directly into the programme-scale feasibility study under Request 11.

What is being asked: Technical support to design the programme's M&E and impact assessment framework — baseline protocols, indicators (attendance, health, nutrition, gender, water availability), data collection tools and the initial impact assessment — so that pilot evidence can credibly inform the National Treasury's scale-up determination and feed the programme-scale feasibility study under Request 11.

Reference to the pre-plan: Sections 3.1(b) and 4.5.

Request 4 – Pilot-scale feasibility studies and detailed engineering design and costing

Before pilot implementation activities can start, a pre-feasibility study at pilot scale, including detailed engineering designs, must be completed. These will provide the technical data and cost estimates needed for sound pilot implementation.

What is being asked: Technical assistance for the feasibility and engineering work required for the pilot: site surveys and techno-economic assessment of selected pilot schools, and detailed, market-based costings for the pilot's infrastructure options (semi-underground cement cisterns, rooftop harvesting and guttering, solar pumping and distribution). These designs are applied first in the pilot schools and subsequently refined with pilot evidence for the programme scale.

Reference to the pre-plan: Sections 3.1 (Component 1) and 4.5.

Request 7 – Embedded programme coordination capacity

Effective coordination is essential for managing the complexity of a programme spanning 23 counties, multiple ministries, and diverse technical partners. Dedicated coordination capacity embedded within the NDMA Programme Management Unit will provide the day-to-day oversight required to drive implementation, manage partnerships, and ensure alignment across all levels of government.

What is being asked: Support to establish dedicated implementation-coordination capacity within NDMA's Programme Management Unit — a small number of embedded officers or equivalent technical support — to manage partner coordination, formalization of agreements, county-level arrangements and roadmap follow-through as facilitation transitions from the Alliance Support Mechanism to country ownership. Financing for this capacity is sought under Request 13.

Reference to the pre-plan: Sections 3.2 and 4.5.

Request 8 – Train-the-trainers co-implementation in pilot schools

The train-the-trainer programme is the cornerstone of the pilot phase, embedding technical and social competencies within local communities through hands-on, learn-by-building delivery. This approach ensures that knowledge and skills remain in the community long after external support ends, creating a sustainable foundation for the national scale-up.

What is being asked: Co-implementation of the hands-on train-the-trainer programme in the pilot schools (initial 10–15 sites): learn-by-building delivery covering cistern construction, O&M, climate-smart school gardens, WASH behaviour change and community governance, cascading to school management committees, teachers, community builders and youth, drawing on validated participatory methodologies.

Reference to the pre-plan: Sections 3.1 (Components 3 and 4) and 4.5.

Request 11 — Programme-scale feasibility study and safeguards frameworks

The transition from pilot to national scale-up must be grounded in a comprehensive feasibility study that meets the rigorous standards required by multilateral development banks for financing appraisal and disbursement. This study will assess the full portfolio of approximately 1,400 schools, incorporate evidence and refined designs from the pilot, and develop the necessary environmental and social safeguards frameworks.

What is being asked: Technical assistance for the comprehensive feasibility study for the full 1,400-school programme: full site portfolio assessment, techno-economic analysis incorporating pilot evidence and refined designs, Environmental and Social Impact Assessment and Environmental and Social Management Framework, and preparation of the complete feasibility and design documentation to the standards required by multilateral development banks as a condition for appraisal and disbursement of scale-up financing. The associated financing may be secured through project preparation facilities ahead of the scale-up decision.

Reference to the pre-plan: Sections 3.1, 3.3 and 4.5.

Request 12 — Technical assistance for at-scale delivery

Delivering the Maji-Plus programme at national scale will require sustained technical expertise across a wide range of specialized areas, from renewable energy and smart monitoring to gender-sensitive WASH design and environmental safeguards. This technical assistance will support the training of 700 water management committees, county-level implementers across 23 counties, and school communities on digital climate hubs and integrated agricultural practices, building on the trainer cadre and materials developed during the pilot. The technical assistance to be provided at this point can mostly be financed through core program financing and be contracted through project financing rules and procedures. This request, however, seeks to map preliminary interest and availability from partners, as comprehensive technical assistance at scale will be important to ensure quality delivery across all programme components.

