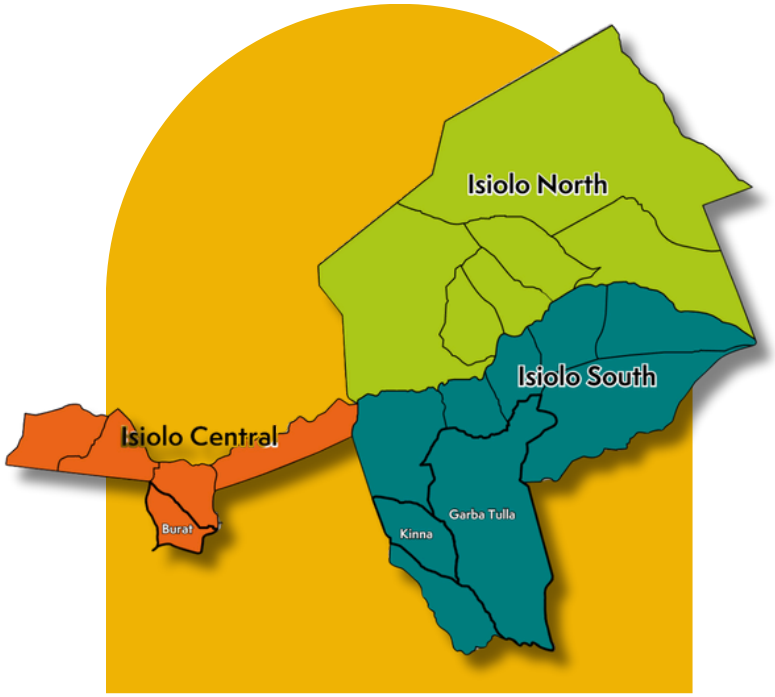
MAY 2024

CLIMATE ACTION IMPLEMENTATION SCHEME

Isiolo County - Kenya



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WHY THE IMPLEMENTATION SCHEME?

Recognizing the importance of bridging the gap between scientific research, policy formulation, and practical implementation, Clim-Eat, a Dutch-based NGO, conducted a study in Isiolo County, Kenya, aimed at identifying challenges in implementing climate actions.

The findings of this study are available for reference here. In the subsequent phase of the project, Clim-Eat facilitated a stakeholder dialogue with the objective of devising a practical and actionable implementation scheme to be executed by the end of the year 2025. The Climate Action Implementation Scheme in Isiolo County is essential due to the region's classification as an arid and semi-arid area. This classification brings significant challenges, including water scarcity, extreme weather conditions, and environmental degradation.

These issues directly impact the livelihoods of Isiolo's predominantly pastoralist communities, who are gradually transitioning to agro-pastoralism. Implementing climate action strategies is crucial to mitigate these challenges, enhance resilience, and ensure sustainable development. By addressing water shortages, improving agricultural practices, and promoting renewable energy as shown in Table 1, the implementation scheme aims to create a stable and sustainable environment conducive to economic growth and improved quality of life for the residents of Isiolo County.

INTRODUCTION

Isiolo County faces a unique set of environmental and socio-economic challenges due to its arid and semi-arid climate. The region's reliance on pastoralism and the gradual shift towards agro-pastoralism necessitates a comprehensive approach to climate action (Gitau Ng'ang'a K & Smit W, 2024).

The Climate Action Implementation Scheme is designed to address these challenges by focusing on sustainable water management, agricultural enhancement, and renewable energy adoption.

This holistic approach aims to build resilience against climate change impacts, promote food security, and improve the livelihoods of the local communities. The scheme (as shown in Table 1) is structured around priority thematic areas that target the most pressing needs and leverage local and international partnerships for effective implementation.

WHAT CONSTITUTES THE CHALLENGE?

Isiolo County's climate challenges are multifaceted, encompassing severe water scarcity, land degradation, and limited access to sustainable energy sources. The traditional pastoralist lifestyle is increasingly unsustainable due to prolonged droughts and erratic rainfall patterns, which strain water and grazing resources (Isiolo county, 2023).

Additionally, environmental degradation, driven by overgrazing and the spread of invasive plant species, exacerbates the region's vulnerability to climate change. These challenges hinder agricultural productivity, threaten food security, and contribute to poverty. Therefore, addressing these issues requires targeted interventions that enhance water availability, restore degraded lands, and promote the use of renewable energy technologies.

