
VEDIC, PRE-VEDIC, POST-VEDIC: TRACING ENVIRONMENTAL THOUGHT IN ANCIENT INDIA

Prateeksha Dwivedi, Legal Researcher, National Green Tribunal

INTRODUCTION

The Environment: A Complex Interplay

Our planet's environment, an intricate blend of natural and human-made elements, sustains life. It encompasses air, water, land, living organisms, and the infrastructure we construct roads, industries, and buildings. Within this intricate web, the biosphere (including humans, plants, and animals) interacts with the lithosphere, hydrosphere, and atmosphere. Our actions significantly impact this delicate balance, affecting the well-being of all living beings. Clean air, water, and land are essential for survival, underscoring our responsibility to preserve a safe and healthy environment for present and future generations.

Albert Einstein eloquently described the environment as “everything that is not me.” In simpler terms, we can define the environment as the sum total of all living and non-living elements and their effects that influence human life. Environmental laws play a pivotal role in this endeavor. These legal frameworks are designed to protect the environment from the adverse impacts of human activities. They provide guidelines, set standards, and establish mechanisms to ensure responsible conduct. As our understanding of environmental challenges evolves, so do these laws. The **Environment (Protection) Act, 1986** provides a comprehensive definition for the term “environment,” encompassing the interconnectedness of water, air, land, and living organisms.

In contemporary Sanskrit, the term “Paryavarana” encapsulates the environment—the encompassing surroundings that envelop us. The ancient Upanishads describe the universe as composed of five essential elements: Earth (Bhumi), Water (Jal), Light (Prakash), Air (Vayu), and Ether (Aakash). These elements interact harmoniously, maintaining a delicate equilibrium that sustains all living beings. The Sanskrit phrase “शाश्वतम्, प्रकृति-मानव-सङ्गतम्, सङ्गतं खलु शाश्वतम्।” translates to “Eternal, the association between nature and humanity is indeed eternal.

Everything in essence holds the truth, sustains, and nurtures, whether it be water, air, sky, fire, or the movement of the elements”.

Environmental Stewardship: A Global Imperative

A healthy and clean environment isn't merely a basic necessity; it's an absolute prerequisite for our survival. As climate change wreaks havoc on human life, responsible environmental stewardship becomes critical. Failing to care for our planet today jeopardizes leaving a healthy Earth for future generations. The preservation and restoration of our environment demand collective global efforts that transcend individual actions. Countries worldwide recognize this urgency and have formulated laws to protect the environment. India, too, plays a crucial role in this endeavor.

India's Constitution underscores environmental responsibility through its “Fundamental Duties.” The 42nd Amendment Act (1976) introduced these duties, emphasizing the protection and improvement of the natural environment. Citizens are duty-bound to safeguard forests, lakes, rivers, wildlife, and show compassion for all living creatures. Article 21, which guarantees the right to life, inherently includes the right to a clean environment free from infections and diseases. After all, life loses its meaning without a healthy environment.

While India lacks specific legislation solely dedicated to climate change, it has taken significant steps to combat its effects. As the world's sixth-largest energy consumer, India faces the challenge of balancing development with environmental preservation. The increasing demand for energy, transportation, and industrial growth contributes to environmental degradation. India actively proposes initiatives like the Clean Development Mechanism (CDM) to reduce greenhouse gas emissions. The need for robust environmental laws remains paramount to address these challenges.

Despite progress, India faces environmental gaps. The India State Forest Report 2019 reveals that only 21.67% of the country's land has forest cover—far below the minimum 33% required for ecological balance. While forest cover has increased overall, the northeastern region, a biodiversity hotspot, experiences significant challenges in maintaining adequate forest cover. Strengthening environmental laws and conservation efforts is essential to bridge these gaps and ensure sustainable coexistence for generations to come.

Interestingly, the concept of safeguarding the environment existed in Vedic literature long ago. During the Vedic period, society demonstrated a strong commitment to environmental preservation. Unfortunately, industrial development over the last century has led to a rapid decline in our environment. The ancient Vedas contain numerous references to environmental protection, ecological balance, weather cycles, rainfall phenomena, and the hydrologic cycle. These references highlight the profound awareness of the seers and people of that time regarding environmental matters.

THE ROLE OF RELIGION IN THE ENVIRONMENT

Harmony across Faiths: Environmental Stewardship

Every religion and culture contributes valuable insights to environmental conservation and protection. Within each religious tradition, we discover a wealth of injunctions and teachings that collectively form a code for promoting sustainable development. These principles resonate throughout sacred texts, emphasizing reverence for nature and responsible stewardship.

The rich tapestry of human cultures and faiths weaves together a shared commitment to safeguarding our planet. Hinduism celebrates the divine in rivers, mountains, and trees, while Buddhism extends compassion to environmental well-being. Judaism views humans as stewards; Indigenous traditions honor ancestral lands, and Sikhism champions equality. Confucianism seeks balance, and Native American spirituality acknowledges the spirit within all natural elements. Together, these diverse perspectives converge toward nurturing our Earth for generations to come.

BUDDHISM AND ENVIRONMENT

Buddhism, which emerged in India after the Vedic period, places great emphasis on **truth**, **non-violence**, and **compassion for all living creatures**, including trees, plants, and fauna. Followers of Buddhism were encouraged to **plant a tree annually** and nurture it until it matured. Any form of hunting or killing of animals, birds, or organisms was strictly prohibited, aligning with the cherished principle of **Ahimsa** (non-violence). King Ashoka, known for his compassion, relinquished his throne and advocated for Ahimsa. He established veterinary hospitals for ailing animals, nurtured nurseries for plant care, and campaigned for roadside tree plantations throughout his kingdom.

Buddhism, with its ancient wisdom and profound teachings, offers a unique perspective on our relationship with the environment. As the world grapples with ecological challenges, understanding Buddhism's stance on environmental issues becomes increasingly relevant. Let us explore how Buddhist thought intersects with contemporary environmental concerns.

Interdependence and Compassion

At the heart of Buddhism lies the concept of **interdependence**. Buddhists believe that everything in the natural world is intricately connected. Our actions reverberate through this delicate web of existence. Compassion extends not only to fellow humans but also to all living beings, including animals, plants, and even the Earth itself.

Living in Harmony

Buddhism emphasizes living in harmony with nature. The teachings encourage mindfulness and awareness of our impact on the environment. By recognizing our interconnectedness, we learn to tread lightly, minimizing harm to other beings and the planet.

The Middle Way

The **Middle Way**, a central Buddhist principle, advocates balance. Extremes whether excessive consumption or neglect disrupt the natural order. Buddhists seek equilibrium, valuing simplicity and sustainable living.

Mindful Consumption

Buddhism encourages mindful consumption. By being aware of our needs versus wants, we reduce unnecessary waste. The practice of moderation extends to our use of resources, promoting ecological sustainability.

Rituals and Reverence

Buddhist rituals often involve nature. Pilgrimages, circumambulation, and offerings connect practitioners to the environment. Landscapes transform into sacred sites, reflecting Buddhist cosmology.

Buddhist Environmental Activism

Contemporary Buddhists engage in environmental activism, drawing inspiration from their faith. They advocate for conservation, climate action, and ethical treatment of animals. Engaged Buddhism a movement rooted in social relevance drives these efforts

Lessons from Buddhist Texts

The **Guru Granth Sahib** in Sikhism and Buddhist scriptures emphasize Earth's sanctity. Stories of gurus' love for animals, mountains, and rivers inspire reverence. Buddha's rules against polluting water sources underscore environmental responsibility.

The Dalai Lama's Wisdom

The **Dalai Lama** eloquently expresses clearly in the following way –

As a Buddhist I believe in the interdependence of all things, the Interrelationships among the whole spectrum of plant and animal life including elements of nature which express themselves as mountains.

In conclusion, Buddhism invites us to tread gently, recognizing that our well-being is intertwined with the well-being of all life forms. As we navigate environmental challenges, perhaps we can find solace and guidance in the ancient teachings of the Buddha.

SIKHISM AND THE ENVIRONMENT

Sikhism, too, recognizes the **preservation of the environment** as a sacred duty for every follower. In the holy religious texts, such as **Guru Nanak Bani**, references trace the creation of the world from natural resources: water, fire, air, sky, and God. This concept aligns with the ancient belief that the human body is composed of **Panchatatva** (the five elements), without which life cannot exist on Earth. Sikhism acknowledges the imminent spirit of God present in nature. All living creatures and human actions are guided by the Almighty's wishes. Therefore, it becomes an ardent duty for every person to protect animals, plants, trees, rivers, and mountains—the natural sources of human existence and life on Earth.

Guru Nanak, the revered founder of **Sikhism**, bestowed divine attributes upon nature. Within

Sikh beliefs, **reverence for God's creations** is paramount, and understanding one's place in the universe is essential. The human race is intricately woven into nature, connected by unbreakable bonds. The sacred **Guru Granth Sahib** extols the magnificence of God as reflected in the natural world. Sikhs firmly hold that the universe was divinely created. Maintaining equilibrium among all natural elements is crucial for the universe's continuity; any disruption leads to distress and calamity. The rich history of Sikh gurus abounds with tales of their profound love and unique relationships with the environment—be it animals, birds, vegetation, earth, rivers, mountains, or the vast sky. Sikhism underscores the interconnectedness of the natural environment and the survival of all life forms, harmonizing with the rhythm of nature.

Respecting the environment is a fundamental principle within Sikhism. Sikhs strive to live in harmony with each other and the Earth, recognizing the interconnectedness of all of God's creation. **Guru Nanak**, the revered founder, emphasized the significance of **air, earth, and water** as essential components of life. These elements sustain us, and we must respect Earth as our mother. The Sikh Gurus exemplified living in harmony with the environment, constructing towns like **Kiratpur Sahib** with parks and gardens. They built **Gurdwaras** surrounded by pools that supported marine life, symbolizing their commitment to nature. The Sikh scriptures, especially the **Siri Guru Granth Sahib**, emphasize the importance of air, water, earth, and sky as sacred places that require protection and care. Sikhs view the world as an interconnected web of relations, where human and non-human environments are inseparable.

ISLAM AND THE ENVIRONMENT

The followers of Islamic faith also believe in peace with nature based on divine ethical principles of mutual coexistence. It believes that human beings must maintain a balance with nature and natural resources which are valuable gifts of nature which need to be preserved from destruction or spoliation. Protection of environment against any kind of pollution has been a cardinal principle of Islamic religious philosophy. It believes that Allah (God) has created the earth and implanted therein mountains, hills, valleys, rivers, lakes, springs, forests, pastures, plaits etc., wherein live human beings along with animals, birds and thousands of other living creatures serving the mankind. Each of these has a function and role in maintenance of ecological balance. According to Islamic concept of environmental conservation, human beings are mere trustees of natural resources which they are supposed to preserve for the benefit of the society.

