

Rain water dropping on the company premises is the foundation to build an eco-balanced society

We are not short of water – but short of water literacy and hence we always feel water scarcity is a big problem? Don't you think our feelings are wrong?

World is not problem free but – every problem has a solution –if we know where to find or how to find or what to find or when and why to find the answer?

Water scarcity is not because of lack of water, and as rightly said in the beginning, we lack water literacy i.e. water awareness. Hence all our development initiatives' should be done sustainably and sans invasion with sensitive Mother Nature. We have no moral rights to destroy it – for our today's greed is tomorrow's disaster for our grand children. The data below indicates the damage we have created for the future generations and to the mankind:

S No	Statistics	Details
1	47,75,839 hectares	Forest destroyed
2	25,45,086 hectares	Extent of Land affected due to soil erosion
3	62,85,869 hectares	Desertification
4	41,52,730 Tons	Industrial waste dumped on surface, sub-surface and air
5	9,46,89,89,002 Tons	Carbon Dioxide released till date
6	1.33 ° Celsius	Increase in the surface temperature
7	7.23 Inches	Increase in the sea level
8	50,000 Crores Tons	Quantity of plastic that was discovered just 25 years back and will be multifold now
9	Over 25,000	Lakes encroached and converted into layouts, residential areas, industries, bus stands, etc.
10	12,000 – 15,000 Feet	Depth of digging water due to only extraction but no recharge
11	1.40 Crore	Borewells dug in Karnataka meant only to extract but not even 2% for recharging.

Responsible social citizenry is the need of the hours and let us not look to "Others" to do this. Each one of us can be partner in 'RESPONSIBLE CONTRIBUTING CITIZEN'. Each drop saved is equivalent to one grandchild saved irrespective of what age group one belongs to.

We at "Water Literacy Foundation" propagate Rain Water Harvesting and Water Conservation field and our humble request to all our fellow citizens to join hands in saving water. Every hand in this will add to the grand design of "Water Surplus India". Do join before it's too late.

Our sincere gratitude to ***ACC Ltd, India's*** leading Cement Manufacturers, for taking up the Ground and Sub-soil Water Recharging through Rain Water Harvesting project.

The short flashback goes like this; Mr. N Keshav, Plant Head wanted to show case his as well as ACC Ltd's Corporate Social Responsibility and was in search of WINNOVATION for business, stake holders and the society at large. His search through Mr. Naveenkumar, the landscape vendor, rightfully landed with the name of Mr. Ayyappa Masagi's , the Founder Director of Water Literacy Foundation. Once the right destination reached, delay was given a go by and Keshav sir – and Ayyappa masagi teamed to harvest water.

ACC Ltd land mass is huge and 100 acres is a great boon for water harvest and water recharge. During the initial survey, WLF (Water Literacy Foundation) planned to cover 50 acres under the project with a budget of Rs 24 Lakhs to harvest every possible rain drop falling in those 50 acres. Since Rain Water Harvesting field is one of the most ignorant activity in our country, Mr. Kirankumar and Mr. Abhinav felt arranging and investing Rs. 24 Lakhs would not be feasible. However, Keshav sir visualized the project in all perspective and asked WLF to revise and restrict the budget to Rs. 14 Lakhs for 1st phase and suggested to execute the other part of the project in subsequent phases. Here we would like to mention that our track record, present work approaching attitude and passion for water conservation too motivated ACC team to go live on this project in phases.

Infrastructure wise, we identified the below strategic locations for our project:

1. Water logging area on the extreme left side of the Main Entrance Gate
2. Main Drainage Line where water flows 24 hours / 7 days in the week / 365 days in the year and its adjacent places
3. Borewells

Based on the huge catchment area IN THE existing infrastructure, WLF constructed series of 18 Infiltration Wells of 4 feet diameter and 10 feet depth adjacent to the Drainage Line. Water was fed to these Infiltration Wells from Drainage Line through which water flows round the clock. To facilitate this, WLF drilled a hole to the Drainage Line, inserted a 4 inch PVC pipe and injected the same to the Infiltration Well. To regulate the flow of water and to feed all the Infiltration Wells, we constructed Baffle Wall that blocks and helps the water to flow into the Infiltration Wells. Excess water overflows above the Baffle walls.

Infiltration Wells are highly effective in recharging the sub-soil water content and eventually start saturating near by open wells and borewells. One Infiltration Well can store upto 3.5 – 4 thousand liters of water per precipitation and all water gets percolated slowly into the earth. Going by this calculation, we can expect, each well can harvest around 40,000 liters of rain water.

