# NEWSLETTER ANULLOUM The official newsletter of ANULOM Technologies Pvt. Ltd. Pune

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# **Rainwater Harvesting**



Rainwater harvesting is the simple process or technology used conserve rainwater to bv collecting, storing, conveying, and purifying of rainwater that runs off from rooftops, parks, roads, open grounds, etc. for later use. Here, let us have a look at the diagram of rainwater harvesting system. All living things including plants, animals and human beings need water to live and to carry out different cellular activities.

### Different uses of water?

We all use water for different kinds of day-to-day activities, such as cleaning, washing, bathing, cooking, drinking and other domestic and industrial uses. Water is a precious, essential and the non-living components of the environment. Today, we all are heading toward the scarcity of water, and this is mainly because of the lack of water conservation and pollution of water bodies. So, let us not waste a drop of water and start conserving water for further use. There are different methods used for conserving water; this article explains the rainwater harvesting system.

### How to Harvest the Rainwater?

Rainwater harvesting systems consists of the following components:

- **Catchment** Used to collect and store the captured rainwater.
- **Conveyance system** It is used to transport the harvested water from the catchment to the recharge zone.
- **Flush** It is used to flush out the first spell of rain.
- Filter Used for filtering the collected rainwater and removing pollutants.
- Tanks and the recharge structures Used to store the filtered water which is ready to use.

The process of rainwater harvesting involves the collection



## Editorial...

## Dear Readers,

Welcome all to this twentyof Anulom sixth issue Newsletter. We hope that you all find the Articles appearing in this Newsletter, informative and useful in your business and personal life. Please give us your feedback on this. Also, we request you to contribute with your article on the subjects that will be informative and interesting for the readers.

We are glad to inform you that our Google Reviews have touched a mark of 2,333 numbers with a 4.6 Rating. Thank you all and stay connected with Anulom services for many more years to come.

- Editor



and the storage of rainwater with the help of artificially designed systems that run off naturally or man-made catchment areas likethe rooftop, compounds, rock surface, hill slopes, artificially repaired impervious or semipervious land surface.

Several factors play a vital role in the amount of water harvested. Some of these factors are:

- The quantum of runoff.
- Features of the catchments.
- Impact on the environment.
- Availability of the technology.
- The capacity of the storage tanks.
- Types of the roof, its slope, and its materials.
- The frequency, quantity, and the quality of the rainfall.
- The speed and ease with which the rainwater penetrates through the subsoil to recharge the groundwater.

#### Why do we Harvest Rainwater?

The rainwater harvesting system is one of the best methods practised and followed to support the conservation of water. Today, scarcity of good quality water has become a significant cause of concern. However, rainwater. which is pure and of good quality, can be used for irrigation, cleaning, bathing, washing, cooking and for other livestock requirements.

#### Advantages of Rainwater Harvesting

The benefits of the rainwater harvesting system are listed below.

- Less cost.
- Helps in reducing the water bill.
- Decreases the demand for water.
- Reduces the need for imported water.
- Promotes both water and energy conservation.
- Improves the quality and quantity of groundwater.
- Does not require a filtration system for landscape irrigation.
- This technology is relatively simple, easy to install and operate.
- It reduces soil erosion, stormwater runoff, flooding, and pollution of surface water with fertilizers, pesticides, metals, and other sediments.
- It is an excellent source of water for landscape irrigation with no chemicals, dissolved salts and free from all minerals.
- The combination of urban 'green' rooftops with rainwater catchments have been found to reduce building temperatures by more than 1.3 degrees Celsius.

When drought occurs, rainwater harvested in past months can be used. If rain is scarce but also unpredictable, the use of a rainwater harvesting system can be critical to capturing the rain when it does fall. Many countries with arid environments, use rainwater harvesting as a cheap and reliable source of clean water. To enhance irrigation in arid environments, ridges of soil are constructed to trap and rainwater from prevent running downhills. Even in of low rainfall, periods enough water is collected for crops to grow. Water collected from roofs and tanks can be constructed to hold large quantities of rainwater. In addition, rainwater harvesting decreases the demand for water from wells, enabling groundwater levels to be further sustained rather than depleted.

## What are the different methods of rainwater harvesting?

Broadly there are two ways of harvesting rainwater, namely; surface runoff harvesting and rooftop rainwater harvesting. Instead of using the roof for catchment, the Rain Saucer, which looks like an upside-down



umbrella, collects rain straight from the sky. This decreases the potential for contamination and makes Rain Saucer a potential application for potable water.