Environmental sustainability is essential for the survival of all living beings. Our planet faces imminent environmental threats due to human activities. While science and technology have granted us immense power, they have also failed to foster a positive relationship with nature. In response, religious scholars must collaborate to develop a compassionate approach to the environment. This study focuses on Islamic eco-religious ethics, rooted in the Qur'an.

Islamic Moral Teachings and Environmental Ethics

In the Qur'an, humans are described as **vicegerents (khalīfa)** of Allah (the Islamic name for God) on Earth. As intelligent and responsible beings, we bear the **amānah** (responsibility) to care for the Earth on Allah's behalf. Our actions should not endanger other creatures' existence. Islamic moral guidelines emphasize this stewardship role, urging us to protect the environment.

The Unique Islamic Perspective

Our analysis reveals that the Islamic approach to the environment is distinct. It neither prioritizes humans at the expense of nature (anthropocentrism) nor disregards human needs (biocentrism). Instead, it strikes a balance. By recognizing the interconnectedness of all life, Islam encourages responsible resource use, conservation, and sustainable practices.

Addressing Environmental Degradation

To combat environmental degradation, we must adopt an Islamic balancing approach. This involves:

- **Tawhīd**: Acknowledging the unity of creation and our interconnectedness.
- **Ihsān**: Practicing excellence in our environmental stewardship.
- **Mīzān**: Upholding justice in resource distribution.
- **Fasād**: Avoiding corruption and harm to the environment.

Islamic teachings provide a holistic framework for environmental ethics. By integrating these principles into our daily lives, we can work towards a sustainable future. Let us heed the Qur'anic call to be responsible stewards of our planet, ensuring its well-being for generations to come.

JAINISM AND THE ENVIRONMENT

Jainism, a spiritual tradition rooted in ancient India, offers profound insights into environmental ethics. In this scholarly exploration, we delve into key Jain concepts from an environmental standpoint. Our focus centers on **parasparopagraho jīvānām**, emphasizing interconnectedness. We uncover shared concerns between Jainism and environmentalism, including reverence for all life forms and a commitment to awareness, respect, and protection of living systems. Additionally, we examine **ahimsā** (non-violence) and its positive influence on ecological balance. Beyond mere actions, Jainism extends non-violence to words and thoughts. By embracing **intellectual ahimsā**, rooted in **anekāntavāda** (tolerance of diverse beliefs), Jainism transcends anthropocentrism. Its virtue ethics, compassion, and tolerance foster a harmonious environment for multi-sectarian interaction in society and ecology.

Environmental sustainability is a global imperative. Jainism, often referred to as the “religion of nature,” advocates a non-violent and humanitarian approach toward all souls. This article explores Jainism’s unique perspective on environmental well-being, emphasizing interconnectedness and holistic ethics.

Jain’s Interconnectedness

Parasparopagraho jīvānām underscores the interdependence of life. Jainism recognizes that every being contributes to the intricate web of existence. Sensitivity toward all living forms is essential for maintaining ecological balance.

Ahimsā: Beyond Actions

Ahimsā, commonly associated with non-violence, extends beyond physical harm. Jainism emphasizes non-violence in speech and thought. By practicing intellectual ahimsā, Jains cultivate tolerance and respect for diverse viewpoints.

Jain Virtue Ethics

Jainism’s radical egalitarianism challenges anthropocentrism. Compassion, humility, and Non-possessiveness guide ethical behavior. These virtues create an environment conducive to peaceful coexistence among different sects and within ecosystems.

Eco-Spirituality and Jain Faith

Our study aims to provide potential bases for a Jain environmental ethics. By integrating Jain philosophy, particularly **anekāntavāda**, we seek remedies for contemporary environmental challenges. Jainism's non-absolutist approach aligns with the central moral principle of **ahiṃsā**.

The followers of Jainism also abhorred killing of animals and plants as they were the natural resources for supporting the human life. Like Buddhism, the Jainism also laid great emphasis on truth, non-violence and compassion for living creatures including animals, birds, aquatics, worms and insects. They believed that plants and trees also had life and therefore, (destroying them was an act of violence which was against the principle of non-violence. Every follower of Jainism was supposed to take fifteen vows such as *Karma*, *Karmdan*, *Van Karm*, *Sphotrik Karm*, *Nirlanchan Karm*, *Asotipasan Karm* etc. which were exclusively related to protection of environment against any kind of pollution.

Jainism's teachings resonate beyond its followers. Let us draw inspiration from its reverence for life, interconnectedness, and ethical balance. By embracing Jain principles, we can contribute to a sustainable and harmonious world for generations to come.

CHRISTIANITY AND THE ENVIRONMENT

Pope Paul VI, the spiritual leader of Vatican City, emphasized the **need for environmental purity** in advancing human society. Within Christian beliefs, water baptism symbolizes purification, reinforcing the conviction that water's purity must be safeguarded at all costs. The Bible instructs against the misuse of natural resources, recognizing their vital role in maintaining ecological balance and a clear environment. These resources are divine gifts bestowed upon humanity for survival, compelling us to preserve them for the continuity of life on Earth.

HINDUISM AND THE ENVIRONMENT

Hinduism deeply reveres the sanctity of all life, whether on Earth or beyond. The Supreme God holds absolute sovereignty over all creatures, including humans. According to Hindu scriptures, every form of life possesses an inherent right to existence. Human dominion over other creatures is forbidden; instead, humans are encouraged to seek peace and coexist harmoniously

with nature. The Hindu faith emphasizes veneration, respect, and obedience to maintain the delicate unity between God and the natural world. This profound connection is exemplified through a series of divine incarnations, as articulated by Dr. Karan Singh in the Assisi Declaration –

“The evolution of life on this planet is symbolized by a series of divine incarnations beginning with fish, moving through amphibious forms and mammals, and then on into human incarnations. This view clearly holds that man did not spring fully formed to dominate the lesser life forms, but rather evolved out of these forms itself, and is therefore integrally linked to the whole of creation”

A perusal of Hindu religious scriptures called the *Vedas*, *Upanishads*, *Smritis*, *Puranas*, *Ramayana*, *Mahabharata*, *Gita*, mythological literature including stories, social and moral codes, and political rules, reveals that following were the general guiding principles to be observed by all in their daily life:

- i. Life in living is dependent on various components of nature.
- ii. Keep harmony with nature.
- iii. Protect natural environment.
- iv. Utilise natural resources only to satisfy the needs of the people.
- v. Presence of the divinity of nature in all living and non-living objects.
- vi. Destruction of nature means destruction of mankind.
- vii. All must have compassion for animate objects; for example, trees, animals, birds, aquatic life, etc.
- viii. Air, water, land, sky, trees, animals are the creation of God and He dwells in all of them. Therefore, to worship them is to worship Him-the creator of the universe.
- ix. Man, being one of the creations of God, has no special privilege or authority over other creatures, on the other hand he has more obligations and duties to protect and improve them.

- x. *Ahimsa Parmo Dharmah* (non-violence) is the dharma of the highest order, one should be non-violent towards animals, tree's, and other microorganisms alike. Hinsa (violence) was considered as a sin.
- xi. Drought, fury of floods and storms, heavy rains, cloudbursts, lightning, earthquakes, volcanic eruptions, heavy tides is the violent forms of anger manifested by the Gods and Goddesses.
- xii. Purity of thought and expression, and cleanliness of the environment around us should be observed.

In Hinduism, all lives whether human or non-human, including trees is regarded as having equal value and share the same right to existence. This principle underscores the deep-rooted sanctity of life within the religion.

The Vedic texts, particularly the Rigveda, convey the earliest and simplest form of nature worship. Environmental science traces its origins back to ancient Sanskrit literature, and the Vedic perspective on the environment is eloquently expressed in a verse from the Atharvaveda. Here, our surroundings are symbolically referred to as 'Chandamsi,' representing three essential elements: water, air, and plants or herbs. These elements have existed in the world since its inception and are considered universal coverings available everywhere.

Hindu teachings provide a profound perspective on environmental conservation grounded in spiritual tradition. Some key aspects are:

In Hinduism, the concept of Ahimsa (non-violence) has a profound philosophical foundation. It is rooted in the belief in karma and rebirth. According to Hinduism, individuals may reincarnate as animals or birds as part of the cycle of birth and rebirth. As a result, Hindus not only respect but also venerate other animals. The practice of Ahimsa extends to treating both humans and animals with reverence. This principle is deeply cherished by Hindus.

Furthermore, Hinduism holds that the soul can reincarnate into various life forms. This belief leads to a strong opposition to the institutionalized killing of animals, birds, and fish for human consumption. In Hindu thought, Nature is revered as the body of God. Different animals and birds are associated with specific deities and are either worshipped or protected. Hinduism provides a moral compass for environmental preservation and conservation, considering any abuse or exploitation of nature as unjust and sacrilegious.

RAMAYAN, MAHABHARTA AND BHAGVAD GITA

Hindu religion also stresses awareness in conservation of trees. In the epic Ramayana Ravana, when faced with calamity, speaks as follows: "I have not cut down any fig tree in the month of Vaisakh, why then does this calamity befall me?" This serves as a good example to illustrate how Hindus respected trees which constituted a large part of our environment. In the words of the ancient immemorial Indian poet, Kalidasa: *"the Himalaya is a great Devatatma, a great spiritual presence, stretching from the west to the eastern sea like a measuring rod to gauge the world's greatness"*.

The Mahabharata suggests that the fundamental elements of nature form the cosmic being: mountains as bones, earth as flesh, the sea as blood, the sky as the abdomen, air as breath, and Agni (fire) as energy. According to ancient Hindu scriptures, human beings cannot detach themselves from their natural surroundings; the earth shares a relationship with humans akin to that of a mother and her child. Planting and preserving trees hold sacred significance in religious ceremonies. *"The purchaser of flesh performs Himsa (violence) by his wealth; he who eats flesh does so by enjoying its taste; the killer does Himsa by actually tying and killing the animal. Thus, there are three forms of killing: he who brings flesh or sends for it, he who cuts off the limbs of an animal, and he who purchases, sells or cooks flesh and eats it – all of these are to be considered meat eaters."* (Mahabharata).

The Bhagavad Gita contains numerous references to the omnipresence of the supreme divinity, emphasizing its presence both within and throughout nature. In Sloka 20 of Chapter 10, Lord Krishna declares: 'I am the self seated in the heart of all creatures. I am the beginning, the middle, and the very end of all beings.' This proclamation underscores the equal treatment that all beings deserve. Additionally, in the Bhagavad Gita, Lord Krishna metaphorically compares the world to a single banyan tree with countless branches—a tree where all species of animals, humans, and demigods wander."

Indian consciousness is deeply intertwined with trees and forests. Various trees, fruits, and plants hold special significance in Hindu rituals. Over centuries, Hindu religious texts, stories, and rituals have emphasized the importance of preserving nature by deifying it.

