

Shaping the Future with Green Roads

Inclusive Growth with Green Roads in Makueni County, Kenya

Open event (December 7, 2023): Shaping the Future with Green Roads

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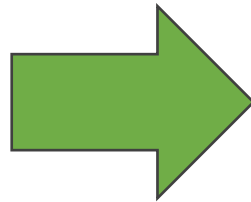
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Inclusive roads with green growth-Makueni County, Kenya

The situation: Regular roads.

- Prolonged drought.
- Road damages.
- Land degradation.
- Floods
- Low/poor agricultural productivity.
- Dust.
- Water logging.
- High cost of road maintenance.



The practice: Green Roads

- Cut-off/Mitre drains-Road run-off from feeder roads is collected and diverted into farms through trenches/ditches.
- Roadside gully rehabilitation using nature based solutions.
- Road run-off harvesting to farm ponds along the county roads.

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Objectives of the Green Roads for Water program (Inclusive Growth)

- Creating beneficial water and land management-
- Improved livelihoods for the local communities-fostering inclusive growth.
- Climate resilient infrastructural development.
- Reduced roads maintenance costs.
- Reliable road connectivity-connectivity-Reduced maintenance costs, access to vital services and economic integration.
- Pollution reduction.
- Preserving biodiversity.



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The green roads practice model-alignment & enabling factors

- Manual excavation of cut-offs and mitre drains and gully rehabilitation to achieve climate resilient road infrastructures and improved community livelihoods. This is financed by the county government and allows utilisation of the scarce water.
- A policy in all contracted projects, the contractors are instructed to engage the local communities around the specific projects to manually implement the green roads for water concept at a fee, boosting the local economy.
- Conducting training for the local communities especially farmers and persons living around the local roads and county staff for capacity building and sustainability. The trained local communities acts as TOTs and become the link between the community and the County Government.
- Local Communities and end user's needs are central in Road planning, design and implementation. This ensures a more collaboration among the larger and diverse groups and local organisations carrying out locally led adaptation measures on climate change.
- Partnerships and collaborations with Non governmental organisations such as: MetaMeta - <https://metameta.nl/> , Green Roads for Water- <https://roadsforwater.org/about-us/>
- County interdepartmental collaborations, coordination and integration of county programs.



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Recognition and acknowledgement

The green road for water program in Makueni County has been recognized and acknowledged by several local TV channels and news papers due to its positive impact to improving the livelihoods of the local communities and combating the drastic effects of climate change.



- <https://thewaterchannel.tv/thewaterblog/green-roads-for-water-for-building-resilience-against-climate-extremes-case-of-makueni-county-in-kenya/>
- <https://nation.africa/kenya/health/harvesting-hope-how-innovative-irrigation-technique-is-reviving-drought-stricken-farms-4435894>

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The Challenges

- Lack of goodwill for collaboration by the different stakeholders in the County and National governments and NGOs.
- Limited financial resources to carry out capacity building, sensitisation and implementation.
- Unpredictable and unreliable rainfall seasons.
- Limited knowledge and skills for the local authorities and the local communities on rainwater harvesting models.
- Poor integrated, inclusive and dynamic planning approach when designing roads by the county and national government road agencies.
- Lack of community goodwill.
- Political interference by the local area political class on project selection during public participation.



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Regular Roads



Eroded road section



Flooded road section



Muddy road section



Dusty road section

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Green Roads



Road with cut-off drains and NBS Gully control



Green road with cut-off drains-Erosion mitigation.



Roadside tree planting-Dust mitigation



Road with Cut-off drains-Mud mitigation.

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Community Sensitisation & Involvement



Community Public Participation & Training Forums

Engaging local communities in excavation of Green Roads for water structures-Cut-off drains

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Inclusive Green Roads-Cut-off/Mitre drains



Cut-off drains/Mitre drains for runoff harvesting

Fruit Farming using harvested road run-off

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Green Practice-Climate Resilient



Climate resilient community using road run-off



Climate Resilient Infrastructural Development

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Gully rehabilitation-Nature Based Solution



Deep gully –Gabions as protection works.

Gully rehabilitation-Nature Based Solution

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Community feedback field sessions



Community feedback-
Monitoring
success stories
from farmers
using
harvested
road-runoff
for crop
farming.

Road Run-off Irrigation & farming



Harvested Run-off stored in farm ponds .

Harvested run-off used for agriculture

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Locally-led adaptation-The Community model



Locally led adaptation is grounded in local, on-the-ground voices and approaches, where the existing power dynamics and hierarchies are addressed head on and development is led by the demand from grassroots communities and organizations.

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Thank you

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