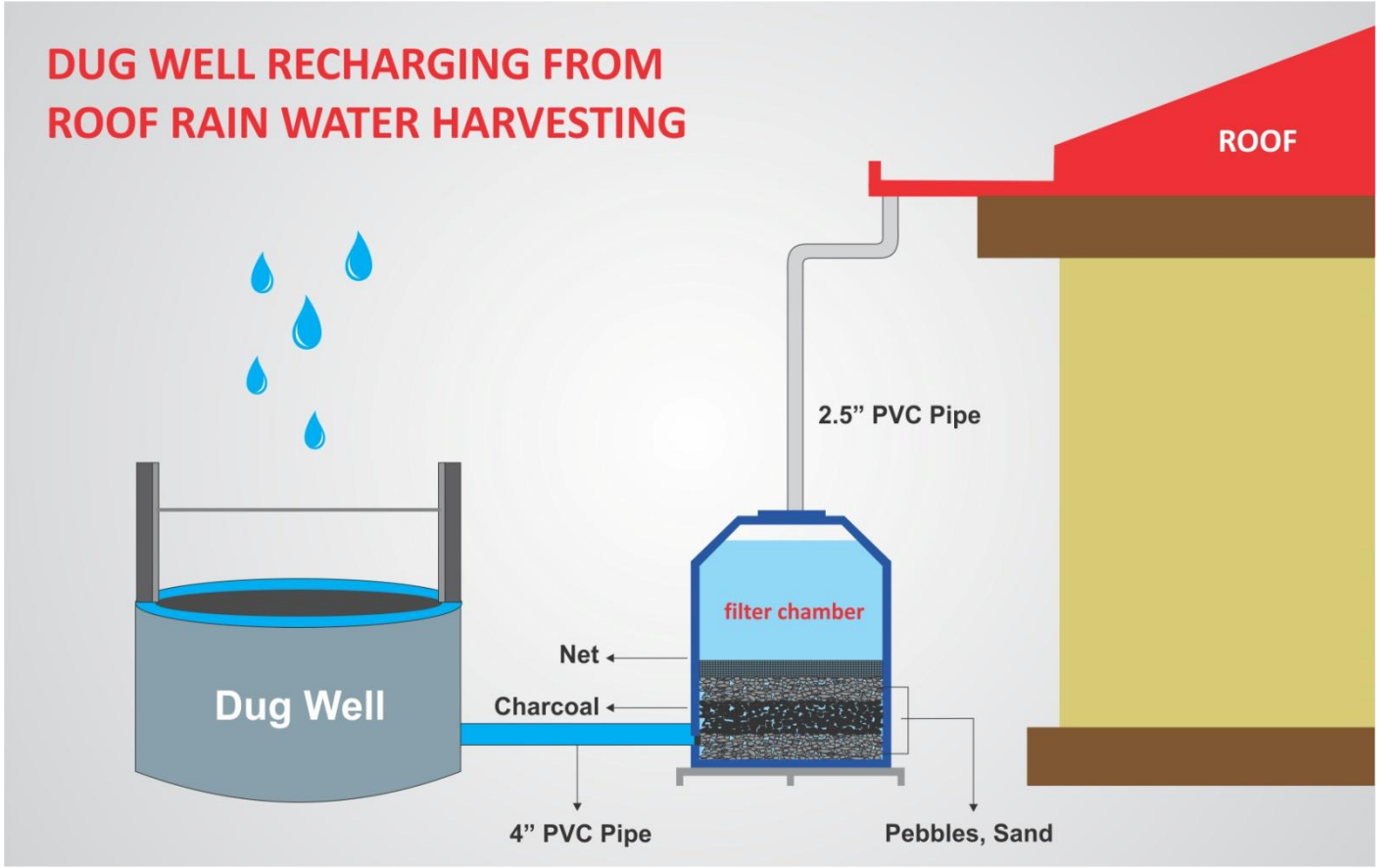


Project proposal 1: Houses

Ground water recharge through wells using rainwater



Source (<https://mazhapolima.org/>)

1) Required materials

- Guttering materials/parts
- 4 Inch pipe
- Balance board (8inch x 1feet). If this balance board is already fitted no additional cost
- Filtration tank or concrete
- Water meter to measure the actual amount of water harvested
- Rain gauge (Pluviometer) to measure the rain fall
- pH, TDS & EC testing equipment to measure water quality
- Any other materials/parts?