In the Bhagavad Gita (9.26), Lord Krishna states: 'पत्रं पुष्पं फलं तोयं यो मे भक्त्या प्रयच्छत | तदहं भक्त्युपहतमश्नाम प्रयतात्मनः' which means, 'I accept a leaf, flower, fruit, or water offered with

devotion.’

Several natural elements hold sacred significance in Hinduism:

- **Coconut Tree and Coconut: These are considered sacred and are offered to gods during worship.**
- **Mango Leaves: Used as festoons during pujas and auspicious events.**
- **Flowers and Leaves: Used in worship for Pushpa puja and patra puja.**
- **Lotus: A sacred flower and plant in Hindu tradition.**
- **Tulsi (Indian Basil): An important symbol in Hindu religious practice.**

In the Ramayana, Ravana, when faced with calamity, laments: ‘I have not cut down any fig tree in the month of Vaisakh; why then does this calamity befall me?’ This illustrates how Hindus respected trees, which constituted a significant part of our environment.

The works of Kalidasa contain the poetic description: ‘The Himalaya is a great Devatatma, a spiritual presence stretching from the west to the eastern sea, like a measuring rod to gauge the world’s greatness.’ Similarly, the Mahabharata describes the basic elements of nature as integral to the cosmic being: mountains as bones, earth as flesh, the sea as blood, the sky as the abdomen, air as breath, and Agni (fire) as energy.

KAUTILYA’S ARTHASHASTRA

Kautilya’s Arthashastra, an ancient Indian treatise on administration, economic policy, taxation, diplomacy, planning, and other aspects of statecraft, remains remarkably relevant in today’s world. Although the text disappeared by the 12th century, it was rediscovered in 1904 by R. Shamasastri, who published it in 1909. The first English translation followed in 1915.

This treatise provides valuable insights into environmental conservation. It outlines guidelines for maintaining public sanitation and preserving the environment, forests, and wildlife. Even in matters of state governance, the administration and rulers were directed to prioritize environmental welfare.

In Arthashastra, Kautilya advocates the establishment of Abhayaranya or Abhayavana forest and animal sanctuaries where trees and animals coexist without fear of slaughter. He also recommends appointing a forest superintendent for each forest zone. This official would be

responsible for maintaining forest health, protecting wildlife (such as elephants in Hastivana), and ensuring the sustainable production of forest products. These products include Teak, Palmyra, Mimosa, Sissu, Kauki, Sirisha, Catechu, Latifolia, Arjuna, Tilaka, Tinisa, Sal, Robesta, Pinus, Somavalka, Dhava, Birch, Bamboo, Hemp, Balbaja (used for ropes), Munja, fodder, firewood, bulbous roots, medicinal fruits, and flowers.

Furthermore, Arthashastra reveals that the Mauryas designated specific forests to safeguard timber supplies and provide habitats for lions and tigers. Kautilya's vision also includes planning new forests on unoccupied or agriculturally unsuitable land when establishing a new state.

The Arthashastra, an ancient Indian treatise, emphasizes the collective value of water rather than treating it as a private commodity. It underscores the preciousness of water and prescribes fines for actions that harm water bodies, obstruct watercourses, or damage embankments. Efficient water management is a recurring theme, with detailed instructions provided. The text also advocates for the conservation of natural resources, particularly living resources.

Kautilya, the author of Arthashastra, recognized that the future productivity of natural resources depends on their appropriate conservation. In alignment with Hindu traditions, he promotes kindness toward animals.

Notably, the Mauryan period demonstrated significant attention to wildlife. Specific forests were designated as Abhayaranya (similar to present-day sanctuaries), and severe penalties, including capital punishment, were imposed on offenders who harmed elephants, deer, bison, birds, or fish, among other animals.

ENVIRONMENTAL PROTECTION IN PRE VEDIC & VEDIC PERIOD

Ancient India's rich heritage encompasses profound environmental wisdom found in the Vedic, pre-Vedic, and post-Vedic texts. The Vedas, the world's most ancient scriptures, reveal a deep understanding of natural phenomena. Seers and scholars of that time possessed remarkable awareness regarding climate change, ecological balance, and environmental protection. These texts delve into the theory of universe evolution, climatology, hydrology, and water management. They caution against human activities that disrupt the delicate cycles of nature, emphasizing the need for righteous conduct to maintain harmony with the environment.

The Vedas, ancient Sanskrit texts of Hinduism, hold immense significance. They are considered the oldest scriptures in Hinduism and constitute the foundation of Indian spiritual and cultural heritage. The Vedas are believed to have been composed between 1500 BCE and 500 BCE during the Indus Valley civilization in ancient India. Initially transmitted orally by a priestly class known as the Brahmins, these texts encompass hymns, rituals, melodies, and philosophical discussions. Each Veda is further divided into various sections, including Samhitas, Brahmanas, Aranyakas, and Upanishads. The Vedas provide insights into the first beginnings of language and embody universal wisdom that transcends linguistic boundaries.

In the Vedas, we encounter vivid and poetic descriptions of life's beauty and the natural world. Nowhere else have the glory of dawn, the majesty of sunrise, and the serenity of nature been expressed with such richness and purity. These symbolic depictions remain intimately connected to life and the natural order.

Among the four Vedas, the Rigveda stands as the most authoritative. Each Vedic verse carries the legacy of one or more sages (Rishis) and is dedicated to specific deities (Devatas). The Rishis are revered as recipients of revealed knowledge, while the Devatas receive praise through these verses.

The Vedic literature provides authentic principles for harmonizing with our environment and leading a spiritually fulfilling life. Specifically, the Vedas delve into various environmental aspects and demonstrate a deep concern for ecology. Many of today's environmental challenges are indeed human-made. Therefore, our role as stewards of the environment is crucial in maintaining perfect harmony. By adhering to Vedic techniques, methods, and principles, alongside insights gained from scientific and technological research, we can work toward safeguarding humanity from environmental degradation.

Hindu mythology holds that Lord Mahesh, also known as Lord Shiva, is the Destroyer of the Shrushti; Lord Vishnu is the Operator of the Shrushti; and Lord Brahma is the Creator of the Shrushti (Universe). This Shrushti refers to the universe as a whole.

In modern Sanskrit, the term 'Paryavarana' refers to the environment, signifying that which encircles us and exists all around our surroundings. However, in the Atharvaveda, equivalent words with similar meanings are employed, such as Vritavrita, Abhivarah, Avritah, and Parivrita. The Vedic perspective on the environment is eloquently expressed in a verse from

the Atharvaveda, where three coverings of our surroundings are referred to as ‘Chandamsi’—meaning ‘coverings available everywhere.’

These three fundamental elements—water; air, and plants or herbs—have existed in the world since its inception. They are varied, visible, and imbued with qualities. This understanding underscores the profound knowledge of the basic elements of the environment possessed by the Vedic seers.

According to ancient Hindu mythology, the five Great Elements—Akash (Earth), Vayu (Air), Agni (Fire), Jala (Water), and Prithvi (Earth)—make up the Panchamahabhutas, or physical creation. The Atharva Veda discusses the universe’s beginnings (Shrusthi) in its eighth chapter, tenth sukta, and first shlokas.

Nature maintains a delicate balance among these constituents and their interactions with living creatures. Any disturbance beyond certain limits disrupts this natural equilibrium, leading to various challenges for living beings. The relationship between humans and the environment is intrinsic, as we cannot exist without it. Since the dawn of creation, our quest has been to understand the environment for self-protection and benefit.

Consistent with the Vedic concept of paryavaran/environment, broadly, we find definition of environment in Section 2(a) of EP Act, 1986, reads as under:

*“2(a) “**environment**” includes water, air and land and the interrelationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;”*

VEDIC APPROACH TO ENVIRONMENT

In Vedic literature, Mother Earth was personified as Goddess ‘Bhumi’ or ‘Prithavi.’ During the ancient Vedic era, the people of India held great respect for the environment and worshipped various objects and manifestations of nature with utmost devotion and sincerity. The wise seers of the Indian subcontinent recognized the need to attribute religious sanctity to the environment for maintaining ecological balance and fostering societal acceptance. They worshipped every facet of the environment: land/soil, water, rivers, plants, animals, birds, mountains, sky, and more.

The 'Prithvisukta' in the Atharvaveda celebrates Mother Earth with all her natural bounties, particularly her gifts of herbs and vegetation. Her blessings were sought for prosperity in all surroundings and the fulfillment of righteous aspirations.

The Vedic Aryans, deeply attuned to nature, meticulously observed its intricate drama. They marveled at sandstorms, cyclones, intense lightning, thunderclaps, monsoon rains, swift mountain streams, scorching sun, and fiery red flames. These natural phenomena revealed a power beyond human control. The Vedic sages not only appreciated these forces but also adored and worshipped them with reverence, surprise, and fear. Their instinctive understanding recognized that the actions, movements, creations, changes, and destructions in nature stemmed from forces transcending human influence. Consequently, they attributed divinity to the natural world.

In the Bhagavad Gita, Lord Krishna says: 'भूमिः अपो नलो वायुः खं मनो बुद्धिरेव च अहंकारः इति यम् मे भिन्ना प्रकृतिः अष्टधा'—meaning that the environment necessary for human survival comprises two fundamental aspects: external (earth, water, air, fire, and space) and internal (primarily involving the mind).

In the Atharvaveda, there is profound reverence for the earth (Prithivisukta). Mother Earth bestows love upon all living creatures inhabiting her. The Vedic seer solemnly declares the enduring filial bond between humanity and Mother Earth: 'Mata Bhumi Putroham Prithivyah'. Earth is our mother, and we are her children. 'Mother Earth' is celebrated for her natural abundance, including precious herbs and vegetation. Her blessings are sought for prosperity in all surroundings and the fulfillment of righteous aspirations. It is our duty to safeguard the Earth from any environmental harm and ensure she remains unoppressed.

A soul-stirring prayer resonates in one of the hymns, advocating for the preservation and conservation of hills, snow-clad peaks, and the brown, black, and red earth—unharmful, unwounded, unbroken, and well-defended by India.

To protect the environment, the Rigveda invokes divine intervention to bliss:

मधु वातः ऋतायते मधुक्षरन्ति सिन्धवः। मध्विर्नः सन्त्वौषधिः मधु अक्तं उतोऽसि। मधुमत्पार्थिवं राजः
मधुद्यौरस्तु न पिता। मधुमन्नो वनस्पतिः मधुमानस्तु सूर्यः। मध्विर्गावो भवन्तु नः॥

This Vedic hymn beautifully expresses gratitude for the sweetness of life, the importance of nourishment, and the interconnectedness of nature.