Many countries in the World have adopted Rainwater Harvesting for various uses. Kenya has already been successfully harvesting rainwater for toilets, laundry, and irrigation. Frankfurt Airport has the biggest rainwater harvesting system in Germany. The system helps save approximately 1 million cubic meters of water per year. This system collects water from the roofs of the new terminal which has an area of 26,800 square meters. The water is collected in the basement of the airport in six tanks with a storage capacity of 100 cubic meters. The water is mainly used for toilet flushing, watering plants, and cleaning the air conditioning system. Rainwater harvesting was adopted at The Velodrome - The London Olympic Park - in order to increase the sustainability of the facility. Areas in Australia use harvested rainwater for cooking and drinking. Recently cost-effective rainwater collection in the already dug wells found to be highly effective in bringing groundwater level up in India.

In the early 21st century, India began heavily investing in rainwater harvesting infrastructure and policy as an urgent response to water scarcity. In 2001, Tamil Nadu became the first Indian state to make rainwater harvesting compulsory in every building to avoid groundwater depletion. In Rajasthan, rainwater harvesting has traditionally been practiced by the people of the Thar Desert. In Maharashtra, the cities like Mumbai and Pune also practice Rain water Harvesting on a large scale. Bengaluru also contributes to RHW to a large extent. Many other countries like UK, USA, Uganda, Thailand, Bermuda, New Zealand, Sri Lanka etc. have opted RWH and have been investing in the Research on a regular basis.

#### **Disadvantages of Rainwater Harvesting**

In addition to the great advantages, the rainwater harvesting system has a few disadvantages like unpredictable rainfall, unavailability of the proper storage system, etc.

- Regular maintenance is required.
- Requires some technical skills for installation.
- Limited and no rainfall can limit the supply of rainwater.
- If not installed correctly, it may attract mosquitoes and other waterborne diseases.
- One of the significant drawbacks of the rainwater harvesting system is storage limits.

But these limitations can be overcomed through continuous Research and Developments.

To sum up, we may reinstate the importance of Rainwater Harvesting and strive hard to save water for our future generations.

## रफुरणिका...

## श्रीमंत होण्यासाठी वा, वा, वा, वा

(वाचवा, वाढवा, वापरा, वाटा)

'गुंतवणूक : कला आणि शास्त्र' या विषयावर एक व्याख्याता व्याख्यान देत होता. श्रीमंत होण्याचा राजमार्ग त्याने सूत्रबद्ध पद्धतीने पुढील चार अक्षरांनी (किंवा शब्दांनी) सांगितला - वा, (वाचवा) वा, (वाढवा) वा, (वापरा) वा (वाटा). मला त्याचे शब्द भावले. कारण माझ्याही तोंडातून पाचवा शब्द निघाला... वा!

या चार 'वा' मधला पहिला 'वा' म्हणजे वाचवा. म्हणजे पैसे वाचवा. वाचवलेल्या पैशातून आपण गुंतवणूक करू शकतो. वॉरेन बफे हा आंतरराष्ट्रीय ख्यातीचा गुंतवणूक सल्लागारही सांगतो - 'First Save and Then Spend' -याचाच अर्थ पैसे खर्च करण्याआधी किती पैसे वाचवायचे हे ठरवा, आणि नंतरच काय तो खर्च करा. पैसे वाचविण्याची क्रिया हे श्रीमंत होण्याच्या मार्गाची पहिली पायरी म्हणायला हरकत नाही.

दुसरा 'वा' म्हणजे 'वाढवा'. पैसे वाचवल्यावर दूरदृष्टीने आणि गुंतवणूकीच्या सर्व पर्यायांचा योग्य विचार करूनच पैसे वाढवता येतात.

आता तिसरा 'वा' म्हणजे 'वापरा'. पैसे अर्थातच खर्चासाठी लागणारच. पण तो पैसा वापरताना डोकेही वापरावे लागते. कुठेतरी उधळपट्टी करून चालणार नाही. You should get money's worth. गरजा आणि चैन यांचा विचार करताना सदसदविवेकबुद्धी, व्यवहार ज्ञान आणि दूरदृष्टी या सर्वांचाच उपयोग करायला हवा.

शेवटचा 'वा' म्हणजे 'वाटा'. वाटा याचा अर्थ योग्य दान करा. संस्कृत मध्ये एक सुभाषित आहे - शतेषु जायते शूरः! सहस्रोषुच पंडितः! वक्ता दशसहस्रोषु! दाता भवति वानवा!! इतके दात्याचे महत्त्व आहे. मात्र दात्यांची वानवा आहे. वाटा म्हणजे कृणाचा वाटा किती आहे याचाही योग्य विचार करा.

या चारही 'वा' चा विचार करता एक महत्त्वाचा मुद्दा लक्षात येतो की श्रीमंती मिळविण्यासाठी हे मार्ग चोखाळ्यानंतर तुम्हाला पैशाचीच नाही तर मनाची श्रीमंतीही मिळेल. कारण शेवटचा 'वा' हा दानासंबंधी आहे. कुठल्याही काळात व्यक्तीला फक्त पैशाची श्रीमंती संपादन करून चालत नाही. पद, पत आणि प्रतिष्ठा, त्या व्यक्तीच्या मनाच्या श्रीमंतीमधूनही व्यक्त व्हावी. वाह क्या बात है...!!!

