

2.0

THE FOUNTAIN OF LIFE

THE FOUNTAIN OF LIFE

2.1 Water is Life

Praising the importance of water, Rigveda, the oldest religious book of the Aryans has said that “इमा आपः शिवतमा” (Ima Apah Shivatama.) That means "Water is God, Water is Life". Saying thus is more than a poetic phrase. Water is absolutely essential for life, not only human life but all forms of life, animal and vegetable. Some very small organisms can exist without air, but none can grow without water. Life actually arose in water to start the longline of evolution that links primitive animals and plants which are virtually nothing but Water. As living things became more complex and specialised, they left the sea for the land, taking water with them as the major part of their bodies.

Indeed, it is a part of life itself, since the protoplasm of most living cells contain about 80 percent of water and any substantial reduction in this process is disastrous. All forms of life contain major portion of their body as water. Water content of some of the animal and plant materials is found to be as under.

Life	Percent Water
Human body	65
Elephant	70
Potato	80
Tomato	95
Jelly fish	99

Most of the biochemical reactions that occur in the metabolism and growth of the living cells involve water and all take place in water. Most scientists also believe that life was conceived first in the planet's primeval oceans. Where there is no water, there is no Life. Earth is apparently the only planet in the solar system that sustain water which has limited the Life on it alone. Yajurveda, the other religious book of Aryans (4000 BC) has said that

आपो वा इदम सर्वम् , विश्वभूतानी आपाहा ।

(Apo Va Idam Sarvam, Vishva Bhutani Apa Ha)

That means "Water is all and All living beings are from water".

In yet another vedic prayer it is said that "Truly, Earth, Atmosphere and sky are nothing but water transmuted into different forms. The mountains, Gods and men, beasts and birds, grasses and trees, animals right down to worms, moths and ants are nothing but water transmuted into different forms Revcre Water."

2.2 Water in Religion

According to Indian and Greek philosophers, water is one of the five basic elements from which the Universe is made of. They are Earth (soil), Water, Air, Fire (Light) and Sky (Space). Thelis (624 - 546 BC) has said that "The root cause of this earth is water." To the Indians of Columbia, three things at the beginning of life are, Mother, Water and Night. In cultures worldwide, Water is a source of spiritual nourishment. It is frequently used in rituals and is endowed with a range of mythic and symbolic properties. All religions have given high importance to water which is evident from the following quotations/couplets.

A Prayer in Rigveda says,

" O God of water, Give us pleasant water and protect us. Mother's milk protect a child, in the same way give us that water which will protect us. Wholesome and safe water gives us health which will help us in further procreation. Let us get clean and sufficient water. Let the water remove out diseases and prevent drought. Give us medicinal water which will keep us healthy and bestow long life. Nature produced water first and then living things. Living things are borne in water and merge in water. First was life in Water, then on earth and then Life in the air."

In Koran (Soerat. Al - koerkaan, 30:49.53) following prayer is made to Allah.

"What would you do if your water soaked deep into the sand ? Who then would bring you water to drink ? It is He who sent down pure water from the Heaven. So that we might revive a dead land, And much of what we created and give men and beasts to drink of it. And it is He who let forth the two seas. This one sweet and good to taste and the other salty and bitter to the tongue. And He set between them a barrier and a ban forbidden. It is He who created a mortal from water and made him kindred of blood and marriage.

The Bible Says,

"Almighty's soul rests on Water, we can hope for the trees only if there is Water".

The Granth Sahib (Shikhism) Says

"Water sustains life but if we don't use it judiciously, it can take away the life".

Mahavir Prabhu (Jainism) Says

Use Water as you use Ghee (Butter - Oil) so that life can be protected.

Paradise itself has been imagined to be a place in which water is plenty.

Water is worshipped at many places. The Hindus treat rivers as mother and worship them.

Rigveda Says **उरातीरिष मातरः** (**Uratiriv Matarah**) means Oh Water!, be loving like mother. Taking a holi dip in rivers and lakes is considered a holy act. There is a custom in many religions to take bath before all sacred performances. The ancient Jews had their pond "Vedesta" with an angel as attendant in which ablutions being carried on with

great ceremonial. Rich people use to construct wells (Step wells) and ponds as a gesture of charity.

Kumbha Mela - is a festival of Water for the Hindus. This ancient festival is a form of worship and respect towards water. Millions of people in India attend and celebrate the festival, once in twelve years. It is celebrated on the banks of River Ganga, Godavari and Kshipra. it brings integrity and unity of the people, besides spiritual satisfaction.