ORIGIN OF ENVIRONMENTAL FROM VEDAS

Nature's Divinity: The **Vedic Aryans** held a profound reverence for nature, and their hymns, found in the Rigveda, reflect this connection. While these hymns cover various themes, a significant portion is dedicated to **natural forces**. Scholars in both India and the West have interpreted Vedic gods in diverse ways, but a common thread emerges: the hymns addressed to deities (known as **Devata**) draw inspiration from the awe-inspiring phenomena of nature and its aspects. The term **Devata** signifies divinity—bright, powerful, and benevolent. Within these hymns, we encounter prayers dedicated to specific natural elements: air, water, earth, sun, rain, and dawn. The radiant brilliance of the sun, the fervent blaze of sacrificial fires, the sweeping rainstorms across the skies, the cyclic return of dawn, the unwavering currents of the winds, and the tempestuous tropical storms—all these fundamental aspects are **glorified and personified as divine entities**. The Vedic seers' deep interaction with nature led to profound appreciation and prayer, rooted in keen observation. The attributes assigned to these deities align with their natural forms and activities: Soma embodies greenness, fire radiates brightness, air moves swiftly, and the sun dispels darkness. These verses attest to the Vedic seers' mastery of natural science.

Varuna and the Cosmic Order "Rita": In the **Vedas**, the concept of '**Rita**' represents the **order of the Universe**. Rita serves to transform chaos into cosmos, providing **integration and harmony** to the natural world. Beyond its functional role, Rita carries an **aesthetic essence**, signifying splendor and beauty. Consequently, the Vedic gods, who uphold Rita, embody qualities of **lawfulness, beauty, and goodness**. Their inherent beauty holds significant meaning.

Scholars have defined Rita in various contexts within the Vedas. In a broader sense, it represents a cosmic order that governs all motion and existence, maintaining harmony in the world. Even the gods themselves adhere to Rita; they are born from it and remain bound by its influence. Rita acts as a **controlling and sustaining force**, ensuring the sun's continuity in the sky. Universally, it functions as the Universal Law, governing all aspects of the cosmos. The entire manifested universe operates within the framework of Rita.

S.R.N. Murthy likens Rita to a **simple form of gravitational law**. According to **H.W. Wallis**, the **principle of cosmic order** existed even before the manifestation of any phenomena. While worldly events may shift and change, the underlying principle governing their periodic recurrence remains constant. In essence, this principle of order predates the earliest observable phenomena.

Varuna, as depicted in the Vedas, assumes the role of the **Lord of Rita**, the universal natural order. He holds sovereignty, akin to a great king and lawgiver, governing not only the cosmos but also the gods themselves. While Varuna is often associated with water and the ocean, his primary function lies in **maintaining order and balance in the world**. From his celestial throne, he observes all that unfolds on Earth and penetrates into the hearts of humanity.

According to the **law of Varuna**, heaven and earth remain distinct. He orchestrates the sun's radiant journey across the sky, creating a wide path for its brilliance. The moon, guided by his ordinances, illuminates the night, while the stars adorn the celestial canvas, vanishing with the day's light. Varuna's influence extends to the flow of rivers, and as a **moral governor**, he transcends other deities. In essence, the concept of Varuna reflects the profound awareness of the Vedic seers regarding the **control and equilibrium of natural forces** within the environment.

Division of Universe: According to Vedic seers, the universe is meticulously structured based on scientific principles. It comprises three interconnected realms: Prithivi (the earth), Antariksha (the intermediate region between heaven and earth), and Dyau (the sky or heaven). These divisions are well-established in Vedic literature. Prithivi, often referred to as the 'observer space,' encompasses our familiar surroundings—the space in which we live, observe, and experience life. Dyau, on the other hand, can be described as 'light space' because it is the medium through which light propagates. Antariksha, positioned between observer space and light space, serves as the 'intermediate space.' The Vedic sages discerned these subtle divisions, transcending the limitations of modern science. In the context of environmental study, the universe's tripartite division remains a fundamental concept within the Vedas.

The Vedas, universally regarded as India's most precious heritage, encompass diverse knowledge. Their central themes revolve around nature and life. Within these ancient texts, we find numerous references to environmental conservation, ecological balance, and weather

cycles, indicating a high level of awareness among our ancestors regarding the environment and ecology.

The Vedas emphasize the utmost importance of environmental protection and purity. They advocate for safeguarding habitats, proper afforestation, and avoiding pollution. Man is forbidden from exploiting nature; instead, he is taught to live in harmony with the natural world and its animals.

A verse from the Rig Veda succinctly captures this wisdom: ‘Thousands and hundreds of years if you want to enjoy the fruits and happiness of life—then take up systematic tree planting.’

During that era, the term ‘pollution’ did not exist, but the learned sages in ancient scriptures referred to it as ‘poisoning the environment.’ They believed that the five elements—space, air, fire, water, and earth constituting the environment were derived from prakriti, the primal energy. Our human bodies are composed of these elements and connected to them through our five senses: the nose to earth, the tongue to water, the eyes to fire, the skin to air, and the ears to space. This bond between our senses and the elements forms the foundation of our human relationship with the natural world.

The Vedas stress the need for protecting and developing forests. Human beings must safeguard trees. In Vedic times, people regarded nature and the environment holistically, revering each constituent and entity by carefully preserving them.

A powerful verse from the Rig Veda (6:48:17) echoes this sentiment: *‘Do not harm the environment; do not harm the water and the flora; Earth is my mother, I am her son; may the waters remain fresh, do not harm the waters; do not cut trees, because they remove pollution.’*

In the Yajur Veda, verse 5:43 states: ‘Do not disturb the sky and do not pollute the atmosphere.’ Similar references can be found in the Upanishads, other Puranas, as well as epic literature like the Ramayana, Mahabharata, and Bhagavad Gita. Kautilya’s Arthashastra also contains significant knowledge about environmental conservation. The protection of trees was emphasized, and the appointment of a Superintendent of Forest Produce was recommended. Violation of rules related to certain kinds of trees carried penalties. Additionally, specific forests were declared protected, known as ‘Abhayaranya,’ and severe punishments, including capital punishment, were prescribed for offenders in the Arthashastra.

PREVEDIC PERIOD (4500 BC – 2500 BC)

Mohenjo-daro and Harappa archaeological finds demonstrate the existence of a highly developed urban civilization that flourished in India between 4000 and 3500 BCE. The people who lived there, dubbed the Indus Valley Civilization, occupied houses with multiple stories made of baked bricks. Well-planned elements like wide streets with baked brick pavement, painstakingly constructed drainage systems, aqueducts, and both public and private baths demonstrate their exceptional civic sensibility.

Beautiful drains with protruding bricks that extend up to six feet in depth are revealed by the Mohenjo-daro excavations. A distinct slope towards the street side was incorporated into the design of the elaborate bathrooms, directing water into pipes that were connected to the main sewers. Some even had pipes connected to these tunnels from restrooms on higher stories. Waste water was pumped effectively to the end of the street thanks to this complex system.

The pre-Vedic era's careful attention to household and civic sanitation points to a deep grasp of health science that supported these well-functioning systems.

VEDIC PERIOD (2500 BC – 2000 BC)

The Vedic period (approximately 2500 BCE to 2000 BCE) stands as a remarkable era of intellectual and creative activity within Indian civilization. It laid the very foundation of Indian culture—an unbroken tradition that continues to shape the present age. The ancient Indian scriptures, including the Vedas, Smritis, Upanishads, Puranas, Epics, and Samhitas, composed during this period, represent perhaps the oldest recorded repository of human wisdom.

These texts impart profound insights, emphasizing the interconnectedness of all life forms humans, animals, and plants. The Vedic Aryans recognized that Nature and humankind (referred to as 'Prakriti' and 'Purusha') form an inseparable part of the life support system. Their keen intuition revealed hidden knowledge about the natural world.

In the Isopanisd, a profound statement resonates: *“This universe is the creation of the supreme, meant for the benefit of all His creations. Individual species must, therefore, learn to enjoy its benefits by forming a part of the system in close harmony with other species. Let not any one species encroach upon the others’ right.”*

In *Ishopanishad*, there is celebrated command which says, *“Everything in the universe belongs*

to Supreme God, therefore, take only what you need, that is set aside for you. Do not take else, for you know to whom it belongs.” It further says “resources are given to mankind for their living. Knowledge of using the resources is absolutely necessary”.

In *Bhagavatam* (Volume 2, Chapter 1, Verses 32-33), it is said that “*the trees are the hairs of His body, the oceans His waist, the hills and mountains are His bones, the rivers are the veins of the cosmic being (Brahman), his movements are the passing of ages*”.

In Kautilya’s *Arthashastra*, great importance led on environment protection and even clear punishments were prescribed on the basis of importance of various parts of forest produce, if damaged by anyone.

Manu Smriti also mentions about optimum use of resource of nature and also prescribes different punishments for causing injury to plants.

The ancient Vedic texts, handed down through generations in India, are remarkably clear, categorical, and profound. In the *Rigveda*, it is stated that life’s foundation rests upon five elements: earth, water, fire, space, and air. Interestingly, the *Rigveda* also alludes to a ‘protective layer,’ which we now recognize as the ozone layer a shield that filters harmful sun rays and safeguards us.

The *Yajurveda* prescribes the performance of ‘Yajna’ (or ‘Yagya’) by offering butter and fire into the sacrificial fire. This ritual ensures that the mixture interacts with the atmosphere, purifying it from impurities. The *Yajurveda* also emphasizes keeping the sky clean and revering water bodies, recognizing their role in sustaining life.

Similarly, the *Samaveda* underscores the importance of maintaining the natural season cycle, which can be disrupted by inappropriate human actions leading to climatic changes.

In the *Atharvaveda*, the concept of ‘give and take’ is emphasized. It implies that we should take from the earth and atmosphere only as much as we give back. The *Atharvaveda* also highlights the purity of water, the protection of wildlife, and the domestication of animals like cattle. In *Atharvaveda* (5.30.6), it beautifully states: ‘Man’s paradise is on earth; this living world is the beloved place of all; it has the blessings of nature and bounties; live in a lovely spirit.

In the Arthashastra, Chanakya emphasizes environmental protection. He advocated the necessity of maintaining forests, imposed fines for cutting trees, and emphasized forest reserves for wild animals. When harmful, these animals would be killed or bound outside the reserve forests.

During the Vedic period, the term ‘Dharma’ was synonymous with law. References to this concept appear in various Vedic texts. The Vedic people believed that order developed among individuals and groups in noble places. Ecologists believed that when humans adopted peaceful means of interaction, they created laws.

The Puranas conceptualize law as a means to secure ‘Abhyudaya,’ which represents the welfare of the people. Dharma encompassed rights, privileges, and obligations of individuals. The objective of law was—and still is—to promote the welfare of both individual humans and society as a whole. As a natural corollary, commands related to nature became law.

