

Madurai Symposium 2013

11-16 September 2013

Workshop on

“Tested and Efficient Methods of Rainwater Harvesting and Grey water recycling in Multi-storeyed Residential and Commercial complexes to achieve water sufficiency”

13th September 2013

Venue: Thamukkam Grounds, Madurai



Organised by



**Akash ganga Trust
Rain Centre
Chennai**

Co-sponsored by



**DHAN Foundation
Madurai**



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“Tested and Efficient Methods of Rainwater Harvesting and Grey water recycling in Multi-storeyed Residential and Commercial complexes to achieve water sufficiency”

Background

Several big cities and towns in India are rain-rich but water starved and Tamil Nadu is no exception. Because the capacity of its water reservoirs is limited, the water authorities have problems in meeting the needs of its citizens if the monsoon rains do not come in time and in a pattern that is comfortably spread out. The problem is going to be aggravated with the recent extension made to the boundaries of these cities. In this situation, the citizens are forced to not only depend on captive sources but also to sustain them through proper water management strategies such as rainwater harvesting (RWH) and grey water recycling.

Secondly, RWH is being talked about in Chennai since 1.1.1994, when CMDA in a notification insisted that all building plans submitted for approval should indicate the kind of RWH system that is likely to be put up by the builder in the completed premises. In October 2002, the T.N. Government amended the Municipalities Building Rules Act (1972) making RWH compulsory for all buildings new and old in the entire state of Tamil Nadu. Interestingly, this law also contains in it the need to recycle the bath and wash water *in situ* in every complex. Our Rain Centre set up by the Akash Ganga Trust itself was inaugurated by the Hon'ble Chief Minister in August 2002, which was reported in all the print and visual media. In spite of all this, a large majority of citizens, particularly those living in big cities in Tamil Nadu like Chennai, Madurai, Coimbatore and Trichy are ignorant not only about RWH and grey water recycling in general but also its methodology in particular.

The most important activity, namely creating awareness has been done till now only for the citizens, who are of course the

beneficiaries. Awareness raising is also important for a few other stakeholders. For example, the media- both print and visual- is an important stakeholder, which can in turn play a very powerful and useful role in creating this much needed awareness. Two other important stakeholders are the Architects and Builders and the engineers belonging to Government agencies such as the Municipal Corporation and the water supply boards.

Objectives

The three important activities to be carried out to popularize and promote RWH and grey water recycling are 1) Awareness raising 2) Proper implementation of these in multi-storeyed apartment complexes and 3) Monitoring of the implemented systems for their effectiveness by the inspection agencies. The stakeholders primarily responsible for these activities are respectively the Media, Architects and Builders and the various government departments responsible for water management in cities such as the Municipal Corporation, DTP, TWAD and PWD.

The ultimate objective of the workshop is to sensitise these three stakeholders about the different aspects of RWH and greywater recycling. The Rain Centre has the expertise not only in total RWH (i.e. rooftop RWH as well as RWH of the surface run-off) but also in treating grey water in the garden by a simple, eco-friendly method that uses only water-loving plants, sunlight and soil to do the job.

Participants

The participants for the workshop will be journalists from English and vernacular print and visual media, Architects and Builders

(engineers responsible for planning, design and execution of high-rise buildings) and engineers belonging to the state and central governments such as Municipal Corporation, DTCP, TWAD, PWD, CPWD, CGWB. The number of participants is restricted to a maximum of fifty.

Workshop Facilitation

The workshop will include three presentations on 1) Rainwater Harvesting, an overview, RWH in urban areas, its need, relevance, importance and methodology, 2) Soil-water relationship, and 3) Simple methods to recover Grey Water *in situ*, Case studies and site visits.

Every presentation will be followed by a question answer session.

A team of workshop moderators will facilitate the deliberations in the workshop.

The faculty will consist of Dr.Sekhar Raghavan, the Director of the Rain Centre, Dr. Indukanth Ragade, experienced Water Management Expert and author of the book, 'Self-Reliance in Water - A Practical Manual for Town and City Dwellers' and Mr.J.Saravanan, a hydro-geologist by education and a groundwater consultant by profession.

Workshop Modules

Presentation I: Rainwater Harvesting – An Overview, its Need and Relevance in Urban Areas, Methodology and Successes *by Sekhar Raghavan, Director, Rain Centre*

This presentation will include a discussion on well-established and effective methods of harvesting rainwater both from the terrace and from the surface run-off, related costs, the need and relevance of carrying out a water audit. Will also touch upon sub-soil characteristics and the need to design soil specific groundwater recharge systems.

Presentation II: Water sufficiency through simple methods of Rainwater Harvesting and recycling of used water *By Indukanth Ragade, Alacrity Foundations*

This presentation will discuss in detail treating grey water (water used for bathing and washing clothes) in the garden by a simple eco-friendly method that needs only soil, sun-light and water loving plants and making it fit for use not only in flushing of toilets and gardening but also in augmenting the shallow water table. The system is practically self-sustaining, operates on gravity and does not need any power or chemicals. Will also make the participants aware of a versatile three-compartment over-head tank which can handle one or two or three different qualities of water depending on their availability.

Presentation III: RWH – In different soils and salient features of groundwater exploration and exploitation *by J. Saravanan, Thrust Geo-consultants Ltd.*

This will deal with topics like soil-water relationship, aquifer recharge, highlighting of the ease with which shallow dug wells can be charged with rainwater, role of shallow dug wells in water security and location of suitable sites for drilling of bore wells. Will also touch upon the need to protect existing shallow dug wells and reviving them wherever possible.

Venue and Date

The workshop will be conducted in Thamukkam Grounds, Madurai on 13th September 2013.

Expected Outcome

- The Building Fraternity and the media will become more familiar with the well-established and effective systems of Total RWH and Grey Water treatment and reuse within one's premises.
- Citizens will get to know more about the various aspects of RWH and grey water recycling including the methodology through print and visual media reports.
- Citizens will get the benefits of correct methodology designed by architects and implemented by builders.
- The monitoring agencies such as the government departments will be better equipped to evaluate the RWH and grey water recycling systems put up by the builders in all their projects.
- Will ultimately help the citizens achieve self reliance in water

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