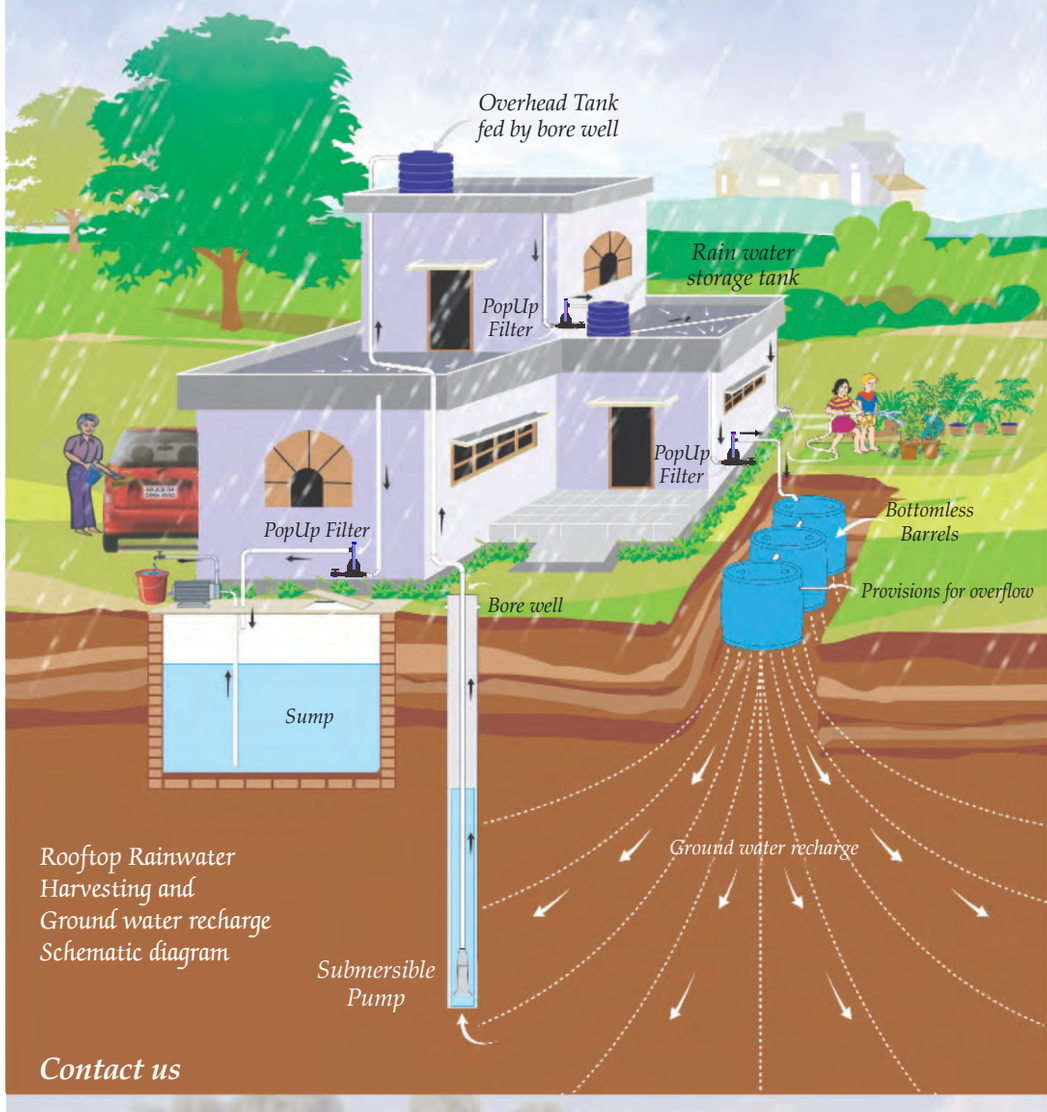
RWH at your finger Tips

- You can plan Rainwater harvesting on your own for your house through our App:
  Visit **http://rwh-advisor.info**
- Also available at Google Play store on your mobile phone - **RWH Advisor**