Remarkably, this awareness of the interdependence of all living things existed at a time when plant and animal resources seemed limitless. The wise seers of ancient India foresaw the potential harm that humans could inflict on the environment. To mitigate this, they instituted various safeguards, including rituals, beliefs, taboos, and totems. Ethical precepts embracing plants, animals, and human beings were also evolved to ensure harmonious coexistence with Nature.

“Ayurveda,” which translates to **“the science of life,”** represents a meticulously **systematized and organized body of medical knowledge** that evolved in ancient India between **2500 BCE and 1000 BCE**. The ancient Ayurvedic masters emphasized that life is **constantly in flux**, rather than static, and that maintaining **harmonious adaptation with the environment** is crucial for health and well-being. Sushruta and Caraka, authors of the **Sushruta Samhita (circa 2500 BCE)** and the **Caraka Samhita (circa 1500 BCE)**, respectively, observed that failure to adjust and adapt whether due to innate deficiencies or environmental pressures can lead to disease.

Caraka and Susruta, the two ancient masters of Indian medicine (Ayurveda), recognized that bodily health is not merely an individual concern. They also observed its connections to **heredity, geographical environment, climate, water supply, air quality, time, and seasonal variations**.

Vedic literature though has been given identification with spirituality, culture and religion but in fact, it is the most reliable source of knowledge about each and every aspect of life and cosmos as well. Though modern Philosophers and Researchers have given different timings to the Indian Vedic Literature going back to more than 4000 B.C. but the fact is that Indians belief recognize Vedas as manifestation of Supreme God, hence Vedas are unborn and impermissible. The term 'Veda' does not denote any single book. It denotes, in effect, the entire divine literature comprising four Vedas, Brahmanas, Aranyakas, Upanisads and six Vedangs. Vedic literature has its genesis to human abilities i.e., Shruti (hearing) and Smriti (memory). In fact, gemology of Vedic literature is also founded in above two components.

Four Vedas i.e., Rigveda, Yajurveda, Samveda and Atharvaveda; Samhitas, Brahmanas, Aranyakas, Upanisads/Vedantas have their genesis to 'shruti' while 'smriti' has given rise to-

A) Vedangas (limbs of Vedas) -

- i. Shiksha i.e., phonetic (nose of Vedas)
- ii. Kalpa i.e., rituals (Arms of Vedas)
- iii. (Vyakarna i.e., grammar (mouth of Vedas)
- iv. Nirukta i.e., etymology (ears of Vedas)
- v. Chanda i.e., Vedic metrics (feet of Vedas)
- vi. Jyotisha i.e., Astrology/astronomy (Eyes of Vedas)

B) Itihas (Epics) i.e., Ramayana and Mahabharata

C) Upveda – (i) Ayurveda (Medicine) (ii) Dhanurveda (Archery) (iii) Gandharvaveda (Music and Dance) and (iv) Sthapatyaveda (Architecture)

D) Puranas

E) Upang or Shad Darshan – (i) Sankhya (ii) Yoga (iii) Nyaya (iv) Vaisheshika (v) Mimansa and (vi) Vedanta

F) **Tantra** – (i) Agamas and (ii) Nigamas

Vedic literature provides profound insights into various aspects of life, including metals, the environment, and the creation of the Universe. Let's explore these concepts in more detail:

Metals in Vedic Literature:

- The ancient Vedas mention metals like **gold, copper, silver, and bronze**. For instance:
 - a. In the Rig Veda, a golden earring and jewelry are mentioned: “Hiranyakarnam Manigreevam.”
 - b. The Śukla Yajurveda refers to **tin and lead**: “Hiranyam Cha Meayaschame Seesam Chame Thrapuschame Syaaman Cha Me Loham Cha Me.”
 - c. These references indicate that the Vedic texts recognized and valued various metals.

Creation of the Universe:

- The **Nasadiya Sukta** in the Rigveda (129th hymn) describes the origin of the universe:
 - a) “Then even nothingness was not, nor existence. There was no air then, nor the heavens beyond it. What covered it? Where was it? In whose keeping was there then cosmic water, in depths unfathomed?”
 - b) This hymn suggests that neither non-existence nor existence existed initially. Time itself did not exist before creation.
 - c) The absence of the sky, atmosphere, and cosmic water is also contemplated.
 - d) The universe eventually arose from the power of heat or energy.
- The Vedas describe creation, evolution, and annihilation as a cyclic process: **sarga** (creation), **visarga** (evolution), **sthana** (maintenance), and **pralaya** (dissolution).

Modes of Nature:

- In the Shrimad Bhagavatam (SB), Chapter 2.5 and 3.10 discuss the three basic material modes (qualities) of nature:
 - a) **Mode of Goodness (Sattva)**: Associated with purity, knowledge, and harmony.
 - b) **Mode of Passion (Rajas)**: Characterized by activity, desire, and restlessness.
 - c) **Mode of Ignorance (Tamas)**: Represents darkness, delusion, and inertia.

- These modes influence our behavior, thoughts, and actions, shaping our experiences in the material world.

Phases of Creation:

- a) The Vedic literature describes nine phases of creation, including the natural interaction of the three modes.
- b) The first phase is **Mahat-tattva**, resulting from the incarnation of the Supreme God (Karanarnavasayi Vishnu).
- c) Time is then manifested, followed by the appearance of the three modes or qualities.

The second phase involves the generation of **false ego (Aham)**, from which material ingredients, knowledge, and activities arise.

In summary, the Vedic texts provide profound wisdom about metals, the environment, and the intricate process of creation. They encourage us to seek self-realization and recognize our interconnectedness with the Supreme Whole.

In **third phase of creation**, sense perceptions and elements are created and details thereof are:

- a) From the darkness of false ego, the first of five elements, namely the sky (*nabhah*), is generated. Its subtle form is the quality of sound, exactly as the seer is in relationship with the seen.
- b) In the course of eternal time, due to the transformation (reactions) in the sky, the air is generated with the quality of touch and by previous succession, the air is also full of sound.
- c) In the course of eternal time, due to transformations in the air, the fire is generated, taking shape with the sense of touch and sound.
- d) In the course of time, due to transformations in the fire, the water is generated, full of juice and taste. It also has form, touch and sound.
- e) In the course of time, due to transformations in the water, the earth (solid) generated with the sense of odour. Thus, the qualities of sense perceptions are fully represented in earth.

We can say that transformation took place in the following order: **ether (or sky) → gas (air) → fire → liquid → solid**. (SB Chapter 2.5 (25-29), Chapter 3.10 (15), Bhagavat Gita 10.8).

Fourth creation is creation of knowledge and of working capacity. This can be understood as law of nature. (SB 3.10 (16)).

Fifth **creation** is of controlling deities by the interaction of the mode of goodness, of which mind is the sum total. SB 3.10 (17)

Sixth creation is the ignorant darkness of the living entity, by which master acts as a fool. SB 3.10 (17)

Seventh **phase of creation** is that of the immovable entities, like creepers, the trees with and without flowers, pipe plants etc. They are of 6 kinds. SB 3.10 (19)

Eighth phase of creation is that of lower species of life, like cow, goat, ass, mule jackal, tiger, birds etc. They are not intelligent species. (SB 3.10 (21-25))

Ninth phase of creation is the creation of human beings. In human race, mode of passion is very prominent. SB 3.10 (26)

Tenth creation, which naturally occurs due to interaction of three modes are the creation of the demigods. They are of eight varieties: (i) Demigods, (ii) Forefathers, (iii) Asuras, or Demons, (iv) Gandharvas and Apsaras, or angels, (v) Yaksas and Raksasas, (vi) Siddhas, Caranas and Vidyadharas, (vii) Bhutas, Pretas and Pisacas, and (viii) Superhuman beings, Celestial Singers, etc. All are created by *Brahma*, the creator of the universe. SB 3.10 (28-29)

Let's explore the fascinating Vedic cosmology, touching upon the age, shape, and size of the universe:

1. Age, Shape, and Size of the Universe:

- According to the Vedas, our universe is approximately **155.52 trillion human years old**, with a total lifespan of **311.04 trillion human years** (equivalent to 100 years of Brahma).

- The diameter of the universe, as described in the **Shrimad Bhagavatam (SB)** Chapter 5.20 (38), is **500,000,000 yojanas** (approximately 4.5 trillion miles).
- Interestingly, the shape of the universe is depicted as **egg-shaped** (Brahmanda = Brahma + Anda), symbolizing cosmic creation within a protective shell.
- Remarkably, the distance light can travel in one day—**16 trillion miles**—matches the perimeter of the Vedic universe.

2. Vedic Perspectives on Nature and Man:

- The ancient Vedic literature reveals an **intimate relationship between nature and humanity**. Rivers are revered as “mothers,” trees as “fathers,” and other natural elements hold spiritual significance.
- The **Isopanisad** emphasizes that God is present in every part of creation, and ancient spiritual traditions viewed humans as integral parts of nature.
- The **five great elements**—Space, Air, Fire, Water, and Earth—are considered fundamental constituents of the environment, all derived from the primary energy (Prakriti).

3. Environmental Awareness in Hinduism:

- Hindu scriptures, including the Vedas and Upanishads, emphasize the **value of trees, plants, and wildlife**.
- References to **environmental protection, ecological balance, weather cycles, and hydrologic phenomena** demonstrate the high level of awareness among ancient seers and people.

In summary, Vedic wisdom invites us to contemplate the grandeur of the universe, our interconnectedness with nature, and the importance of environmental stewardship.

People in Vedic times regarded nature and the environment in a holistic manner and revered each of its constituents and entities by carefully preserving them. In *Rigveda*, it has been mentioned that there are five elements which give basis to life and these elements are Earth, Water, Fire, Space and Air. The *Rigveda* makes a clear reference to the presence of a protective layer which we know now to be the ozone layer that filters the harmful rays of the sun and protects the earth. In *Yajurveda*, it has been mentioned that yajna be performed by offering

butter and firewood into the sacrificial fire so that it mixes in the atmosphere and makes the environment free from impurities. It mentions about keeping the sky clean and about praying to the water bodies as they sustain life. The *Samaveda* like all other Vedas also recognizes the importance of maintenance of the seasons' cycles that are likely to get altered due to climate change owing to inappropriate human actions. In *Atharvaveda*, there is a clear concept of give and take which means that one can take from the earth and atmosphere only so much as one would give back to them. Many other things are also highlighted in the *Atharvaveda* like purity of water, protection of wild life and domestication of animals like cattle.

The Vedas attach great importance to environmental protection and purity. They persist on safeguarding the habitation, proper afforestation and non-pollution. In fact, man is forbidden from exploiting nature. He is taught to live in harmony with nature and recognize that divinity prevails in all elements, including plants and animals. The *rishis* of the past have always had a great respect for nature.

A verse from *rig-veda* says, "Thousands and hundreds of years if you want to enjoy the fruits and happiness of life then take up systematic planting of trees".