WHAT IS THE AIM OF THE IMPLEMENTATION SCHEME IN ISIOLO COUNTY?

The aim of the Climate Action Implementation Scheme in Isiolo County is to enhance the resilience and sustainability of local communities through targeted climate action initiatives. The scheme focuses on:

- Improving access to reliable water sources for domestic, agricultural, and livestock use.
- Promoting sustainable agricultural practices and livestock management to boost food security and economic stability.
- Encouraging the adoption of green energy technologies to reduce reliance on traditional fuels and improve environmental health.
- Restoring degraded lands to increase vegetation cover and enhance biodiversity.
- Educating and training the community on good agricultural practices and climate resilience techniques.

By achieving these objectives, the scheme intends to transform Isiolo County into a model for climate resilience and sustainable development.

TABLE 1. DEMAND DRIVEN IMPLEMENTATION SCHEME FOR ISIOLO COUNTY

Priority Thematic Area	**Agriculture & Environment**
Priority Climate actions	Drill and equip 30 boreholes across various wards for integrated domestic use, and for supporting crop cultivation, livestock production and wildlife. Isiolo County has a total of 10 wards, resulting in an allocation of 3 boreholes per ward.
Indicator for success (End-of-2025 Goals)	1. The total number of boreholes successfully drilled and equipped, with a target of 30 boreholes. 2. An increase in the number of households reporting reliable access to water.
Cost Estimates (USD)	692,000
Lead stakeholder(s) and Roles	1. Department of Water, Sanitation, Energy, Environment & Natural Resources - oversee *and coordinate the planning, implementation, and maintenance of borehole, approval and issuance of permits* 2. Drilling companies - *Borehole drilling*
Supporting stakeholder(s) and Roles	1. WFP, ACF, Mercycorps, NAWIRI, MIDP, CRS, WVK - *Funding support. Advocacy, Capacity building* 2. Department of Agriculture, livestock and fisheries – *Capacity building on irrigation techniques and soil water management*
Resources Needed	1. Land 2. Data 3. Drilling and installation equipment 4. Permits, budget 5. Human resources 6. Financial resources
Estimated Number of Farmer Households to be Impacted*	15,000

*There are a total of 53,206 households in Isiolo county, out of which 23,996 are farming households and 29,210 are non-farming households

Priority Thematic Area	**Agriculture**
Priority Climate actions	Promote the commercialization of livestock systems by establishing 4 feedlots in Oldonyiro, Cherab, Sericho and Kinna wards of Isiolo County to improve livestock health and nutrition. Feedlots are areas where cattle are kept and fed a high-energy diet to quickly fatten them for the market.
Indicator for success (End-of-2025 Goals)	1. Successful establishment of 4 feedlots in 4 different wards. 2. Improvement in livestock health and weight gain in feedlot-managed cattle. 3. Increase in livestock sales, fetching better prices than traditionally grazed livestock.
Cost Estimates (USD)	600,000
Lead stakeholder(s) and Roles	1. Department of Agriculture, Livestock and Fisheries – Planning, coordination, capacity building 2. *Local Community/ies - Supply of livestock to feedlots, provision of labour and growing of fodder*
Supporting stakeholder(s) and Roles	WFP, Mercy Corps, FCDC, FAO, WFP, NAWIRI, MID-P, CRS, WVK - Funding support. Advocacy, Capacity Building
Resources Needed	1. Land 2. Water source 3. Fodder 4. Supplements 5. Expert personnel 6. Construction materials
Estimated Number of Farmer Households to be Impacted*	6,000

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Priority Thematic Area	**Agriculture and Environment**
Priority Climate actions	Promote green energy technology by subsidizing the installation of 500 biogas systems (50 per ward), 500 solar panels (50 per ward), and distribution of 2,000 clean cooking jikos (200 per ward). This initiative involves assessing and selecting eligible farmers, coordinating the procurement and installation of biogas systems and solar panels, and distributing clean cooking jikos. Additionally, provide training and support to farmers on using and maintaining these technologies to ensure successful adoption and long-term benefits.
Indicator for success (End-of-2025 Goals)	1. Success is indicated by 500 biogas systems installed, 500 solar panels, and 2,000 clean cooking jikos installed and in use. 2. At least 80% of the farmers demonstrating proper usage and maintenance of the biogas systems, solar panels, and clean cooking jikos within the first year.
Cost Estimates (USD)	460,000
Lead stakeholder(s) and Roles	1. Sistema.Bio, Home Biogas – *Installation and maintenance of biogas* 2. Solar companies e.g Mkopa solar – *Installation of solar panels* 3. Burn, Akili holdings – *Supply of cooking stoves*
Supporting stakeholder(s) and Roles	1. Department of Water, Environment, Climate Change and Natural Resources – Capacity building on renewable energy 2. Department of Agriculture, Livestock and Fisheries – Capacity building on the use of bio-slurry fertilizer from biogas 3. NRT – Support with resource mobilization
Resources Needed	1. Biogas installation materials 2. Solar kits 3. Clean cooking jikos 4. Human resources 5. Training costs
Estimated Number of Farmer Households to be Impacted*	3,000