2.3 Water in Metabolic Processes

Water acts as a medium for important Life processes and chemical reactions and transports food and waste products. It is involved in virtually every process occurring in plants and animals. All living organisms depend on water to dissolved the substances they feed on. The simplest single - celled organisms are surrounded by and permeated with water. It moves in and out of their walls, bringing food and oxygen along and taking wastes away. The principle is the same but the processes are more complicated in higher form of life. The roots of plants can not absorb food in the soil unless it is in solution. Human's food must also get dissolved before it can enter the blood stream. It is the solvent portion of the fluid in plants and animals which carries nutrients from cell to cell and assures correct functioning of the several vital organs. The heat and waste matter resulting from the metabolic processes which constitute physical life are eliminated as water vapour and aqueous solutions respectively, thus requiring periodic replenishment of water.

They need water to quench their thirst and also for nourishment. Before birth much of man's life is spent in water in the sheltering membranous sac of his mother's womb and water flows through his body till he dies. Man's daily requirement of water is 7 percent of his body weight. A healthy human being can live without food for a month, but will die in less than a week's time without fresh water. Thus we live by the grace of water.

2.4 Water as Medicine

All medicines are included in water so in "Vedas" Water is called (Vishvabheshajah) meaning universal drug. From the time immemorial man has been making use of water for the treatment of diseases, which is called **Hydrotherapy**. Even animals are found to make use of water when they get ill. The proper use of water not only helps us to preserve our health but also to regain it when it is lost or impaired by eliminating all the impurities from the body. In the living body of men and animals, it helps to digest food, control body temperature, dispose of the waste material through urine and perspiration, circulate blood and heal all injuries such as wounds, cuts falls, fractures, burns etc.

The Ayurvedic Scholars have praised water by saying,

औषधम् निर्मलम् चारि वैधो नारायणो महान ।
हृतः सकलान् योगान् अकाल निधनम् तथा ॥

(Aushadham Nirmalam Vari, Vaidhyo Narayano Mahan,
Haratah Sakalan Rogan, Akal Nidhanam Tatha)

That means, Pure water is the real medicine. The great sun is the real physician. They cure all diseases and all prevent untimely death.

The river Ganga is the most sacred River for the Hindus and its Water "Ganga-Jal" is used as a medicine as well as to wash out all sins. The following verse is repeated by them while taking a dose of medicine during their illness.

अकालमृत्यु हरणम् सर्वव्याधि विनाशम् ।
औषधम् जान्द्वीतोयं जहरे धारयाभ्यहम् ॥

(Akal Mrutya Haranam, Sarva Vyadhi Vinasham,
Aushadham Jhanvi Toyam, Jathare Dharyamiaham)

That means, I take in my stomach the holy water of the Ganga which prevents untimely death and which is a destroyer of all diseases.

Hippocrates (460 - 377 BC) employed hot and cold water in the treatment of fevers, ulcers, hemorrhages and a variety of maladies both medical and surgical. During the middle ages the Arabic physicians also recommended drinking of cold water in fevers and constipation.

In Vedic prayers it is said "Oh Water! we seek healing balm of you".

2.5 Indispensable Water

Water is the companion and friend of human as well as the source of purity and hygiene. It cares for human existence and offers everything people want. It is a treasure indispensable to all human activities. Every activity of human beings involves some use of water. Some of the salient uses of water are,

Drinking	Civil works (Construction)
Culinary (Cooking)	Mining
Bathing	Disposal of wastes (Sanitation)
Washing	As a Solvent
Laundering	Livestock maintenance
Agriculture (Irrigation)	Transportation (Navigation)
Industrial processes	Gardening
Heating	Fishing
Cooling	Fire protection
Power generation	Medicine
Air conditioning	Recreation

Water has very high specific heat and latent heat of vaporization which enables the oceans to absorb the vast energy radiated by the sun. This regulate the temperature on and around the earth. In hot weather it absorbs heat and in cold it gives up heat, thus keeping the planet warm. Without water, our planet would have cooled to subzero temperature long ago and all life would have perished.

It determines the climate, forms the soil in which crops and forest take root. It plays an excellent role in environmental balance through the water cycle. Human activities always try to create an environmental imbalance where water acts as a buffer. One English poet has said that "fresh water is the blood of our land, the nourishment of our forest and crops, the blue and shining beauty at the heart of our landscape.