When we go through the concept of earth (*Prithvi*), water (*Apah*), air (*Vayu*), ether (*Akasha*) and fire (*Agni*), we realize that ancient Vedic intellectuals knew various aspects of environment, cosmic order and importance of co-ordination between all natural powers for universal peace and harmony. When they pray for peace at all levels in Shanti mantra, they side by side express their believe about the importance of coordination and inter-relationship among all natural powers and regions. The prayer says that not only regions, waters, plants trees, natural energies but all creatures should live in harmony and peace. Peace should remain everywhere. Mantra takes about the concord with the universe-
"peace of sky, peace of mid-region, peace of earth, peace of waters, peace of plants, peace of trees, peace of all-gods, peace of Brahman, peace of universe, peace of peace; May that peace come to me!"

This mantra resounded United Nation when Union Minister, MoEF&CC started UNSC debate on climate change by reciting this verse which reads as under:

“ॐ यौः शांतिरंतरं शांतिः

पृथ्वी शांतिरापः शांतिरोषधयः शांतिः ।

वनपतयः शांतिर्वेदेवाः शांतिर्मशांतिः

सर्वशांतिः शांतिरेव शांतिः सामाशांतिरेध ॥

ॐ शांतिः शांतिः शांतिः ॥”

Hindi Translation

युलोक म शांति हो, अंतर म शांति हो, पृथ्वी पर शांति हो, जल म शांति हो, औषध म शांति हो,

वनपतय म शांति हो, वन म शांति हो, सभी देवतागण म शांति हो, म म शांति हो, सब म

शांति हो, चार और शांति हो, शांति हो, शांति हो, शांति हो।

English Translation

“May peace radiate there in the whole sky as well as in the vast Ethereal space everywhere. May peace reign all over this earth, in Water and all herbs, trees, and creepers. May peace flow over the Whole universe. May peace be in the Supreme Being Brahman. And may there always exist in all peace and peace alone. Aum peace, peace, and peace to us and all beings!”

PRITHVI(EARTH)

The Vedic people lived intimately connected to nature. They held deep concern for the impact of nature on human life and recognized humanity's indebtedness to the natural world. In AV 12.1.12 it is said that “माता भूमिः पुत्रोऽहं पृथिव्याः”

Indeed, this represents the utmost reverence one can hold for **Mother Earth**. To a devout Hindu, the earth is not merely a natural entity; she is a nurturing mother who sustains all life. The human being residing on this earthly plane feels a sense of guilt even for the slightest touch upon their mother. Therefore, each morning, they offer prayers to Mother Earth, seeking forgiveness for their unintentional transgressions.

समुद्रवासने देवी पर्वतस्तानमण्डले विष्णुपत्नी नमस्तुभ्यां

पादस्पर्शक्षमस्वमे॥

The depiction of the earth's form in the Rig-veda is profoundly intriguing. It is often discussed in conjunction with heaven, forming a dual concept known as Rodasi and Dyavaprithivi. While there is a single hymn dedicated to Prithivi (the earth), six hymns are devoted to Dyavaprithivi. In Vedic tradition, Prithivi is revered as the mother, and Dyau (heaven) as the father, together constituting a harmonious pair. A beautiful verse from the Rig-veda poetically expresses this relationship: 'Heaven is my father, the atmosphere my navel, and the vast earth my mother.' The union of heaven and earth is symbolized by the terms Matara (mother), Pitara (father), and Janitara (parents). They sustain all living beings and are considered the progenitors of the gods. Described as a goddess, the earth holds a significant place in Rig-vedic literature.

In the Atharvaveda, there exists a significant hymn comprising 63 verses that eloquently describes the earth. Known as the Bhumisukta or Prithivisukta, this hymn reflects the environmental consciousness of the Vedic seers. Through their profound understanding, they attribute various names to the earth. She is called Vasudha, symbolizing her role as the repository of all wealth. Additionally, she is referred to as Hiranyavaksha, signifying her golden bosom, and Jagato Niveshani, denoting her status as the abode of the entire world. Importantly, the earth's significance extends beyond humanity, encompassing all creatures.

JALA (WATER)

Water, with its cosmic significance, plays a vital role in our lives. It stands as the **essential principle of creation**. In the beginning, everything existed as formless water. Over time, water has been recognized not only as a life-giving liquid but also as one of the fundamental elements within the microcosmic organism.

Indeed, water requires no proof of its indispensability to life—it **is life itself**. The very word “**jivana**” (meaning life) is closely associated with water. The health of an individual greatly depends on the type of water they consume. If the water is impure, it can lead to various diseases.

Water is indispensable for all life forms. According to the Rig-veda, water manifests in five distinct forms within the human environment:

- Rain water (*Divyah*)
- Natural spring (*Sravanti*)

- Wells and canals (*Khanitrimah*)
- Lakes (*Svayamjah*)
- Rivers (*Samudrarthah*)

In addition to the classifications found in the Taittiriya Aranyaka, Yajurveda, and Atharvaveda, water is further categorized into various types, including drinking water, medicinal water, and stable water. The Chandogya Upanishad expounds on the qualities of water, emphasizing its role as a source of joy and essential for maintaining a healthy life. Water serves as the immediate cause of all organic life forms, including vegetation, insects, birds, animals, and humans. Remarkably, even mountains, the earth, the atmosphere, and celestial bodies are interconnected with water. The cyclical nature of water is described: it flows from the ocean to the sky and returns to the earth as rainwater. Rain, symbolized by the deity Parjanya, is revered. The Rig-veda recounts the legendary battle between Indra and Vritra, which holds multiple interpretations. One perspective views it as a struggle for control over water. Indra, known as Apsu-jit (the conqueror of waters), contends with Vritra, who encircles the waters. Vritra, holding the rain and covering the waters, is defeated by Indra wielding his thunderbolt, the Vajra. This myth mirrors natural phenomena occurring in the aerial space. Through Indra's efforts, the seven rivers flow, emphasizing the importance of maintaining an uninterrupted water supply—a desire shared by humanity. The Vedic seers recognize water as nectar, the source of all plant life, and a bestower of good health. Water purifies and eradicates various ailments. The cultural tradition of riverbank pilgrimages likely stems from the concept of water purification. Ancient Indians, aware of water's vital role in life, diligently preserved its purity, avoiding pollution. The Manusmriti underscores the need to keep water clean, while the Padma Purana sternly warns that those who pollute ponds, wells, or lakes face dire consequences.

In India, throughout its historical and cultural evolution, the environment has held a sacred and revered position. This reverence dates back to both the **pre-Vedic** and **Vedic eras**. The element of “**water**” has been particularly significant in this context.

In the **Rigveda**, water is not merely a physical substance; it is also a **spiritual symbol**. The Rigveda identifies water as the **first abode** or **ayana** of **nara**, the Eternal Being. This recognition elevates water to the status of **pratishtha**, the underlying principle or the very foundation of the universe itself.

Furthermore, the **Satapatha** texts reinforce this perspective. They emphasize the importance of maintaining harmony with nature, including water. The texts caution against polluting rivers, ponds, and wells, and they warn against overexploitation of natural resources. In the Vedic worldview, every aspect of nature—be it water, air, birds, animals, plants, sky, earth, or mountains—is associated with divinity. These elements are to be worshiped, protected, and preserved.

In summary, the Vedic tradition in India reveres water as a sacred and essential component of existence, emphasizing the need for environmental conservation and balance. It teaches that humans should coexist harmoniously with nature, recognizing the interconnectedness of all living beings and the divine presence within the natural world.

Water is said to be *pratishtha*, the underlying principle, or the very foundation of this universe. In Satapatha, it is said:

“Water may pour from the heaven or run along the channels dug out by men; or flow clear and pure having the Ocean as their goal...In the midst of the Waters is moving the Lord, surveying men’s truth and men’s lies. How sweet are the Waters, crystal clear and cleansing...From whom... all the Deities drink exhilarating strength, into whom the Universal Lord has entered...”

Early *Vedic* texts also identify “water” as a manifestation of the feminine principle, commonly as *Sakti*. *Rigveda* said:

“I call the Waters, Goddesses, wherein our cattle quench their thirst; Oblations to the streams be given...”

It is said that the primordial cosmic man or Purusa was born of the Water. Later Vedic texts identify that, “*Water is female...*” (Satapatha). Philosophically, *vedas* bestows a sacred character on water, identified therein, a medium to attain spiritual enlightenment. *Vedas* identify water as the very essence of spiritual sacrifice, or as stated in *Atharvaveda* “*the first door to attain the divine order*”. The use of water in daily life as well as in ritualistic ceremony was referred to as spiritual sacrifice, a process of attaining eternity. *Rigveda* said:

“...Whatever sin is found in me, whatever wrong I may have done, if I have lied or falsely sworn, Waters remove it far from me...”

Besides, philosophical and spiritual status given to environment including water, in ancient vedic scriptures, even on the issue of hydrology, we find a lot of material in *vedic* literature showing that since ancient time science of water was well developed in ancient India. Certain concepts of modern hydrology, we find, scattered, in various verses of *Vedas*, *Puranas*, *Meghmala*, *Mayurchitraka*, *Vrhat Sanhita* and other ancient scriptures. Our forefathers in *Vedic* age, had developed the concept that water gets divided into minute particles due to the effect of sun rays and wind. In *Puranas*, at various places, it is alluded that water cannot be created or destroyed, and that, only its state is changed through various phases of hydrological cycle. Evaporation, condensation, cloud formation, precipitation and its measurements were well understood in ancient India as we find from the study of *Vedic* and *Puranic* scriptures. During the time of *Kautilya*, contrivances to measure rainfall were developed which had the same principle as that of modern hydrology, except that weight measures were adopted instead of modern linear measurement of rainfall.

The science of water in India is ancient but unfortunately forgotten in the last few centuries. Indian sub-continent was invaded and ruled by people from other areas having different concepts, convictions and religious culture. The ancient scientific knowledge went in dormancy. The invaders treated inhabitants in a very crude manner, did not hesitate in destroying treasure of knowledge given in this sub-continent by great Saints and Rishis, and compelled common folk to believe that their cultural wealth was a myth. Huge collection of research and knowledge stored in educational institutes of repute were set on fire or damaged otherwise. Volumes of ancient knowledge treasure were also taken away by later invaders and rulers. The resultant subsequent unscientific, unmindful and irrational massive excavation, extraction and consumption, not only of surface water, but ground water, in the name of development of civilization, has created a situation where in some parts of country, even drinking water is not available or has become a serious scarcity.