- डॉ. अरविंद नवरे

डायरेक्टर, अनुलोम टेक्नोलॉजीज प्रा. लि. मोबाइल : ९५५२३८४९३१

## कोर्टाची पायरी चढण्यापूर्वी...

आज मितीस न्यायदान करणाऱ्यांचे म्हणजेच आजच्या भाषेत न्यायालयांचे अनेक प्रकार अस्तित्वात आहेत. कायदेशीर समस्येचे, तंट्यांचे स्वरूप काय आहे, त्यानुसार तो तंटा कोणत्या न्यायालयात न्यायचा ते ठरते. मालमत्तेसंबंधीचे तंटे, पैशांच्या देवाण-घेवाणीवरून निर्माण झालेले वाद, कराराचा भंग केल्याने झालेले वाद, वारसा हक्कासंबंधीचे, मृत्यूपत्रावरून झालेले किंवा जमिनीसंबंधातून झालेले असे सर्व वाद दिवाणीन्यायालयात सोडवले जातात. दिवाणीन्यायालयात विविध स्तर आहेत. लघुवाद न्यायालय (स्मॉल कॉजेज कोर्ट), कनिष्ठ स्तर (ज्युनियर डिव्हिजन), वरिष्ठ स्तर (सीनियर डिव्हीजन), जिल्हा न्यायालय (डिस्ट्रिक्ट कोर्ट), किती रकमेचा दावा आहे, त्यानुसार कोणत्या न्यायालयात तो चालणार ते ठरते. याशिवाय भाडे नियंत्रण



# FEEDBACK FROM OUR SATISFIED CUSTOMERS.

Been using Anulom for last 3 years ... Works like a magic ... This year Afasana helped me with registration. Very patient even though my laptop ran into multiple issues.

— YOGESH PATIL

We used Distant registration service from Anulom. Instructions were very precise and we got pretty much idea of the process in the beginning. In our case, tenants were from different place, we were in US, two different persons handled our cases and the process was smooth. We had connected Keerthana Rajendran, she helped us with biometric verification, she was aware of the steps and very cooperative.

#### – ROSHAN PILLAI

The process with Anulom is hassle-free. sitting at home, I have got my Notice of intimation created easily. Miss Suchita Raul has helped me for the entire process कायद्याखालील दावे प्रथमतः लघुवाद न्यायालयात चालतात.

भारतीय दंड विधान (इंडियन पीनल कोड) या कायद्यानुसार नागरिकाचे जे वर्तन 'गुन्हा' या सदरात मोडते, त्या गुन्हेगारी वर्तनाबदल त्या नागरिकाविरुद्ध फौजदारी न्यायालयात दावा दाखल केला जातो. तिथे न्यायदंडाधिकारी (ज्युडिशियल मॅजिस्ट्रेट) आणि सत्र न्यायालय (सेशन्स कोर्ट) असे न्यायालयाचे दोन स्तर आहेत. फौजदारी खटला (क्रिमिनल केस) प्रथम न्यायदंडाधिकाऱ्यांपुढे चालतो. गुन्ह्याच्या स्वरूपानुसार तो सत्र न्यायालयापुढे वर्ग केला जातो.

जिल्हा आणि सत्र ही दोन्ही न्यायालये एकच असतात. जेव्हा तिथे दिवाणी दावा चालतो, तेव्हा त्यास जिल्हा न्यायालय (डिस्ट्रिक्ट कोर्ट) म्हणतात आणि फौजदारी खटला चालतो तेव्हा त्यास सत्र न्यायालय (सेशन्स कोर्ट) म्हणतात. म्हणूनच दोहोंचे एकत्रित नाव जिल्हा व सत्र न्यायालये (डिस्ट्रिक्ट अँड सेशन्स कोर्ट) असे आहे.

> (क्रमशः) - ॲड. अविनाश चाफेकर मोबाइल : ९८५०९३५९११

and kept me informed with every progress. Really appreciate their service. Thank You!

- RITESH RAUT

Very good experience working with Anulom. Is a very well-known agency in the field. Specially thanks to Poornima Bhalerao.

#### — JYOTI SAWANT

Excellent support from the team  $= \emptyset M \ddot{U}$  about the follow up and documents thank u so much  $= \emptyset O \breve{P}$ Poornima and Sarika were great in their work.Thank u :&b they made my work easy.

### - REACHDOLLY555

Excellent services by Anulom, their process is simple and hassle free. Thanks to their team for timely registration of Notice of Intimation. Thanks to Miss Archana, Miss Shakuntala, and Miss Pornima for providing hassle free services from registration initiation to getting the registered document.

— MURALI KRISHNA B



Please send your Feedback, suggestions and FAQs about this Newsletter to : yashodhan.jatar@anulom.com



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The editor does not necessarily agree with the opinions published in the Articles in this magazine.

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