What is being asked: Specialized technical assistance for the scale-up: renewable energy and solar pumping systems, smart monitoring and automated maintenance technologies, gender-sensitive and disability-inclusive WASH design, hydrogeology and water quality, environmental and social safeguards, school feeding and kitchen-garden programme linkages, periodic joint supervision, and support to the national training cascade — 700 school and community water management committees, county-level implementers across 23 counties, digital climate information hub management, integrated agricultural practices and hygiene behaviour change — building on the trainer cadre and materials produced under Requests 2 and 8. This technical assistance may be financed within the overall scale-up financing under Request 10, complemented by partners' own instruments and in-kind expertise.

Reference to the pre-plan: Sections 3.1 (Components 1-4) and 3.3.

4.5 Knowledge support needs

Request 1 – South–South knowledge exchange on community-reproducible water harvesting

In addition to financial and technical support, the programme's success depends heavily on the strategic deployment of South–South and triangular cooperation to bridge critical knowledge gaps. Learning from countries that have successfully scaled community-reproducible water harvesting technologies offers an efficient and cost-effective pathway to accelerate implementation, avoid common pitfalls, and adapt proven methodologies to the Kenyan context.

What is being asked: Structured exchange with countries that have scaled community-reproducible water technologies; preparatory policy webinars; a technical study visit to Brazil on the Cisterns Programme model; a knowledge exchange with India centred on the Atal Bhujal Yojana programme's cascade train-the-trainer methodology, community mobilization, gender inclusion and water-data systems; and field visits to reference installations in Kenya.

Reference to the pre-plan: Sections 2.1 and 4.5.

Request 9 – Documentation, codification, research and learning products

The scale-up will be delivered largely by county implementers and school boards of management who took no part in the pilot. Everything the pilot passes on must therefore be usable without the partners who developed the model: manuals, operating and maintenance procedures, curricula and toolkits, and the research and baseline data behind the design. Producing this material while the pilot runs, rather than after it closes, keeps it available to the programme-scale feasibility study under Request 11 and to exchanges with countries working in comparable conditions.

What is being asked: Support to codify the pilot into replicable assets: Productive School Implementation Manual, water harvesting systems guide, school garden/farming toolkit, nutrition education curriculum, seed bank management protocol, implementation protocols and O&M manuals for School Boards of Management, applied research alongside the pilot, and a baseline and impact database.

Reference to the pre-plan: Sections 3.1 (Component 5) and 4.5.

Annex 1: Scale-up Phase II - Logical Framework Matrix:

Goal: Enhance access to safe water, improve sanitation and hygiene services, strengthen climate resilience, and promote sustainable environmental management to support inclusive socio-economic development and improved learning environments				
Results Level	Outputs	Indicators	Means of Verification	Key Assumptions
Outcome 1: Targeted schools have year-round access to safe and adequate water for drinking, sanitation, and productive uses, reducing learning disruptions and health risks associated with water scarcity.	- Water harvesting systems installed; - Water distribution points established; - Water treatment systems operational; - Renewable energy systems deployed; - Smart monitoring and water management systems established	- Number of schools with functional climate-resilient water systems % of systems operational year-round - Increased water storage capacity (litres)	Infrastructure completion reports; Technical inspection reports; Smart monitoring data; County water department verification reports	Adequate groundwater availability; Community ownership sustained; Adequate and timely disbursement of funds by financing partners.
Outcome 2: Improved hygiene practices and sanitation standards in schools, resulting in reduced incidence of waterborne and hygiene-related illnesses and improved student attendance.	- Functional handwashing stations established; - WASH maintenance and management structures operational	% of schools with functional handwashing facilities - Number of schools implementing WASH O&M plans - Reduction in reported cases of water-related illnesses among learners (where data is available).	School WASH assessments; Monitoring checklists; School health records; Site inspection reports	Adoption of hygiene practices by learners and staff
Outcome 3: Schools adopt sustainable food production, meal preparation and greening practices that enhance nutrition, environmental learning, and local climate adaptation capacity.	- School kitchen gardens established/revived; - Tree and vegetable nurseries established; - Trees planted and maintained - Climate hubs established	- Number of schools with operational kitchen gardens - Number of schools with operational kitchens serving meal preparations - Number of seedlings produced and planted	School agricultural records; Field monitoring reports; Nursery production logs; Environmental monitoring reports; climate hubs records	Favourable seasonal conditions; School management and communities have the interest and capacity to dedicate time to