2.6 Water for Development

History has been shaped by water. No civilization has prospered without ample water around it. All ancient civilizations have developed on the banks of rivers. The Indus civilization arose on banks of river Indus, 4000 years before in north western part of India. Other Indian Kingdom flourished along the course of river Ganga and Kaveri. In ancient Mesopotamia people waged wars for control of the life living rivers Tigris and Euphrates. When water ran out or became unusable, civilizations died. King Bhagirath brought Ganga on the earth from high mountains of Himalaya by making a canal.

The presence or absence of water in an area has a profound influence in its development and prosperity. In Rigveda it is said, आपोहिष्ठा मयो भुवः (Apo Hista

Mayo Bhuvah). Means water is the abode of prosperity. Kandarma Rishi in "Shree Shukta" has prayed God of water to give wealth by saying

(Varunam Dhanamastu Me) Oh God of Water! give me the wealth. Mr. Hoffman of UNDP has rightly said that "Water is wealth". Man is fully dependent on water for survival and growth as the infant is on its mother.

2.7 Water as Energy

Water has also become indispensable to humans in yet another way, Energy, A moving body of water has considerable amount of energy which can be harnessed to produced hydroelectric power. This power is used to run hundreds of applications that make life more comfortable. Man has mastered the science of tapping energy from water through waterfalls and dams. Ocean waves and tidal currents are employed for energy production. Water is also a powerful source of chemical energy. Heavy water is used for generation of atomic energy. Rigveda therefore Says " तान् उर्जम् दधातन् " (Tan Urjam Dadhatanam) Oh God of Water ! give use the energy. Charles Galton Darwin has said

that "Water power is the only really big source of energy that can be counted as income and not capital".

2.8 Water as solvent

Water is extra-ordinary. As a chemical it is unique. It is a compound of great stability and a remarkable solvent. It is everywhere in the form of oceans, ice fields, lakes, and rivers. It covers nearly three quarters of the earth's surface. The movement of water, its beauty, its support of life makes it perhaps the single most significant resource on earth. The Indian philosophers have called it "Elixir" or Nectar of life. Nobel laureate scientist Gyorgy has called water. "The matrix of life". Where as English author Loran Izly (1957) in his book. The immense Journey has said that "If there is any magic on the earth, it is contained in water". Some other philosopher has known it as "Amazing, Terrestrial, elixir and Romantic". Water is known as " जल "Jal in Sanskrit. " ज " Ja means life (Janma means Birth) and " ल " (La) means Last (Death). The liquid which remains with man from life till death. We should therefore understand this magic liquid.

It would be interesting to note that the importance of water gets very well spelled out in terms of adjectives given to water in the Sanskrit Language. They are shown in Table - 2.1

2.9 References

- 1.0 Water by Life Science Library By L.B. Leopold and K.S. Davis, Time-Life Books. Hongkong
- 2.0 The Wonderful Liquid by Vijay K. Joseph, Article published in Science Reporter, May 1993.
- 3.0 Water for People Presidential address by S. Srinivasan at the 22nd Annual Convention of Indian Water Works Association at Pune, 18 Jan. 1990.
- 4.0 Water the well spring of life By Bruce K. Ferguson
- 5.0 Valedictory address by Dr. P.R. Pisharoty, at Jalpareeksha workshop at CEE Ahmedabad 16, June 1990
- 6.0 Facts about water not too wellknown by V.B. Patel, Former Secretary, Govt. of Gujarat, Water Management, Volume-2, Nov. 1993.
- 7.0 Drugless Prevention and cure of Diseases with Water (Hydrophathy) By Dr. V.M. Kulkarni crest Publishing House, New Delhi - 110 002.
- 8.0 Nalco Water Handbook, 2nd edition - 1988, McGraw Hill Book Company, New York

Table - 2.1

Sanskrit Adjectives glorifying the importance of Water

Sanskrit Name	Pronunciation	Meaning
रसायण	Rashayan	Chemical
शमक	Shamak	Quencher
शीतल	Sheetal	Cold
सुलभ	Shulabh	Easily available
सरल	Saral	Simple
कमल	Komal	Soft (Tender)
विमल	Vimal	Transparent
निरमल	Nirmal	Pure (Clean)
विरल	Viral	Unique (Rare)
तरल	Taral	Floating
वाहक	Vahak	Carrier
प्रसारक	Prasarak	Spreading
तारक	Tarak	Protector
अरंग	Arang	Colourless
सुरम्य	Suramya	Pleasing (Aesthetically)
औषध	Aushadh	Medicine
धारक	Dharak	Sustainer
उद्धारक	Uddharak	Saviour
सर्जक	Sarjak	Creator
पालक	Palak	Foster
पोषक	Poshak	Nourisher
विनाशक	Vinashak	Distroyer