

# **RAINWATER HARVESTING: A Viable Option for Kenya<sup>1</sup>**

## ***1.1 Introduction***

Kenya is among the “water–scarce” countries of Africa. The country has seen her water per capita diminish in the face of deteriorating catchment areas, an increasing population, expanding irrigated agricultural activities, and a growing industrial base. Access to water has become a limiting factor in socio economic development of the country. Therefore the Government has been promoting various ways of harnessing water resources, including rainwater through rainwater harvesting techniques.

## ***1.2 Partners in Rainwater Harvesting***

In Kenya today the key players in rainwater harvesting include the following government ministries: Ministry of Environment, Natural Resources and Wildlife; Ministry of Water Resources Management and Development; and Ministry of Agriculture. Several NGOs and other Community-Based Organizations at national and local levels have played major roles in highlighting rainwater harvesting. The Kenya Rainwater Association (KRA) in particular has played a major role in putting rainwater harvesting in the limelight. KRA is affiliated to the International Rainwater Catchment System Association. Through this network, Kenya has been able to exchange information on rainwater harvesting with other countries in the eastern and southern Africa. At the local level, church organizations and women groups have been very active in this field.

UNEP and other UN agencies have conducted pilot projects and workshops in Kenya to promote rainwater harvesting at national and local levels. Some bilateral development partners have also supported the application of this technology. The private sector has been instrumental through manufacture of innovative tools and components needed to implement rainwater harvesting projects such as gutters, roofing material, concrete surfaces and water tanks.

## ***1.3 Rainwater Harvesting Vs Environmental Issues of MDG and WSSD Targets***

Global Water Partnership has described Integrated Water Resources Management (IWRM) as *an ecosystem approach that ensures the coordinated development of water, land and related resources to optimise economic and social welfare without compromising on the sustainability of environmental systems*. Rainwater harvesting fits very well in this description.

In Kenya, rainwater harvesting is crucial for both economic and social activities that can improve living standards. From one harvesting storage structure can arise a myriad of interrelated activities including kitchen gardens, poultry keeping, zero grazing, biogas digester installations, manure harvesting, drip irrigation for horticultural crops production and fish farming among other economic activities. All these activities have a projection on increased income generation, improved nutrition status, improved sanitation and personal hygiene, creation of on-farm employment leading to poverty reduction and conservation of the environment.

## **2.0 MAINSTREAMING/SUSTAINABILITY OF RAINWATER HARVESTING**

Water impoundment in dams, ponds and wetlands has been encouraged by the Kenya Government for a very long time. Although it is not mandatory for institutional buildings to construct rainwater harvesting facilities, necessity has made many institutions such as hospitals and schools, especially in rural areas, to install rainwater harvesting facilities. As an incentive, tax rebates on roofing materials and guttering facilities have been applied by the Government.

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<sup>1</sup> *Contribution by Kenayn delegation*

To underscore the importance with which the Government considers this harvesting technique, use of water draining over asbestos roofing materials has been discouraged due to health considerations.

In agricultural production, rainwater harvesting is mainstreamed into soil and water conservation measures where the two are seen as complementary activities. This illustrates how rainwater harvesting is recognised in the national water conservation policy. It is for this reason that rainwater harvesting is incorporated in the national IWRM strategy in order to ensure the initiative takes a central place within national development planning and poverty reduction strategies. In particular, for arid and semi-arid areas, rainwater harvesting is given budgetary provision by the Exchequer.

### **3.0 REPLICABILITY OF THE INITIATIVE**

Rainwater harvesting is not a new phenomenon in Kenya except for magnitudes and proportions. Kenyan communities have practised different techniques in rainwater harvesting for a long time but in varying scales and conditions. Most applicable harvesting techniques are simple, acceptable and replicable across many cultural and economic settings. Success stories abound that can be cited, particularly in the arid and semi-arid areas of Kenya where rainwater harvesting is a principal pre-occupation to ensure economic survival and success. Some examples to be enumerated include:

- (i) Kasaye Project, which has an agricultural component, is implemented by the Kenya Rainwater Association;
- (ii) UNEP/Earth Care Africa project in Machakos consists of harvesting water and storing it in sand and sub-surface dams. This project has a strong gender component on empowering women.

These projects have been replicated directly by neighbouring local communities after recognising the positive impacts the harvesting technology has on those who practice it. Training workshops and field exchange visits between different communities on harvesting techniques have exposed more people and elicited interest in adopting these interventions.

### **4.0 LESSONS LEARNT**

Several lessons have been learned during the development, promotion and implementation of rainwater harvesting techniques. Highlights of these include:

- a) Poor planning during formulation and implementation can cause deleterious environmental effects. Therefore, planned interventions of specified scale must be subjected to environmental impact assessment before implementation;
- b) Community involvement and participation is crucial for the success of interventions. Therefore, appropriate benefits to target communities must be identified earlier in the project planning stage and communities sensitised to internalise and accept proposed technological interventions;
- c) Capacity building for the community is key for the sustainability of proposed interventions. It is, therefore, vital to impart skills through training to a selected cadre of community members to ensure sustainability, continuity and replication of the new technology.