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Priority Thematic Area	**Agriculture and Environment**
Priority Climate actions	Establish 30 nurseries for fruit and fodder trees, distributing 3 nurseries per ward across the 10 wards, to enhance household food security and strengthen climate resilience.
Indicator for success (End-of-2025 Goals)	1. Successful establishment of 30 tree nursery, with each ward having 3 tree nurseries. 2. 80% of the seedlings surviving and being planted by households or the community.
Cost Estimates (USD)	240,000
Lead stakeholder(s) and Roles	1. Department of Water, Environment, Climate Change and Natural Resources – Implementation, Coordination 2. KFS – Regulation, Permits, capacity building on the best tree varieties, oversight
Supporting stakeholder(s) and Roles	1. Department of Agriculture, Livestock and Fisheries 2. CRS, NAWIRI and Mercycorp - *Facilitate extension services, advocacy*
Resources Needed	1. Land 2. Seeds/Seedlings 3. Permits 4. Human resources 5. Financial resources 6. Shade nets
Estimated Number of Farmer Households to be Impacted*	53,206

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Priority Thematic Area	**Agriculture and water**
Priority Climate actions	Construct a total of 20 water pans by establishing 3 water pans per ward as part of the provision of water harvesting infrastructure across 10 wards, aimed at harvesting runoff water to enhance water availability for livestock, crops and domestic use, hence enhancing resilience.
Indicator for success (End-of-2025 Goals)	1. Successful establishment of 30 water pans, with each ward having 3 usable water pans. 2. Reduction in walking distance to sources of water.
Cost Estimates (USD)	760,000
Lead stakeholder(s) and Roles	1. Department of Water, Environment, Climate Change and Natural Resources - *Implementation, Coordination* 2. Community – *Provision of labour and some materials for construction* 3. Water pan construction companies – *Actual establishment and equipping of the water pans*
Supporting stakeholder(s) and Roles	1. Department of Agriculture, Livestock and Fisheries 2. CRS, NAWIRI, Mercycorp - *Facilitate extension services, advocacy*
Resources Needed	1. Land 2. Human resources 3. Financial resources 4. Water pan construction materials e.g dam liners
Estimated Number of Farmer Households to be Impacted*	20,000

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Priority Thematic Area	**Agriculture and Environment**
Priority Climate actions	Restore 6,000 hectares of degraded land in Oldonyiro, Cherab, Ngaramara, Burat, and Sericho through the removal of Acacia raficians and Prosopis juliflora, gully filling, spring protection, and reseeding to increase the native vegetation.
Indicator for success (End-of-2025 Goals)	1. 100% restoration of the 6,000 hectares degraded land in 5 wards. 2. 50% increase in native vegetation cover and a 80% reduction in invasive species.
Cost Estimates (USD)	450,000
Lead stakeholder(s) and Roles	1. Department of Water, Environment, Climate Change and Natural Resources – *Implementation and Coordination* 2. Community – *Provision of labour* 3. Department of Agriculture, Livestock and Fisheries
Supporting stakeholder(s) and Roles	SATWI, WFP, CRS NAWIRI, MERCY COORP, MID-P KENYA RAPID+, ACF, NRT, WVK – *Advocacy, capacity building, research and development and resource mobilization*
Resources Needed	1. Land invaded by invasive species 2. Technical expertise 3. Financial Resources 4. Casual labourers 5. Farm implements 5. Seed/Seedlings for re-seeding
Estimated Number of Farmer Households to be Impacted*	10,000