		• Tree survival rate after 12 months • Climate hubs operational		kitchen gardens and tree nurseries.
Outcome 4: School and community management structures effectively operate and maintain water, sanitation, and environmental systems, ensuring sustainability beyond the project lifecycle.	• Implementation team capacity strengthened; • Partnerships and resource mobilization enhanced; • Research and knowledge management advanced; • Project administration supported	• Functional MEL system producing regular reports • Number of coordination meetings held annually • Amount of additional funding leveraged • Timely implementation of project milestones	Project progress reports; MEL database; Evaluation reports; Financial reports; Knowledge products	Continued government support; Timely fund disbursement; Stakeholder engagement maintained
Outcome 5: Improved access to safe water, sanitation, and climate-resilient infrastructure enhances participation, retention, and wellbeing of girls, children with disabilities, and vulnerable learners.	• Gender-responsive and disability-inclusive WASH facilities established in targeted schools • Gender equality, disability inclusion, and child protection considerations mainstreamed in planning and management of water and sanitation services.	Increase in attendance rates among girls and vulnerable groups in targeted schools. Percentage of WASH facilities designed to meet gender-sensitive and disability-inclusive standards.	Disaggregated school enrolment and attendance data; infrastructure design assessments; beneficiary surveys; and independent verification visits.	Disaggregated school enrollment and attendance data; infrastructure design assessments; beneficiary surveys; and independent verification visits.
Key Activities		Inputs		
Site assessments; system design; procurement; construction and installation; system testing and commissioning		Technical engineers; construction materials; storage tanks; gutters; labour; procurement funds; supervision teams		
Mapping water access points; installation of pipelines and taps; construction of cisterns, steel tanks and distribution infrastructure; user orientation		Pipes and fittings; construction materials; technical contractors; tools and equipment; community labour		
Energy needs assessment; solar system installation; user training; maintenance setup		Solar panels; batteries; technicians; installation equipment; financing resources		
System design; installation of sensors and digital platforms; training users		ICT equipment; sensors; software systems; technical specialists		
Formation of school WASH committees; development of O&M plans; governance training		Trainers; training materials; facilitation costs; community mobilization resources		
Development of maintenance protocols; training technicians; periodic inspections		Technical manuals; spare parts; maintenance funds; skilled personnel		

Water quality assessment; selection of treatment technology; installation and testing; user training	Treatment units; technical experts; laboratory testing kits; installation equipment
Creation of climate hubs	Met stations, training on climate information
Design and installation of handwashing facilities; hygiene promotion campaigns; provision of soap systems	Construction materials; water containers; hygiene supplies; behaviour change communication materials
Land preparation; irrigation setup; seed distribution; training on climate-smart agriculture	Seeds and tools; irrigation kits; extension officers; fencing materials; soil improvement inputs
Nursery site selection; seedling production; training on nursery management	Seeds/seedlings; nursery shade materials; watering equipment; technical trainers
Stakeholder engagement; committee formation; governance framework development	Facilitation teams; meeting venues; coordination support
Training workshops; technical coaching; follow-up mentoring	Training experts; manuals; logistics support; monitoring resources
Stakeholder consultations; signing collaboration agreements; coordination meetings	Coordination staff; meeting resources; communication materials
Donor engagement; investment forums; proposal development	Resource mobilization experts; communication materials; stakeholder outreach funding
Studies and documentation; knowledge sharing events; dissemination of lessons learned	Researchers; documentation teams; publication resources
Financial management; procurement; reporting; logistics coordination	Project staff; office equipment; operational budget; management systems

Annex 2: Draft list of outputs, cost and KPIs for Phase II scaled-up implementation (to be revised based on pilot-phase designs)

