

RAINWATER HARVESTING FOR INCREASED AGRICULTURAL PRODUCTION IN KENYA

GREATER HORN OF AFRICA RAINWATER PARTNERSHIP/
KENYA RAINWATER ASSOCIATION SECRETARIAT

Website: www.gharainwater.org

Presentation held by Dr. David M. Mburu, Chairman of the Kenya Rainwater Association, 10.12.2008, Maputo (9th General Assembly of the AACCC)

ABOUT KRA

Kenya Rainwater Association (KRA) is a professional, national membership organization, which is non-profit and non-political, bringing together individuals, institutions and organizations actively involved in enhancing rainwater harvesting and utilization.

ABOUT KRA cont'

Kenya Rainwater Association was registered in 1994, under the Societies Act and its activities complement those of individuals, institutions, private companies, NGO's and Government efforts in the water sector.

ABOUT KRA cont'

- The current National Development Plan also emphasizes the promotion and utilization of rainwater for sustainable development and this is what KRA is striving to achieve.

VISION

- That all people have access to safe and reliable water supplies for domestic, livestock, agricultural and commercial use.

MISSION

Our mission is to improve and promote rainwater harvesting technologies, utilization and management

OBJECTIVES

The main objectives are to promote rainwater harvesting technologies, utilization and management, building capacity in rainwater harvesting among professionals, technicians, artisans and communities/land users.

BENEFITS OF MEMBERSHIP INCLUDE

- Access to technical and professional advice
- Receipt of the Association's newsletter
- Opportunity to participate in meetings, workshops, seminars and conferences
- Training and research opportunities
- Product marketing and advertisement
- Joint rainwater harvesting projects between KRA and Community Based Organizations

ACHIEVEMENTS

- **Integrated Rainwater Harvesting and Management Program**
- The main program goal is to promote integrated rainwater harvesting & management (RHM) systems and complementary technologies for water supply, food security, wealth creation and sustainable livelihoods. Towards this goal, KRA/GHARP developed a three-phased program

ACHIEVEMENTS cont'

Phase I Case Studies: Entailed evaluation of existing RHM systems and identification of adoption and replication constraints.

Phase II Piloting: Focuses on addressing constraints, testing and piloting viable options and dissemination approaches.

ACHIEVEMENTS cont'

Phase III Replication and Up-scaling Involves mainly replication and up-scaling of tested RHM systems

- **Integrated Water Resources Management for Socio-economic Development and Sustainable Livelihoods of Tungu Kabiri Community.**
- **Gedo Region Integrated Rainwater Harvesting and Management Program in Somalia.**
- **Stakeholders Directory**
- **Rainwater Harvesting Expositions**
- **International SearNet Conferences**

ON GOING PROJECTS

- Improved rural drinking water supply, for ASAL Mwingi and Kyuso Districts sanitation and related. Funded by ACP EU water facility through GAA
- Sub-surface dams and sand dams, rock catchment systems, roof catchment systems in schools and VIP latrines.

ON GOING PROJECTS Cont'

Integrated RHM systems and complementary technologies for wealth creation and sustainable livelihood in 8 semi-arid Districts in Kenya. Funded by EC through SKILLSHARE international (water pans and earth dams, water regulation system and auxiliary structures sand dams, farm ponds, roof catchments, drip irrigation systems, tree nurseries, fodder/pasture production, DAT, bee keeping and capacity building)

ON GOING PROJECTS cont'

- Integrated Water Supply and Improved Sanitation in Rural Schools in Laikipia District.
Funded by UNDP (Roof catchment systems, farm ponds, sanitation systems, drip irrigation)

DEVELOPMENT PARTNERS

USAID- OFDA USAID/Pact- Kenya	UNDP- SGP	SEARNET- GWP Project	CORDAID
European Commission	RELMA- Sida	NRRDO Sudan Water Program	

EXAMPLES OF WATER HARVESTING TECHNOLOGIES

- Roof water tanks for schools
- Community water supply projects

Construction of roof water tank at a school in Makueni District

Completed roof water tank at a
school in Makueni District

Community water supply project in Chuka district

Community participation in water tank construction

Formwork for roofing water tank

Water storage tank

In-situ Rainwater Harvesting

- Planting pits
- Negarims
- Range pitting
- Ground breaking for rangeland rehabilitation
- Fodder preservation

Pawpaw planted in pits in Mwingi District

Negarims for citrus and millet production in Mwingi District

Pits for rangeland rehabilitation in Kitui District



Ground breaking for range rehabilitation in Baringo District

Demonstration on manual hay baler in Laikipia District

Runoff Water Harvesting

- Water ponds
- Earth dams
- Water pans in rangelands
- Plastic lined water ponds
- Siltation problems
- Desilting with dam scoop

Water pond for livestock in
Makanya village, Tanzania

Earth dam and Passion fruit production in Laikipia District

Newly constructed water pan in Baringo District

Rehabilitated water pan in Laikipia District

Newly constructed water pan in Koibatek District

Large plastic lined water pond

Plastic lined water pond for water storage

Siltation-challenge in water ponds

Demonstration on dam scoop for desilting water pans

Dam scoop demonstration

Water Utilization

- Drip irrigation
 - Vegetable production
 - Fruit tree establishment Apiculture
- Apiculture (Bee-keeping)
- Commercial production by farmer groups

Drip irrigation system

Demonstration on drip irrigation

Tomato production on drip irrigation in Kitui District

Drip irrigation for vegetation growing in Nyando district

Pawpaw grown under drip irrigation in Baringo District

Bee hives for honey production in Laikipia District

Farmer groups growing sweet corn
for export in Kibwezi

Salad production for export in Laikipia district

Other Water Harvesting Structures

- Rock catchment
- Sand dam
- Shallow wells in dry riverbeds

Rock catchment dam in Mutomo District

Sand dam fully recharged in Machakos District

Water extraction from sand dam in Somalia

Water from sandy riverbed in Gedo region,
Somalia

Shallow well in a dry riverbed

Protected shallow well in a dry
riverbed

Camels drinking water from a shallow
well in a sandy riverbed

Goats drinking water from a shallow
well in a dry riverbed