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Priority Thematic Area	**Agriculture**
Priority Climate actions	Establish a Food System Hub (Centre of Excellence hub) in each of the 10 wards, ensuring that every ward has 1 hub.
Indicator for success (End-of-2025 Goals)	1. Establishment of 10 fully operational hubs. 2. At least 70% of community members utilization of the hubs and demonstrable positive impact on food security and agricultural productivity in each ward.
Cost Estimates (USD)	385,000
Lead stakeholder(s) and Roles	Department of Agriculture, Livestock and Fisheries – *Key executor of the project, Capacity building*
Supporting stakeholder(s) and Roles	1. WFP, CRS NAWIRI, MERCY COORP, MID-P KENYA RAPID+, ACF, NRT, WVK – *Advocacy, capacity building and resource mobilization* 2. KALRO – *Support with research*
Resources Needed	1. Land 2. Technical expertise 4. Demo Materials 5. Surveys 6. Financial Resources
Estimated Number of Farmer Households to be Impacted*	23,996

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Priority Thematic Area	**Communication & Climate Change**
Priority Climate actions	Promote Social and Behavioral Change Communication (SBCC) messaging in all 10 wards to enhance the adoption of climate action technologies.
Indicator for success (End-of-2025 Goals)	1. 80% reach of the target audience with SBCC messaging across all the 10 counties in Isiolo. 2. 40% increase of climate action technologies across the 10 wards.
Cost Estimates (USD)	100,000
Lead stakeholder(s) and Roles	Department of Agriculture, Livestock and Fisheries – *Overall implementor and coordinator*
Supporting stakeholder(s) and Roles	WFP, CRS NAWIRI, MERCY COORP, MID-P KENYA RAPID+, ACF, NRT, WVK – *Provision of learning content, resource mobilization, dissemination of messages*
Resources Needed	1. Channels of dissemination 2. Personnel 3. Climate action content
Estimated Number of Farmer Households to be Impacted*	23,996

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Priority Thematic Area	**Agriculture**
Priority Climate actions	Train at least 20,000 farmers across all 10 wards on Good Agricultural Practices (GAPs), including seed, variety, and breed selection, soil and water conservation, and dryland technology to enhance food and nutrition security.
Indicator for success (End-of-2025 Goals)	1. Successful execution of training sessions for 20,000 farmers across 10 wards on GAPs (seed variety and breed selection, soil and water conservation, dryland technology). 2. At least 60% of the trained community adopting some of the practices.
Cost Estimates (USD)	200,000
Lead stakeholder(s) and Roles	Department of Agriculture, Livestock and Fisheries – *Overall implementor and coordinator*
Supporting stakeholder(s) and Roles	WFP, CRS NAWIRI, MERCY COORP, MID-P KENYA RAPID+, ACF, NRT, WVK – *Advocacy, capacity building and resource mobilization*
Resources Needed	1. Extension staff 2. Facilitation fees 3. Training materials 4. Demo plots 5. Farmers
Estimated Number of Farmer Households to be Impacted*	50,000

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Priority Thematic Area	**Agriculture and Environment**
Priority Climate actions	Support the development of small-scale irrigation schemes in each of the 10 wards to benefit at least 300 farmers per ward, amounting to 3000 farming households
Indicator for success (End-of-2025 Goals)	Successful establishment of irrigation scheme serving 300-500 households in each ward, and successful use of the schemes.
Cost Estimates (USD)	1,000,000
Lead stakeholder(s) and Roles	1. Department of Agriculture, Livestock and Fisheries – Implementation and capacity building on irrigation schemes 2. Department of Water, Environment, Climate Change and Natural Resources – Assisting the department of agriculture with planning and supervision in setting up the schemes, Issuing of permits
Supporting stakeholder(s) and Roles	PREG, LISTEN, RANGE, NRT, CSOs – *Support with resource mobilization, Advocacy, and capacity development*
Resources Needed	1. Land 2. Permit and licensing 3. Water reticulation system (tanks, pipes) 4. Human resources 5. Financial resources
Estimated Number of Farmer Households to be Impacted*	3,000 – 5,000

