Promoting Rain Water Harvesting as a solution for polluted water related CKDu (Chronic Kidney Disease)

Deepthi Wickramasinghe, Ph.D

Professor, University of Colombo
Regional Council Member, Global Water Partnership - SA
Sri Lanka Water Partnership
Clean and accessible water is a basic human right.

• Yet, water scarcity affect many people - mostly the poor.
• Experience in Sri Lanka ....

• Can we achieve the SDG target 6.1 – Safe and affordable drinking water for all?
In the rural agricultural areas
• The same water resource is shared for
  - irrigate crops (paddy, mostly)
  - human needs

• Misuse and over use of chemicals are common among farmers.

• Thus, fertilizers and agrochemicals are added to water in many ways.
Village **poor** have no means of obtaining water …..

- No pipe water supply
- Impacts of climate change - less rain fall and droughts
- No option other than using reservoir water for drinking

http://unhabitat.lk/infocus/rehabilitating-the-kovilvayal-village-internal-access-road-in-kiinochchi/
Problem- Lack of safe drinking water

- CKDu has become a **silent killer** leaving many families helpless.
- **Chronic Kidney Disease of Unknown Aetiology**
  - 35,000 patients
  - 1000+ deaths
CKDu

- Evidence suggests that the disease is related to one or more environmental agents.
- However, pinpointing a definite cause for CKDu is challenging.
- It is plausible that CKDu is multifactorial
- No specific guidelines or recommendations exist for treatment of CKDu.
The researchers reveal that there is a strong possibility of contamination of drinking water with high levels of

- fluoride
- water hardness
- pesticides
- heavy metals
- and may be cyanobacterial toxins
• Kidney disease was the seventh most common cause of death and an increasing cause of death in Sri Lanka in 2012 (WHO).

• Farming was reported as the main occupational/environmental risk factor for CKDu.
• CKDu problem affects not only the local economy and development but also stability of the family lives of the patients.

• Most of the affected people are the chief occupant or the bread winner of the family which drag the entire family unit into a misery.

Solution- Rain Water Harvesting (RWH)

RWH: clean, free water

• To ensure health, dignity to all

• To tap rain water at your door step

https://puritas.lk/
• Rain water harvesting is an eco friendly alternative.

• Since rain water does not contain any pollutant and regarded as a clean source of drinking water it could enhance water and sanitation in the affected areas.
• Providing safe and clean drinking water will not only save the comminutes from the deadly diseases
  • but also help them obtaining clean water from their residence reducing time wasted for fetching water form outside.
Highlights

• This project proposes to form **village level rain water harvesting societies** and promote use of same to overcome water shortage issues.

• Members of the societies will be educated why they should not use contaminated tank water and switch to RWH.

• Selected families will be donated with RWH tanks and will be given a short training how to maintain those with periodical cleaning.
35 RWH tanks - schools, hospitals, individuals in Kurunegala District
Training and awareness
Monitoring - Participatory approach
Other benefits

- Attitudes: Willingness to change

- Awareness raising – water sources conservation, good practices

- School children as conservation messengers

- Increased stakeholder participation

- Innovative solutions using freely available natural resource
Thank You!