



**UNIVERSITY OF NAIROBI
CENTRE FOR ADVANCED STUDIES IN
ENVIRONMENTAL LAW AND POLICY
(CASELAP)**

NATIONAL WORKSHOP

**RAINWATER HARVESTING IRRIGATION
MANAGEMENT FOR SUSTAINABLE DRYLAND
AGRICULTURE, FOOD SECURITY AND
POVERTY ALLEVIATION IN SUB-SAHARAN
AFRICA**

5 AUGUST 2014

OLIVE GARDENS HOTEL

ARGWENG'S KODHEK ROAD

NAIROBI

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Background

Global projections based on population growth and food consumption patterns indicate that agricultural production will need to increase by at least 70 % to meet demands by 2050 (FAO, 2010). Most estimates also indicate that climate change is likely to reduce agricultural productivity, production stability and incomes in some areas that already have high levels of food insecurity. Hence, developing climate-smart agriculture is thus crucial to achieving future food security and climate change goals.

Rain-fed agricultural systems remain the principal livelihood base in large parts of sub-Saharan Africa and play a significant role towards the fight against hunger. Yet regular occurrences of intra-seasonal dry spells lead to poor yields. Among agrarian populations, the impacts of a changing climate are particularly pronounced, as they contend with ever-more uncertain conditions in which to raise food and earn a living. Moreover, impacts of climate variability on lives and livelihoods are not uniform within agrarian populations. The most vulnerable are often the poor, politically disenfranchised and marginalized communities in semi-arid and dryland areas, who are least able to rebound and buffer from climatic stress. Such environments constitute over 80% of the Kenya's landmass.

Recent studies (Maimbo Malesu pers. Comm.) show that the length of crop growing period has decreased by 30-45 days in East Africa. This would suggest that drylands in region cannot support sustainable rain-fed agriculture, hence need to adopt irrigation-based food production system. Currently, irrigated agriculture largely involves use of blue water with high potential for green water use through rainwater harvesting technologies.

The response to current and future threats of climate change on food security will require robust adaptation options that can allow for certainty in agriculture through rainwater harvesting for irrigation. For this reason, measures designed to ensure food and water security will demand integrated soil and water management and technological innovations in water systems. Besides supplementing water supply in all sectors, rainwater harvesting can form the basis of land use practices that promote agriculture and environmental conservation. While the interest in rainwater harvesting as a decentralized solution to water resource scarcity is gaining traction in academic and research communities, and other development organizations in Kenya, calls for

innovative and adequate technologies have yet to gain wide purchase in development implementation and policy.

Aim of the National Multi-Stakeholder Workshop

The National Multi-Stakeholder Workshop aims at providing a forum to assess the needs, capacities and measures to improve the inclusion and impacts of rainwater harvesting irrigation (RWHI) management on agricultural, food and poverty alleviation policies. It will focus on enhancing the use and knowledge of RWHI management for small-scale irrigation in rural drylands of Kenya. This will be achieved through the implementation of integrated theoretical and practical capacity building, and the development of technology-transfer and demonstration projects. It will also focus on providing the scientific evidence-based presentations that will adequately appraise policy and institutional reforms.

Conference objectives

The main objectives for this conference will be to:

1. Identify existing and emerging rainwater harvesting technologies and share best practices in rainwater harvesting for irrigation;
2. Assess the needs and capacities of scientific and technological communities, practitioners and local communities in rainwater harvesting irrigation management;
3. Assess the potential and market-oriented products in the field of RWHI management;
4. Assess policy and institutional arrangements on rainwater harvesting irrigation management;
5. Strengthen cooperation and enhance networking among academic and research communities with businesses/micro-enterprises, NGOs and public sectors, policy-making actors and local communities.

Expected output

- Consolidate information on rainwater harvesting technologies, institutions and capacity needs;

- Better understanding of the current needs and capacities of scientific and technological communities, private, NGOs and public agencies, and other practitioners including local communities in rainwater harvesting irrigation management;
- Recognize the potential for market development and entrepreneurship in the field of rainwater harvesting;
- Share emerging recommendations for improved practice in rainwater harvesting that will inform policy and institutional reforms;
- Strengthen cooperation and enhanced networking among researchers, policy makers, NGOs and local communities in Kenya.

Format

The event will take an interactive learning approach with a mixture of scientific evidence-based presentations, small group discussions and open space sessions. The key objectives of the workshop will be explored through reflection and sharing of knowledge on good practices, and learning from practical experiences in rainwater harvesting. Thematic areas include:

- Potential rainwater harvesting technologies and water management practices
- The current capacities and training needs of partner institutions and local communities in rainwater harvesting irrigation management;
- Research and innovation needs in rainwater harvesting irrigation management;
- Technology-transfers and market development needs in the field of RWHI management;
- Policy and institutional arrangements on rainwater harvesting irrigation management in Kenya

Participants

The workshop will bring together 40 participants from agencies and institutions working with dryland agriculture and water resource management. The participants will be drawn from academic and research communities, micro-enterprises, private, non-governmental organizations (NGOs), and public sectors, policy makers and local communities (including representatives from farmers, women and youth groups) to discuss and share knowledge on RWHI for small-scale irrigation in rural drylands of Kenya.

Workshop Program

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8:30 am - 9:00 am	Arrival/Welcoming of guests
9:00 am - 9:10 am	Welcome remarks and overview the AFRHINET Project: The role of rainwater harvesting irrigation management towards a climate resilient rain-fed agricultural system of - Prof. Nicholas Ogue, Director of CASELAP, University of Nairobi
9.10 am – 9.30 am	Official opening: Prof Lucy Irungu (Deputy Vice-Chancellor Research, Production and Extension, University of Nairobi)
9:30 am - 10:00 am	Status, policy and projections on rainwater harvesting and storage in Kenya – Eng. Robinson K. Gaita (Director, Water Storage & Land Reclamation – Ministry of Water, Environment & Natural Resources).
10:00 am - 10:20 am	Tea Break
10:20 am - 11:50 am	Potential rainwater harvesting technologies and soil and water management practices – Mr. Maimbo Malesu (Programme Coordinator, Water Management, Searnet/ICRAF).
11:50 am - 12:20 pm	The current needs and capacities of scientific and technological innovations in rainwater harvesting irrigation management – Dr. Boniface Kiteme, (CEO, CETRAD).
12:20 pm - 1:00 pm	Market-oriented and innovative products in the field of RWHI management: A Case study by Kenya Rainwater Association – Mr. Orodhi Odhiambo (Department of Civil Engineering, University of Nairobi).
1:00 pm - 2:00 pm	Lunch
2:00 pm - 3:00 pm	Group discussions
	Working Group 1: Assessment of current capacities and training needs of practitioners and local communities in rainwater harvesting irrigation management
	Working Group 2: Assessment of research and innovation needs in rainwater harvesting irrigation management and the way forward.

Working Group 3: Assessment of technology-transfers and market development needs in the field of RWHI management

Working Group 4: Analysis of legal, policy and institutional frameworks in rainwater harvesting irrigation management and the way forward.

3:00 pm - 4:00 pm

Group presentations

4:15 pm – 4:30 pm

Tea Break

4:30 pm – 5:00 pm

Vote of thanks/Closing remarks: Moving forward on Rainwater Harvesting Irrigation – Mr. Oremo (AFRHINET Project Manager)