Availability of water in all the areas is not uniform, whether it is surface water or ground water. Water covers about 71% of the earth surface. It comes to about 333 million cubic miles on the planet. In a U.S. Geological Survey's Water Science School, taking data source from Igor Shiklomanov's chapter "World freshwater resources" in Peter H. Gleick (editor), 1992, availability of earth water has been shown in three parts:

i.) For total global water available, 96.5% is in oceans, 0.9% is other saline water and only 2.5% is fresh water.

ii.) For 2.5% fresh water available, further division is that 68.7% thereof is in the form of glaciers and ice caps, 30.1% is ground water and only 1.2% is surface or other fresh water.

iii.) For 1.2% surface/other fresh water available, again it is in different forms, i.e. 69.0% as ground ice and permafrost, 20.9% lakes, 3.8% soil moisture, 2.6% swamps and marshes, 0.49% rivers, 0.26% living things and 3% in atmosphere.

In other words, as a rough estimate, out of total water supply of about 333 million cubic miles (1386 million km³), more than 97% is saline. Only a small percentage, i.e., 2.5% fresh water is available. There against also, substantial part, i.e., 68% is locked up in ice and glaciers. A very small amount is available as surface water for human uses, i.e. 1.2%, which comes around 22300 cubic miles (93100 km³) which is about 0.007% of total water available on earth. These figures should not surprise us. Despite a very small fragment of water, available on surface, is consumable by human being, yet rivers are source of most of the water, the people use.

AGNI (FIRE)

Fire holds a prominent place in many mantras of the Atharva Veda, especially when invoked to thwart enemies. In **Atharva Veda III.1.1**, it is explicitly stated that the **wise Agni (fire)** should recognize our adversaries and consume them. The fervent prayer seeks Agni's assistance in bewildering the enemy forces and ensuring their destruction.

*अग्निर्णः शत्रुम्न प्रतिदन्नाभिशस्तिमारतिम्/.
स सेनाम् विद्वान मोहयतु परेषां निर्हस्तां आ कृष्णवज्जातवेदाः*

Fire is described as the giver of long life:

आयुर्दा उग्रे जरसं वृणानो घृतप्रतिको॥

VAYU (AIR)

Air, the next elemental force, received great attention from the Vedic people. The importance of **pure air** and **ventilation** cannot be overstated, and the Vedic seers were keenly aware of its

significance. They invoked **Vāyu**, the deity of air, to maintain such purity that no impurities would dare enter the atmosphere.

In **Atharva Veda IV.5.25.1**, it is explicitly stated that **wind** serves as the **support for all beings**. Another mantra praises both वायुः सावित्री च, acknowledging their protective presence that envelops the entire world. May they liberate us from sin.

**वायुः सवितुर्विदधानि मन्महे यावतमन्वद् विशायौ/.
यौ च रक्षायः यौ विश्वस्य परिभू बुभवयुस्तौ नो मुञ्चत मंहसः**

The observer space serves as the dwelling place for matter particles, while light space accommodates energy. The intermediate space, known as ‘Antariksha,’ is associated with fields. In Vedic tradition, the principal deity of Antariksha is Vayu. The Jaiminiya Brahmana states, ‘Vayu brightens within Antariksha.’ Field, being another manifestation of energy, is described in the Yajurveda as having ‘penetrating brightness.’ The Shatapatha Brahmana further clarifies the meaning of Vayu through the following mantra: ‘The sun and the entire universe are woven together by a string. That very string represents Vayu.’ This verse underscores that Vayu transcends mere air and encompasses a deeper significance.

AKASH (EARTH)

In the Atharva Veda, **heaven** is symbolically depicted as a **cow**, and the **sun** as her **calf**. Through this celestial bond, heaven bestows blessings upon us: food, strength, desires fulfilled, abundant life, nourishment, and wealth. Additionally, the quarters of the sky are likened to cows, with the **moon** as their calf.

The Vedic seers invoke deities such as **Mitra**, **Varuṇa**, and **Vivasvān**, along with planetary influences from **earth**, **air**, and **heaven**, seeking their favor. Powers associated with the moon, including **Rāhu** and the **Ādityas**, are also prayed to be benevolent. Even **Death** and the **Rudras** receive supplications for favor.

The **sunrise**, with its far-seeing gaze, is invoked for blessings. The four quarters of the sky are prayed to be auspicious. The **firmly seated mountains**, the **rivers**, and the **waters** are also sought to be favorable.

In this harmonious environment, people aspire to live for a hundred autumns, thriving and abiding in well-being.

पाश्येमः शारदः शतं/जीवेम शारदः शतं/.
 भुयेमः शारदः शतं/पुंमः शारदः शतम्
 /भूयसीः शारदः शतात्//

Contemporary environmentalists frequently address sound or noise pollution. Interestingly, there exists a connection between ether and sound. Sound waves traverse the sky at various frequencies. While scientists can observe the sky within the vicinity of Earth, the Taittiriya Upanishad sheds light on two distinct types of ether: one existing within the body and the other outside it. The ether within the body is considered the seat of the mind.

An insightful piece of advice from the Yajurveda emphasizes respecting the sky and avoiding its pollution: ‘Do not harm anything in the sky, nor disturb anything in Antariksha.’ The sun illuminates the celestial realm (Dyuloka), providing us with light. These sunrays fortify our inner vitality and are essential for our existence. Thus, the significance and conscientious treatment of ether find explicit mention in Vedic verses.

CONCEPT OF MIND ‘MANAS’

Within the Vedas, numerous prayers beseech the divine to safeguard the mind from negative thoughts and harmful ideation. Notably, the Shivasankalpa Sukta from the Yajurveda emphasizes this aspect. Recognizing the potential havoc that polluted minds may wreak, our ancient sages fervently prayed for minds imbued with noble intentions. Logicians acknowledge the mind (Manas) as one of the fundamental elements in the universe. Despite not being a direct focus of modern environmental science, the study of the mind remains relevant in the context of cultural environmental consciousness as observed by the Vedic seers.

ANIMALS AND BIRDS

Animals and birds are integral components of the natural environment. In Hinduism, the **reverence for animals** is deeply ingrained. The belief in **ahimsa**, or non-violence, extends to all living beings. According to this principle, no creature should be harmed, whether human or animal. The doctrine of ahimsa has led many Hindus to practice **vegetarianism**. Additionally,

Hindu mythology recognizes **fourteen avatars** of the gods, such as Matsya, Kurma, Varaha, and Nrisingha, which are believed to manifest in divine forms within animals, ensuring their protection. The cobra is **worshipped during Nagpanchami**, and cows receive adoration during the **Balabhadrapuja**. Furthermore, the Vedas **prohibit the killing of certain animals and birds**, especially those that serve as scavengers by feeding on carcasses and filth. As we navigate the present, it remains essential to follow the ancient roots of compassion and respect for all life.

“किंचिदेव तु विप्रयाय दद्यादस्थिमितान् वधे। अनस्थानं चैव हिंसयः प्राणायामेन शुध्यति।” (Manu - samhita-11/142)

Yajurveda expressed its thought that animal should be safe, protected and healthy. The

Shlokas reads as under:

(i) “भूभुवः सुजाः जा भः या सुवीरो वीरैः सुपोषः पोषैः। नयं जां मे पाह्यं यः प्रश्नुमे पायथयं पतुं मे पाह्यं ॥३७॥” (Yajurveda, 3/37)

Hindi Translation -

मनु य को ई वर क उपासना व उस क आ ा के पालन का आ य लेकर उ म-उ म नयम से वा उ म जा, शूरता, पुं ट आ द कारण से जा का पालन करके नर तर सुख को स ध करना चा हये॥३७॥

English Translation -

“O God, friendly to the wise, do Thou protect my offspring. O worthy of praise do Thou protect my cattle. O God, above all suspicion, protects my food. O God through Thy grace, in unison with the three life-winds, Pran, Apan and Vyan, may I be rich in offspring, well-manned with men, a hero with the heroes, and strong with wise and invigorating deeds.

PLANTS AND HERBS ‘OSHADHI

The Vedic literature provides detailed insights into the origin and significance of plants. Within the Rigveda, the Aranyani Sukta pays homage to the forest deity, Aranyani—the queen of the forest. She is lauded not only for her benevolence toward humanity but also for her inherent charm. The Rigveda emphasizes that forests should thrive with lush greenery, including trees and plants.

The Oshadhi Sukta, also from the Rigveda, addresses plants and vegetables as maternal figures: ‘O Mother! Your birthplaces are countless, and your shoots are innumerable.’ According to Vedic wisdom, plants predate the creation of animals on Earth. The Chandogya Upanishad further elaborates on the role of water in generating plants, which, in turn, provide sustenance.

The Atharvaveda enumerates specific names of Oshadhis (medicinal plants) along with their values, later serving as a crucial resource for Ayurveda. Additionally, the Rigveda instructs that forests must not be destroyed. The Atharvaveda acknowledges the profound connection between plants and the Earth, describing the Earth as the custodian of creation, housing forests, trees, and herbs.

Plants, as living entities, play a vital role in the ecosystem. A Puranic quote underscores their significance: ‘One tree is equivalent to ten sons.’ The Atharvaveda offers prayers for the continuous growth of herbs, urging the Earth to nurture what is unearthed. Another prayer seeks protection for the Earth’s vital essence.

Intriguingly, the Atharvaveda refers to the ‘Avi’ element, associated with the greenness of trees. Scholars commonly interpret ‘Avi’ as ‘chlorophyll,’ denoting its role as a protector. Thus, the Vedic seers recognized plants as integral components of the environment and advocated for their preservation.

The ancient Vedic civilization maintained a profound connection with the natural environment. Their belief in the sacredness of nature and the interconnectedness of all living beings is evident in the Vedic literature, including texts like the R̥gveda and the Atharvaveda. These scriptures contain hymns and prayers dedicated to various natural elements such as the sun, sky, rivers, and plants. Additionally, Vedic rituals and ceremonies, such as the Agnicayana and the Aśvamedha, were closely intertwined with the natural world. Notably, Vedic societies upheld a strong tradition of conservation and sustainable use of natural resources, exemplified by practices like shifting cultivation and the establishment of protected forests.

“यौः शांतिं तं तं रं शांतिं तं पृथ्वी शांतिं तुरापुः शांतिं तुरोषधयुः शांतिं तं। वन पतयुः
शांतिं तु व वे देवाः शांतिं तु म शांतिं तुः सव शांतिं तुः शांतिं तरेव शांतिं तुः सा मा शांतिं तरे ध॥१७॥”

(Sukla yajurveda 36-17)

Hindi Translation -

“हे मनु यो ! जो (यौः, शांतिः) काशयु त पदाथ शांति तकारक (अ त र म) दोन लोक के बीच
का आकाश (शांतिः) शांति तकार (पृथ्वी) भूमि (शांतिः) सुखकार न प व (आपः) जल वा ण
(शांतिः) शांति तदायी (ओषधयः) सोमलता आ द ओष धयाँ (शांतिः) सुखदायी (वन पतयः) वट आद
वन प त (शांतिः) शांति तकारक (व वे, देवाः) सब व वान ्लोग (शांतिः) उप व नवारक (म)
परमे वर वा वेद (शांतिः) सुखदायी (सवम) ्स पूण व तु (शांतिः) शांति तकारक (शांति तरेव)
शांति तह (शांतिः) शांति त (मा) मुझको (ए ध) ा त होवे (सा) वह (शांतिः) शांति त तुम लोग के लये
भी ा त होवे ॥१७ ॥”

English Translation -

“May sky be peaceful. May atmosphere be peaceful. May Earth be peaceful. May waters be peaceful. May medicinal herbs be peaceful. May plants be peaceful. May all the learned persons be peaceful. May God and the Vedas be peaceful. May all the objects be peaceful; May peace itself be peaceful. May that peace come unto me.”