				Key Performance Indicators (KPIs)			
No	Expected Outputs	Expected Duration	Estimated Cost (KSh.)	Unit	Y2	Y3	Y4
1.	Surveys and assessments in 850 primary schools and 550 secondary schools	2 years	700,000,000	No.	800	550	0
2.	Rehabilitation of 230 existing boreholes	2 years	345,000,000	No.	130	70	30
3.	Construction of 50 new boreholes	2.5 years	225,000,000	No.	30	15	5
4.	700 water cistern systems installed and optimised	2 years	1,050,000,000.00	No.	350	250	100
5.	Installation of 700 guttering systems	2 years	455,000,000.00	No.	350	250	100
6.	Installation of 700 rainwater harvesting systems	2 years	245,000,000.00	No.	350	250	100
7.	Installation of rainwater harvesting structures including semicircular bunds, Zai pits and negarims	2 years	4,900,000.00	No.	350	250	100
8.	Construction and equipping of 1 No. Green Centre at Kajiado	2 years	200,000,000	No		1	
	Construction of 700, 25m ³ elevated steel pressed tanks 12metres high	2 years	2,450,000,000.00	No.	350	250	100
9.	Laying of distribution system for schools and community (700 systems)	2.5 years	70,000,000.00	No.	400	200	100
10.	Installation of solar powered water pumping system	2.5 years	350,000,000.00	No.	400	200	100
11.	Construction of raised hand-washing stations	2 years	84,000,000.00	No.	350	300	0
12.	Train school and community on integrated agricultural practices incorporating tree growing	2 years	350,000,000.00	No.	400	200	100
13.	Establish /revive school kitchen gardens	2.5 years	14,000,000.00	No.	150	450	100

14.	Establish tree and vegetable nurseries at school and community level	2.5 years	4,900,000.00	No.	150	450	100
15.	Support 4K and environmental clubs	3 years	14,000,000.00	No.	200	250	250
16.	Growing trees at school and community level (140,000 seedlings)	3 years	2,800,000.00	No.	40,000	50,000	50,000
17.	Agroforestry and nursery inputs for 700 schools	2.5 years	70,000,000.00	No.	200	250	250
18.	Development of 700 maintenance and operations plan	2.5 years	70,000,000.00	No.	250	300	150
19.	Installation automated routine maintenance system in 700 sites	2.5 years	350,000,000.00	No.	250	300	150
20.	Training of 700 water management committees	3 years	140,000,000.00	No.	300	200	200
21.	Create linkages between local CBOs and school greening initiatives	3 years	35,000,000.00	No.	300	200	200
22.	Develop water sharing agreements with neighbouring communities	3 years	35,000,000.00	No.	300	200	200
23.	Continuous stakeholder engagement forums	3 years	35,000,000.00	No.	300	200	200
24.	Develop and implement partnership agreements	2.5 years	35,000,000.00	No.	100	400	200
25.	Create linkages for learning, resource mobilization financing and upscaling	3 years	35,000,000.00	No.	100	400	200
26.	Establish digital weather and climate information hubs	2.5 years	210,000,000.00	No.	150	350	200
27.	Establish linkages with county level meteorological departments	3 years	35,000,000.00	No.	150	350	200
28.	Train the school community on management of the hubs	3 years	35,000,000.00	No.	150	350	200
29.	Develop a monitoring and evaluation plan	2.5 years	7,000,000.00	No.	400	200	100
30.	Undertake routine monitoring of the programme	3 years	1,050,000,000.00	No.	150	350	200
31.	Organize participatory learning forums	3 years	35,000,000.00	No.	200	250	250

32.	Formation of programme coordination structures at both levels	1 year	35,000,000.00	No.	2	0	0
33.	Develop capacities of the coordination structures	2 years	35,000,000.00	No.	2	0	0
34.	Train programme implementers at national and county level	3 years	50,000,000.00	No.	250	250	200
35.	Undertake continuous stakeholder engagement forums	3 years	35,000,000.00	No.	250	250	200
36.	Develop and implement partnership agreements	2.5 years	35,000,000.00	No.	250	250	200
37.	Create linkages for learning, resource mobilization financing and upscaling	3 years	35,000,000.00	No.	250	250	200
38.	Undertake continuous documentation, reporting and sharing	3 years	35,000,000.00	No.	250	250	200
39.	Undertake research for continuous improvement and replication	3 years	35,000,000.00	No.	250	250	200
40.	Create a programme repository and integrate with existing institutional knowledge management system	2.5 years	35,000,000.00	No.	250	250	200
41.	Conduct programme verification audits, feasibility studies, study tours, exchange & Learning visits	3 years	30,500,000.00	No.	1	1	1
42.	Provide operational support	3 years	7,500,000.00	No.	1	1	1
43.	Programme Visibility, Publicity and Communication	3 years	70,000,000.00	No.	250	250	200
44.	Programme Management, Operations & Maintenance costs, technical support, Training & Capacity Building, supervision, Monitoring and Evaluation	3 years	400,000,000.00				
	Sub Total		9,579,600,000				
	Indirect costs (10%)		957,960,000				
	TOTAL BUDGET		10,537,560,000				