Rooftop Rainwater Harvesting and Ground water recharge Schematic diagram

Contact us

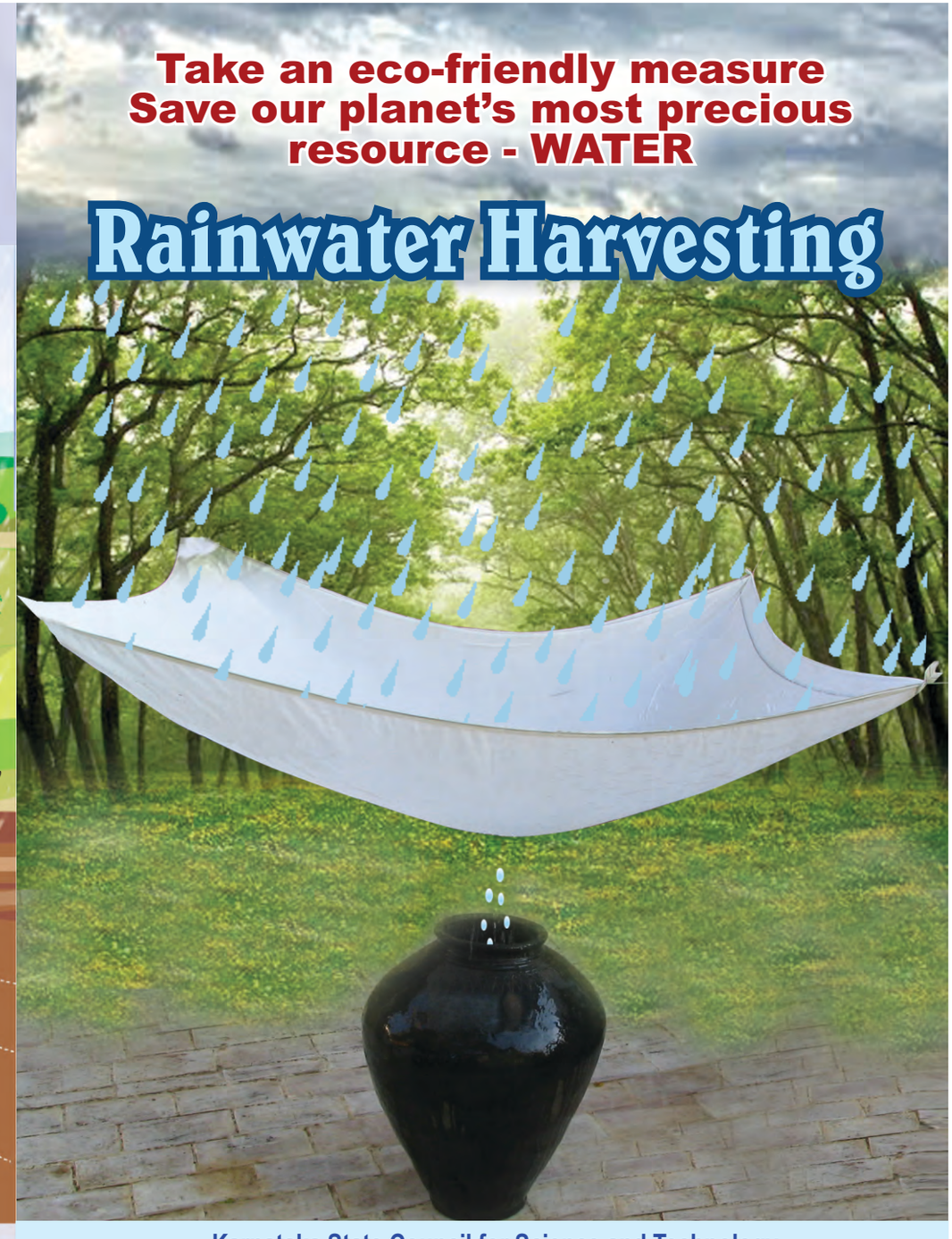
Dr. U.T. Vijay, Principal Investigator - RWH

E-mail : rwhcell@kscst.iisc.ernet.in

Website : www.kscst.iisc.ernet.in/rwh.html

Take an eco-friendly measure Save our planet's most precious resource - WATER

Rainwater Harvesting



KSCST

Karnataka State Council for Science and Technology

Indian Institute of Science, Bengaluru - 560 012

Ph : 91-80-2334 1652, 2334 8848/49, 2665 3666

E-mail : rwhcell@kscst.iisc.ernet.in

Website : www.kscst.iisc.ernet.in/rwh.html

GOVERNMENT OF KARNATAKA

H_2O - The Formula for Survival of Life on Earth

Water accounts for almost two third of the human body. Apart from the air we breathe, it is our most vital requirement. It sustains all life. Without it, no form of life would exist on our Planet.

Yet, this precious resource is becoming scarcer.

The effect of water scarcity can be devastating. If we are to preserve water supplies for future generations, a proven method to maintain the hydrological balance and the biological functions of the ecosystem should be adopted. We must act now to develop water sources, that are replenished and sustained by nature. By harnessing innovative technologies and improving indigenous ones, efforts must be made to effectively manage these water sources and to ensure they remain pollution free.