ROOF 2 WELL Project – Karainagar, Jaffna, Sri Lanka

2) Costing

- a) As per initial info it is about Rs300 (Rs180 if balance board already fitted) per feet (material + labour). So, it is about Rs10, 000 for 35feet long guttering.
- b) It is between 3,000 to 5,000 for 200 litres plastic barrel with pebbles/sand/charcoal filtration
- c) OR, it is about Rs 10,000 for a filtration tank (concrete) 3 x 3 x 3 feet (27 cubic feet = 764litres) dimensions.
- d) So, the total cost could be between Rs20,000 to Rs30,000 (£100 - £150) for 35 feet long system
- e) ~35,000 litres of rain water can be saved inside the well based on 400mm average rainfall
- f) So, it works out to be around Rs 1,000 per feet (including required materials (barrel filter) and labour). If someone wants to implement this system for 100 feet long system it will cost about Rs 100,000.

<i>Revision : Version 2, 17th July 2019</i>		Cost in SLR (including labour)		
	Items	Per Meter	Per feet	Price in SLR based on 35m (112 feet) length
1	Guttering material	380.00	115.85	13,300
2	Pipe 4" (4Inch)	220.00	67.07	7,700
3	Balanced board (8" width & 1 feet length)	377.20	115.00	12,880
		977.20	297.93	33880.00
4	200 litre plastic standard tank for filtering (optional)	3,000	3,000	3,000
	Total	3,977	3,298	36,880
			Price per feet length	1,053.71
	<i>PS: The above figures are only for estimates. Accurate cost can be obtained after survey by the local workers.</i>			

3) Maintenance

- a) Each system has to be monitored on a regular basis, preferably every 3 months. This regular system check may include checking the state of the roof, guttering debris or leakages, first flush pipe condition, filtration tank status, refill of filtration tank materials, pipe route checks from roof to well.
- b) A qualified or suitable person to be appointed for this maintenance and an acceptable fee to be paid for this maintenance check.
- c) Regular maintenance updates and reports to be submitted for data collection and updates.

4) Water related data collection, monitoring & analysis

- a) Weather data:
 - I. Rain fall measurement and recordings
 - II. Temperature measurement & recordings
 - III. Wind measurement and recordings
- b) Water quality data :
 - I. Some key water quality parameters (pH, Total dissolved solids (TDS), Electrical Conductivity (EC), & Nitrate) are to be monitored & recorded on monthly basis
- c) Well water level, ground water level, recharges water amount are to measured and recorded on monthly basis
- d) Data analysis (through Jaffna University or other government body) to be carried out by professionals to ensure the collected samples and the process followed are adequate to the expected level
- e) Volunteers to be indentified to help with this collection. We can promote citizen science (using local people) and educate the local population through this mechanism.

5) Statistical data collection by GN division

- a) We need to know the exact number of houses in Karainagar that can be used for this project
- b) We need to know how many of those houses already have this systems installed
- c) We need to know how many families are willing to do this system on their own houses
- d) We need to know how many families require financial support (full or partial). This needs to be verified and confirmed by the local GS and DS office
- e) We need to know how many new houses are going to be built in future so that we can request them to include this system during the construction of those houses (cost effective)

6) Awareness program

- a) Local group meetings at GN level (J/40.....J/48) to be conducted on monthly basis (initially) and then quarterly
- b) Help from DS office & Samurthi to ensure beneficiaries are fully updated with the benefits of the system
- c) Expansion of successful systems to all around Karainagar through this awareness program within 2 years

7) Contacts

- a) Karainagar (Sri Lanka) : Gopinath : 0094-767622100, Sivananthi : 0094-712308485, Thavarasa : 0094-773437418
- b) UK: Ragu : 0044-7883374709, Nanthan : 0044-7737121187
- c) Colombo (Sri Lanka) : Kumanan : 0094-772555814, Hariharakumar : 0094-766043903, Thayanithi : 0094-777485097
- d) Australia : Parameshwaran : 0061-437140327, Mahadeva : 0061-425235181, Ravi : 0061-404969628, Bobby : 0061-452201075, Karan : 0061-426455499
- e) Canada :
- f) France : Nehru master : 0033-625168812
- g) Swiss : Lingam : 0041-792739231, Babu : 0041-786499957
- h) Germany : Ravinthiran : 0049-1627808268, Saayi : 0049-1627243503
- i) America : Thayaparan : 001-7406454933
- j) Norway : Satkunam (Rasan) : 0047-91707841

8) Model systems in Karainagar

- a) People can visit the model of this system (and micro irrigation for growing coconut trees) using the following contact: Mrs Thiagarajah (CTB), Neelipanthanai, Mobile : 0094-772721094



Source (<https://mazhapolima.org/>)