

# WATER: THE ELIXIR OF LIFE

-C.V.Raman

C.V. Raman was the Nobel Prize winner in 1930, in physics for his work on 'the scattering of light' and for the discovery of the Raman Effect. He was the first to investigate the harmonic nature of the sound of the Indian drums such the tabla and mridingam. In 1934, Raman becomes the director of the newly established Indian institute of science in Bangalore. In 1947, he was appointed as the first National professor by the new government of independent India.

Humankind has always searched in vain for an imaginary elixir of life, the divine amrita. A draught of this elixir was thought to confer immortality. But Raman feels that the true elixir of life is water. This single liquid can change the entire scene. He remembers that he was standing on the line which separates the Libyan Desert from the valley of the Nile in Egypt. On one side was vast area covered with sand and without speck of green or a single living thing. On the other side was one of the greatest, most fertile and densely populated areas. It was teeming with life and vegetation. The only thing which made the difference was water. It was the water of river Nile. Geologist tells that the entire soil of river, Nile is the creation of the river itself. It'sancient civilization was created and sustained by the life giving water of the Nile.

We take granted this common substance in everyday life. But we forget that water is the most potent and wonderful thing on the earth. It has played a very important role

Inshaping the course of earth's history. It continues to play the leading role in drama of life on earth. Nothing can add so much to the beauty of the **countryside** as water. In south India the rain fed tanks are very common. They are **shallow** but the bottom of tank is not visible due to **silt-laden** water. These tanks play a **vital** role in south India agriculture. Much of rice is grown under them.

One of the most remarkable facts about water is its power to carry silt in suspension. This suspension is the reason for the different colors of the water in a rain fed tanks. Swiftly flowing water can carry fairly large and heavy particles. The finest particles remain with the water and are carried to large distance. When silt-laden water mixes with the salt water of the sea, there is a rapid precipitation of the suspended matter. The colour of the water changes successively from the muddy red or brown of silt through varying shades of yellow and green finally to the blue of the deep sea. A large land is formed by silt thus deposited. Such land is very fertile. The flow of water plays a great part in this process; sometimes it can be destructive also.

The problem of **soil erosion** is of major significance. It occurs in step by step. The cutting up and washing away of earth will make agriculture impossible. Sudden burst of excessively heavy rain resulting in a large run of surplus water are the principal factor in causing soil erosion. Soil erosion is dangerous to agriculture. Some measures can be taken to check soil erosion. They are terracing of the land, construction of bunds to check the flow of water, the practice of contour cultivation and the planting of appropriate plants.

Water is a basis of the all life. Every animals and plants contain water in this body. No activity is possible without water. Water is

necessary for animal life. The moist in the soil is necessary for the growth of plants and trees. So, the conservation and utilization of water is most important for human welfare.

Indian agriculture depends on rain fall. The problems of soil erosion and irregular rainfall are closely connected with each other. By preventing soil erosion we can conserve and keep the water where it is wanted. So, the collection and utilization of rain water is very important. Much of the water flows down the streams and rivers and thus a large quantity of water is lost.

Vast area of land could be turned into fertile and prosperous country by courageous and well planned action. The systematic planting of suitable trees is the urgent need of India. Such plantation would directly and indirectly prove a source of wealth to the country. They would check soil erosion and conserve the rainfall of the country. Water is the commonest of liquid, but it is also the most uncommon of liquid with amazing properties. These properties are responsible for its unique power of maintaining animal and plant life. The investigation of the nature and properties of water is therefore, of the highest scientific interest.

EXERCISE:

**Que.1. Why do you think water is the true Elixir of life? How has water been a powerful influence in the life of humankind and in the rise of civilization?**

**Que.2. How does soil erosion occur and what are the chief factors that cause it?**

**Que.3. write about the power and beauty of the element, water.**

**Que.1. Why do you think water is the true Elixir of life? How has water been a powerful influence in the life of humankind and in the rise of civilization?**

Ans. Water is the true elixir of life. This is a common substance. So, we take it granted in our everyday life. It is the most wonderful thing on Earth. It continues to play leading role in the drama of life on Earth.

Water is the basis of all life. Every animal and every plant contains a large proportion of water in its body. The moisture of the soil is equally important for plants and trees.

The conservation and utilization of water is fundamental for human welfare. One of the most remarkable facts about water is its power to carry silt suspension. Our agriculture depends on seasonal rainfall. So, collection and utilization of rain water is very important. Water is the commonest of the liquids. These uncommon properties are responsible for its unique power of maintaining animal and plant life.

**Que.2. write about the power and beauty of the element, water.**

Ans. Water is the true elixir of life. It is the basis of life on Earth. Every animal and plant contains water. It is necessary for their life. Our agriculture is depended on water.

To explain the power of water C.V.Raman has given an example. One day he was standing on the line which separates the Libyan Desert from the valley of the Nile in Egypt. One side was having a sea of sand without a speck of green or a single living thing. On the other side was one of the greatest, most fertile and

densely populated areas on the Earth. It was full of life and vegetation. Water has changed the scene.

One of the most remarkable facts about water is its power to carry silt in suspension. The flow of water plays a great role in geographical process. It can sometimes play destructive role and wash away the soil. Great tracts of land have been formed by silt deposited by water. The problem of soil erosion is caused by water. Vast areas of land could be turned into fertile or infertile. This is the power and beauty of water.

**Que.3. How does soil erosion occur and what are the chief factors that cause it?**

Ans. The problem of soil erosion is very important, in many countries and specially in many parts of India. Soil erosion occurs in steps; the earliest may easily pass unnoticed. In the later stages the cutting up and washing away of the soil results into the formation of deep gullies and narrow rillies. This makes agriculture impossible.

The sudden burst of excessively heavy rain results into a large run of surplus water which causes soil erosion. The slope of land, removal of the natural protective coat of vegetation, ruts for flow of water with speed and no check to such flow are also the causes for soil erosion.

**Que.4. What are the usual measures used to check soil erosion?**

Ans. The measures that can be used to check soil erosion are terracing of the land, construction of bunds to check the flow of water, the practice of contour (outline) cultivation and the planting

of proper plants. The prevention of soil erosion would help to save water and keep the water where it is wanted.

Vast areas of land could be turned into fertile and prosperous country by well-planned action. The systematic planting of suitable trees in every possible place is most urgent in India. They would check soil erosion and conserve the rainfall of the country.

**Que.5. What is C.V. Raman's suggestion regarding controlling the movement of water in order to harness it for useful purpose?**

**Ans.** C.V. Raman gives the example of rain-fed tanks which play a very vital role in south Indian agriculture. In Mysore much of the rice is grown under them. The colour of the water in rain-fed tanks changes according to the land from which the water comes. Swiftly flowing water can carry large and heavy particles. The finest particles remain floating in the water. Large areas of land can be converted into fertile land due to silt laden water.

Collection and utilization of rain water is very important because our Indian agriculture depends on rainfall. Much of the rain water flows down into the river and the sea. So a large quantity of water is lost. The proper use of this flowing water is a great national problem. Planting of trees is urgent need of India. They would help to save the rain water of the country from flowing away to waste.

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