Rainwater Harvesting (RWH)

Rainwater harvesting is the process of collecting and storing rainwater in a scientific and controlled manner for future use.

Types of Rainwater Harvesting:

1. Roof top RWH
2. RWH in paved and un-paved areas (open fields, parks, pavement, landscapes)
3. RWH in large areas with open ponds, lakes, tanks etc.

Methods of RWH:

A. **Storage:** Rainwater is stored for direct use in tanks above the ground or underground sumps/ overhead tanks and used directly for flushing, gardening, washing etc.

B. **Groundwater Recharge:** Rainwater is recharged to ground through recharge pits, dug wells, bore wells, soak pits, infiltration trenches etc.

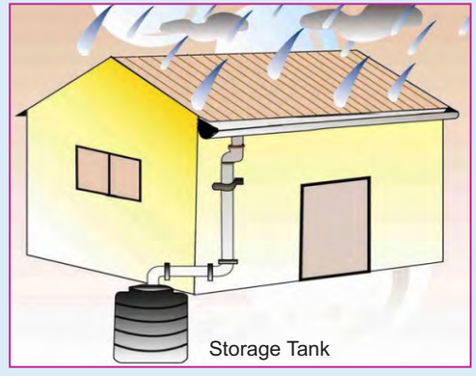
The need for Rainwater Harvesting - other dimensions:

- The alarming depletion and pollution of groundwater
- Soil erosion resulting from unchecked water runoff
- The inadequacy of the urban water supply system to meet the demands of the burgeoning population.
- The hazards of consuming polluted water

Rainwater - The Immense Potential

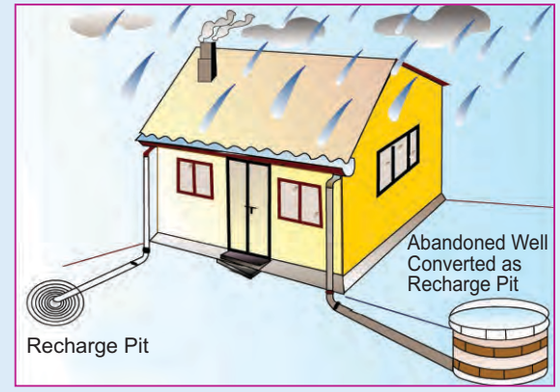
Rain is the primary source of water in the hydrological cycle. Rivers, lakes and groundwater are all secondary sources. Having relied for centuries on these secondary sources of water, we continue to ignore the inherent value of the primary source of water - Rain.

Harvesting rainwater, today, has helped us rediscover the various utilitarian aspects of rain. This facilitates optimal use of rainwater at the site of rainfall.



Rainwater Harvesting – Many Advantages

- Environment - friendly option
- Easy and simple means of meeting the water requirements for variety of uses - Drinking, Washing, Gardening etc.
- Mitigates the effects of drought
- Enhances groundwater - both in quantity and quality
- Reduces water run-off, that could otherwise result in flooding of storm water drains
- Reduces flooding of roads and low lying areas
- Reduces soil erosion
- Easy maintenance and low-cost methods results in considerable savings in water and electricity costs



Rainwater Harvesting - Anyone Can Do It Anywhere!

- Rooftops of Houses, Public buildings, Institutions, Hospitals, Hotels, Apartments, Industries and Shopping malls with wide open area
- Farmlands, Public parks, Playgrounds, etc.
- Paved and unpaved areas of layouts, cities, towns and villages

Rainwater Potential

Annual Rainfall		Annual Rainwater Potential (in Litre)			
		Plot size in Sq. feet			
in Inch	in mm	(20' x 30') 600	(30' x 40') 1200	(40' x 60') 2400	(50' x 80') 4000
20	500	28,000	55,500	1,11,500	1,86,000
32	800	44,800	88,800	1,78,400	2,97,600
39	1000	56,000	1,11,000	**2,23,000**	3,72,000
47	1200	67,200	1,33,200	2,67,600	4,46,400
55	1400	78,400	1,55,400	3,12,200	5,20,800
157	4000	2,24,000	4,44,000	8,92,000	14,88,000

For example, in Bengaluru (average annual rain fall of 39 inch / 1000 mm), about 2,23,000 litre of rainwater can be harvested in an area of 2,400 sq. ft. (40' x 60' site). The harvest yield depends on the rainfall received, the catchment area and the collection efficiency.