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Priority Thematic Area	Environment
Priority Climate actions	Implement the restoration of the Isiolo River and the protection of the Kuro Barata and Oldonyro Springs. This is crucial to ensure sustainable water resources and improve ecosystem health for the local communities.
Indicator for success (End-of-2025 Goals)	1. Increased water flow and quality in Isiolo River and sustained water levels in Kuro Barata and Oldonyro Springs, demonstrating effective restoration and protection efforts. 2. Improved ecosystem health and biodiversity around Isiolo River, Kuro Barata, and Oldonyro Springs, evidenced by thriving local vegetation and enhanced resilience of local communities.
Cost Estimates (USD)	200,000
Lead stakeholder(s) and Roles	Department of Water, Environment, Climate Change and Natural Resources – *Coordination of the entire implementation process*
Supporting stakeholder(s) and Roles	1. KFS – *Provision of tree seedlings and other planting materials* 2. LEWA and NRT- *Support with fundraising* 3. CBOs - *Participate in implementation*
Resources Needed	1. Tree seedlings 2. Grasses 3. Gabions 4. Fencing materials 5. Human resources 6. Handwork tools and machinery
Estimated Number of Farmer Households to be Impacted*	53,206

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ANNEX 1 - PROPOSED WORK PLAN

How is the Implementation scheme developed?

Stakeholder meetings with government officials, community leaders, farmers, NGOs, and other stakeholders were organized in which priority actions, project objectives, roles, and responsibilities were determined.

How do we propose the Implementation to be executed?

1. Project Initiation Phase:
- Identify specific priority projects to be implemented from the implementation scheme.
- Establish Project Team: In liaison with the lead partner, assign roles and responsibilities to team members.
- Kick-off Meeting: Convene a meeting with lead and supporting partners to discuss project objectives, timelines, and deliverables.
- Develop Project Charter: Document project scope, objectives, stakeholders, and challenges.

2. Monitoring and Evaluation of Existing Projects:
- Review previous projects: Evaluate the effectiveness of past initiatives related to water and agriculture.
- Identify Key Learnings: Review successes, challenges, and lessons learned from previous projects.

3. Mapping and Identification Phase:
- Geographic Mapping: Identify and map areas in Isiolo where actions will be implemented.
- Household Identification: Collaborate with local authorities to identify farmers and households in target areas.

4. Procurement Phase:
- Develop Bid Documents: Prepare documents outlining project requirements, scope of work, and evaluation criteria.
- Call for Bidders: Issue requests for proposals (RFPs) to potential vendors and contractors in coordination with partners.
- Bid Evaluation: Evaluate bids received and select vendors based on criteria including expertise, cost, and capacity.

5. Project Execution:
- Partner Collaboration: Work closely with lead and supporting partners to implement project activities.
- Capacity Building: Provide training and support to farmers and households in water management and agricultural practices.
- Infrastructure Development: Implement water conservation measures and agricultural interventions in targeted areas.

6. Monitoring and Evaluation Phase:

- Progress Tracking: Regularly monitor project activities and milestones to ensure alignment with objectives.
- Impact Assessment: Evaluate the efficacy of implemented measures on water conservation and agricultural productivity.
- Stakeholder Feedback: Solicit feedback from farmers, households, and partners to identify areas for improvement.

7. Reporting and Documentation:

- Progress Reports: Compile regular progress reports detailing project activities, achievements, and challenges.
- Lessons Learned: Document key insights and recommendations for future project implementation.
- Final Evaluation: Conduct a comprehensive evaluation of project outcomes and impact.

8. Knowledge Sharing and Dissemination:

- Best Practices Sharing: Share success stories and best practices with stakeholders and the wider community.
- Sustainability Planning: Develop strategies for sustaining project interventions beyond the implementation period.

9. Project Closure:

- Final Review: Conduct a final review of project deliverables and outcomes.
- Stakeholder Engagement: Engage stakeholders in a discussion on project achievements and next steps.
- Closure Report: Prepare a comprehensive closure report summarizing project activities, outcomes, and recommendations.

10. Follow-up and Continuous Improvement:

- Follow-up Actions: Address any outstanding issues or follow-up actions identified during project closure.
- Continuous Learning: Continuously learn from project experiences and adapt strategies for future projects.
- Feedback Mechanism: Establish a feedback mechanism to gather input from stakeholders for ongoing improvement.

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ACRONYMS

ACF – Action Against Hunger
CBOs – Community Based Organizations
CRS - Catholic Relief Services
FAO – Food and Agriculture Organization
FCDC – Frontier Counties Development Council
KALRO – Kenya Agricultural and Livestock Research Organization
KFS – Kenya Forest Service
MIDP – Merti Integrated Development Programme
NGOs – Non-Governmental Organizations
NRT – Northern Rangeland Trust
NRT – Northland Range Trust
PREG – Partnership for Resilience and Economic Growth
WFP – World Food Programme
WVK – World Vision Kenya