Annex 3 – Estimation of School water storage and supply needs

COMMENT (Support Mechanism): This annex could be revised and expanded with the support of MDS, WFP, ASA-Brasil, and ABC to incorporate the findings from Brazil's Cistern Program. Specifically:

- Review calculation of projected water demand and cistern size, versus projected refilling rates and seasonal rainwater volume.
- Add discussion of cistern size, materials, cost, and community replicability, comparing pros and cons of different sizes and technologies
- Discuss the possibility of building more than one smaller-size cistern per school, avoiding the need for 100-150m³ cisterns
- Present and discuss tradeoffs related to cistern capacity/volume versus price and replicability, given that the aim of the program is to also incentivize communities to replicate the model.
- Discuss water use efficiency measures to realistically reduce water demand per learner given the context, with a view to progressively achieve WASH service standards

International humanitarian standards, including the **SPHERE WASH standards**, recommend that every learner should have access to **at least 1.5–3 litres of safe water per day within school premises** to ensure drinking, hygiene, and sanitation needs. Meeting this minimum requirement is essential for creating safe, healthy, and inclusive learning environments.

According to minimum WASH service standards, the required water supply per learner is 1.5–3 litres per person per day, that for an average school population (including staff) of 550 persons translate into an Estimated Water Demand per School of 825 – 1,650 litres/day and 165 – 330 cubic metres per year.

The plan under development provides for the construction of cisterns that fulfil the following assumptions:

- The consumption demand of a school population of 550 people, teachers and students.
- Average water consumption is 2 litres/person/day
- 210 school days
- 3 months of rain

To collect water for the 210 school days, considering that the 3-month rainy season guarantees 25% autonomy for this school period, there is a direct demand for water consumption of approximately 173,250 litres, so that the children can have 2 litres of water daily. This means that approximately 12 16,000 litre cisterns are needed in this model school, just for human consumption, which requires a roof area of 330 m² to collect the water, which is easily met given the size of the school.

An additional 96,000 litre capacity (achieved through 6 cisterns) could be provided to account for the demand generated by seed banks and school gardens in the school premises, for a total of 269,250 litres of water storage capacity per school.

It should be noted that there are models of cisterns larger than 16,000 litres, such as the 52,000-litre cistern. However, this 16,000-litre cistern has a pedagogical character, as it allows farmers to learn more easily and to replicate it in their homes, with their own construction. It is known that the 52,000-litre cistern would be more cost-effective for a school environment, but without the social reproduction potential.

Therefore, to combine both possibilities, a combined arrangement of four 52,000 litre cisterns plus four 16000 l cisterns will allow schools to store sufficient water during rainy seasons to sustain operations throughout extended dry periods. By combining the two different cistern sizes, it will allow to combine cost-efficiency, pedagogical value, and community reproducibility.

In addition to schools, external benefits include reduced pressure on community water sources, reduced public expenditure on emergency water trucking; local employment during construction and maintenance phases; and environmental benefits through sustainable water management. Additional community benefits, particularly the parents and families of students, include access to seeds and excess produce from community school gardens.

No significant environmental or social negative impacts are anticipated. Minor construction disturbances will be temporary and manageable through standard safeguards.

Alternative water supply to schools mainly involves the use of water trucking, with high recurrent cost, unreliable supply and environmentally unsustainable. Other options include borehole development, which requires high capital cost, groundwater depletion risk and management skills not always available.

Hence, rainwater harvesting with cistern systems (Proposed Option) is considered the most cost-effective, climate-resilient, low maintenance, environmentally sustainable technology. It provides the highest long-term economic and resilience benefits while minimizing operational costs and environmental risks.