If all the Infiltration Wells are filled completely and cannot receive any more rain water, then the surplus water is sent to AN unique technique called as 'Sump Type Bore well Recharging Unit'.(a WLF innovation) It has 3 compartments for Collection, Filtration and Recharging. It is called as Sump Type Borewell Recharging Unit because its collection tank resembles our sump. Its dimensions are 18 feet Length x 8 feet Breadth x 12 feet Depth. The rain water is collected in the Collection Tank. Water slowly passes through a Gallery Wall that traps all the silt, sediments, etc from entering into the next unit. Then the water gets filtered in 6 stages and finally injected into the perforated borewell casing pipe. This is so effective that till date we have recharged over 90 thousand borewells directly and indirectly. There was an added advantage to ACC Ltd in terms of availability of seepage water which is being fed into the borewell to keep the borewell recharging 'On' for 24 hours a day / 7 days a week / 365 days a year.

As Per WLF calculation, constructing 18 Infiltration Wells and a Sump Type Borewell Recharging Unit for 50 acres of rain water is not adequate. After filling all the Infiltration Wells and Collection Tank of the Sump Type Borewell Recharging Unit, the surplus water is fed to the 60 m Length x 40 m Breadth x 5 m Depth Lake on the left side of the company. We drilled holes on the external Drainage Line wall and company compound wall and used 44 Hume pipes to route the water from Drainage Line to our lake inside the company premises. We have designed and constructed the lake to maintain a level of 5 feet of water. The excess water flowing into the lake is used to recharge the borewell that is exactly on the lake bund. We call this entire system as

'Lake Type Borewell Recharging Unit'. The lake became ready from all angles on 8th Jan and is harvesting 45,000 liters of Drainage Line water everyday.

Lake:



With the combination of Infiltration Wells, Sump Type Borewell Recharging Unit, Lake and Lake Type Borewell Recharging Unit, we have endeavored to harvest as much water as possible falling within ACC Premises. As a respectful gesture, we would like to thank Mr. N Keshav, Mr. Abhinav F, Mr. Kirankumar, M/s Gowri Constructions and our RWC team for their invaluable contribution towards the project.

Water conservation is everybody's responsibility and ACC performed its part. ACC went one step ahead and wants to conduct a program to encourage other companies to take up such projects. With such a noble thought, ACC intends to invites all the ACC employees, neighboring villagers, and local governing bodies and nearby industry Facilities Managers to witness the inauguration of the project Mr. N Keshav, Director.

We welcome one and all to ACC Ltd premises on 18-1-2011.

Your humbler AYYAPPA MASAGI is the proud founder of WLF and this function is only the beginning and would like each one of you to become torch bearer of your company as well as WATER CONSERVATION- YOU CAN AND YOU WILL.

About the Rain water harvesting organization

The entire project was designed and executed by Rain Water Concepts (I) Pvt Ltd, Bangalore. Mr. Ayyappa Masagi is the Founder Director of the company who was a Mechanical Engineer with L&T Komatsu, Bangalore prior to this stint.

The company has a rich track record of successfully executing Rain Water Harvesting projects in over 30 industries, 200 plus apartments, thousands of houses, 4 luxury villas, farms and numerous villages in 9 states of India. Mr. Ayyappa Masagi is on a mission of developing Water Warriors to end the water scarcity in India by 2020 as per his companies vision: *"We visualize India of 2020 to be a water-efficient nation: a nation in which all people are able to enjoy their basic human right to water. This ideal will be achieved through a massive*

movement for 'Water Literacy' – knowledge about water issues and conservation methodology.” He has also conducted over 1600 Water Literacy campaigns, awareness programs, workshops, and rallies towards his vision.

His back breaking work has been identified by numerous organization and governments who have honored him with the below credentials:

1. Ashoka Fellowship by Ashoka – Innovators for the Public USA
2. Portfolio Social Entrepreneur – Social Impact
3. The Jamnalal Bajaj National Award for Application of Science and Technology for Rural Development 2009
4. Shrushti Samman – National Award as a Doctor of Barren Bore Wells
5. India Leaders for Tomorrow in Water Resource Management- Ratan TATA Trust
6. Conferred the title Water Gandhi in 2008
7. Jalashree Award [Highly Respectable Person]
8. Veera Neera Kannadiga [Water Warrior]
9. Karnataka’s Best Social Service Award by Zee Kannada Channel
10. Karnataka Rajyotsava Award – 2010 in the field of Agriculture
11. NGO Award 2011 for Water Conservation – By LGCL and Times Foundation

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