The concept of environment, since Vedic era till date is almost consistent. Vedic view of environment is well defined in one verse of Atharavaveda where three coverings of our surroundings are referred as Chandamsi. Wise utilize three elements variously which are varied, visible and full of qualities. These are water, air and plants or herbs. They exist in the world from the very beginning. They are called as Chandamsi meaning ‘coverings available everywhere.’ The Sanskrit Shloka reads as under:

“ीणि छ दांसि कवयो िव येतिरे पु पं दश तं िव च णम।

आपो वाता औषधय ता येकि मन् भुवन आप तांनि ॥” Ibid 18.1.17

Hindi Translation

व वान ्लोग अनेक कार उपकार जल, वायु, और ओष धय आ द के गुण को व वान म उपदेश
करकेलाभ उठाव और उनके कता परमा मा क म हमा जानकर उ न त कर ॥

English Translation

“Sages and scholars of Shastra and Vedas study and foster three joyous gifts of nature and divinity, versatile in form, sensitively satisfying and universally illuminative for body, sense and mind and the soul. For this purpose, they are: waters for taste and sweetness, winds for

energy of prana, and herbs for strength and alleviation of pain. And all these three are vested and concentrated in the same one source, Nature.”

ENVIRONMENTAL PROTECTION IN PURANAS

During the ancient Puranic period (from 320 BC onwards), a widespread belief emerged that each tree had its own divine presence. People would offer water to trees and encircle them with sacred threads to safeguard their well-being.

- **Narsingh Purana:** This text personifies trees as manifestations of God.
- **Varaha Purana:** Advocates regular tree planting as a pathway to attaining heaven.
- **Matsya Purana:** Considers planting a single tree equivalent to leaving a legacy of ten sons.
- **Vishnu Purana:** Emphasizes that God is pleased when humans refrain from harming non-speaking creatures or animals.

These ancient teachings highlight the reverence for nature and the interconnectedness between humans, trees, and the environment.

In ancient texts such as the Padma Purana and Kama Purana, it is asserted that trees like peepal, bel, her, and neem are divine abodes and should not be cut down. The Durga Saptashati emphasizes that as long as the earth has mountains, forests, and trees, the human race will endure. The Charaka Samhita recognizes the destruction of vegetation as a potential cause of drought. Additionally, the Padma Purana warns that those who sacrifice cattle are destined for perdition. In the Manusmriti, cruelty towards animals is unequivocally condemned. Furthermore, these texts advocate for the judicious use of natural resources to maintain ecological balance.

A Quote from Vishnu Purana:

“As the wide –

Spreading Nargodha (Sanskrit for Banyan) tree is compressed in a small seed, so at the time of dissolution, the whole universe is comprehended in thee as its germ; as the Nargodha germinates from the seed, and becomes just a shoot and then rises into loftiness, so the created world proceeds from thee and expands into magnitude”.

The Varah Purana says, “One who plants one Peepal, one Neem, one bar, ten flowering plants or Creepers, two Pomegranates, two Oranges and five Mangos, does not go to hell”.

References of worship in nature and reminders for protection and respect thereof, we find in other texts like *Upnishads* etc. *Vishnu Purana* contains the words, “*As the wide-spreading nargodha (Sanskrit for banyan) tree is compressed in a small seed, So, at the time of dissolution, the whole universe is comprehended in Thee as its germ; as the nargodha germinates from the seed, and becomes just a shoot and then rises into loftiness, so the created world proceeds from Thee and expands into magnitude*”. Varaha Purana says, “*One who plants one peepal tree, one neem tree, ten flowering plants, two pomegranate trees, two orange trees and five mango trees, he does not go to hell.*”

ANCIENT ENVIRONMENT

Environmental awareness has deep roots in ancient Indian culture. Amidst immense diversity, the relationship between culture and ecology was integral to ancient Indian societies. Hinduism, a major religion in India, reveres the Earth profoundly. According to the **Vishnu Puran**, the Goddess Earth was once imprisoned in the netherworld by a demon, disrupting the natural order. To rescue her, Lord Vishnu incarnated as the **Varaha Avatar**, a boar in ancient Hindu mythology. In a fierce battle, Lord Vishnu defeated the demon and carried the Goddess Earth on his tusk, allowing her to float freely upon cosmic waters.

Ancient Indian literature, spanning thousands of years, holds profound insights into environmental phenomena. Whether maintaining ecological balance, understanding weather cycles, or protecting nature, Vedic seers possessed wisdom that continues to shape India’s social fabric and sustainable policies. The principles of ecological harmony established by the Vedic, Puranic, Jain, and Buddhist traditions remain relevant today. The **Prithvi Sukta** in the **Atharvaveda**—the oldest manifestation of environmental concern—declares, “*matabhumih putroham Prithviah*” (earth is my mother, and I am her child), emphasizing the Vedic people’s allegiance to nature and invoking divine intervention for its bliss and protection.

Ancient Indian texts contain lot of material reflecting concern of Vedic people for environmental issues. They professed environmental protection in the form of mythology and traditions so as to give broader enforceability, acceptability and executability of the wisdom and vision of Vedic sages. Some Sanskrit shalokas which we reproduce below, are selfevident

to demonstrate how important nature and environment was for Vedic people and they left no stone un-turned for making it mandatory for the people to follow life stream which concentrates on protection of environment:

(i) “भूमिरापोऽनलो वायुः खं मनो बुद्धिरेव च।

अहङ्कार इतीयं मे भिन्ना कृतिर धा॥”

Hindi Translation by Tribunal -

पृथ्वी, जल, अग्नि, वायु और आकाश तथा मन, बुद्धि और अहंकार - यह आठ कार से विभक्त हैं मेरी कृति है॥

English Translation -

Earth, water, fire, air, space, mind, intellect, and ego-these are eight components of my material energy.

(ii) “संस्मृतं दूषितं न या लोकः मानवजीवनम् ।

न कोऽपि कश्चिद् नाशं, कुर्यादथ यस्मिन् ये ॥”⁴⁹

Hindi Translation -

संसार दूषित न हो। मानव जीवन सुरित रहे। धन कसि के लिए (धन प्राप्ति के लिए) कोई भी किसी का (कृति का) नुकसान न करे।

English Translation-

“Do not pollute the whole world. May god human life be safe. No one should harm anyone (of nature) for the accomplishment of wealth.”

(iii) “पया वरणनाशेन न यित्तु सव ज तवः ।

पवनः दुतां याति कृतिवृत्तायते ॥”

Hindi Translation -

हमारे पया वरण के दूषण के कारण सभी प्राणी नष्ट होते हैं, हवाएं खराब होती हैं और कृति शून्यतापूर्ण होती है।

English Translation-

“Due to pollution (destruction) of our environment, all beings are destroyed, the winds get vicious and the nature becomes hostile.”

(iv) अथ वरुणं तरुमृतम सुभेषजमपामुत शतये। देवाभवतवाजिनः ॥19॥

Hindi Translation –

जल म अमृत है, जल म औषिध है । हे ऋषि जन, ऐसे े जल क शंसा अथा त् तुति करने म शी ता
बरत ।

English Translation -

*“There is nectar in water, there is medicine in water, O sages, be quick to praise such
elevated water.”*

Ancient Wisdom and Modern Challenges

In ancient times, societies held deep reverence for nature’s power and its inherent unpredictability. Observing natural patterns and understanding the risks associated with environmental phenomena, they embedded morals and values aimed at protecting the Earth.

In contrast, modern society rests on the dual pillars of mechanization and individual freedom. When discussing the environment, it’s essential to address strategies that reinforce individual ethics and responsibilities. Simultaneously, integrating ecological and sustainability criteria into decision-making processes through informed choices and moral considerations is crucial.

In ancient India, wise sages and Rishis were custodians of a highly evolved civilization. They possessed profound awareness of the critical significance and vulnerability of the natural environment. Considering physical, chemical, biological, and social aspects, their holistic approach aimed for peaceful coexistence with all living organisms and harmony with the physical surroundings.

The ancient masters skillfully imparted their value-oriented teachings through rituals, taboos, and totems. People embraced these practices as spiritual duties, fearing the consequences of violating them. Over time, these practices became enduring traditions, ensuring harmonious coexistence between humanity, other living beings, and the environment.

Precious Indian heritage in the form of *Vedas* is now universally accepted. *Vedas* have knowledge of all types and Fundamental *Vedic* views revolve around the concept of nature and life. *Vedas* contain several references on environment conservation, ecological balance, and weather cycle. *Vedas* persists on safe-guarding the habitation, proper afforestation, and non-pollution. In fact, man is forbidden from exploiting nature. He is sought to live in harmony

with nature and recognize that divinity prevails in all elements including plants and animals. Isha Upnishad mantra 1 said,

**“ईशावास्यमिदं सर्वं यमकिञ्च जगकयां जगत् ।
तेन कयक्तेन भुञ्जीथा िा गृधः िस्य मस्वद्धनि ॥ १ ॥”**

(God pervaded the entire universe. Enjoy all of nature as gifts from God, but with a spirit of renunciation! Do not be attached to them. Do not covet the wealth of others. Control greed.) (Isha Upnishad Mantra 1)

To give an obligatory kind of force to the above concept, concept of *Dharma* was introduced and various natural elements were identified with different deities. *Rig Veda* says “thousand and hundreds of years if you want to enjoy the fruits and happiness of life, then take up systematic planting of trees.” The term pollution did not exist at that time but they call, at that time, poisoning of environment. In ancient time, the wise man/sages believed that five great elements (space, air, fire, water and earth) constitute the environment and are all derived from “*prakriti*”, the primal energy and our human body is composed of these and related to these five elements and connects each of the elements to one of the five senses. *Rig Veda*, 6:48:17 says, “Do not harm the environment; do not harm the water and the flora; earth is my mother, I am her son; may the waters remain fresh, do not harm the waters”. “Do not cut trees, because they remove pollution.”

The emphasis of Indian ancient Hindu scriptures is that human beings cannot separate themselves from natural surroundings and earth has the same relationship with man as the mother with her child. Planting and preservation of trees are made sacred in religious function. Kautilya’s *Arthashastra*, an ancient Indian treatise on administration, economic policy, taxation, diplomacy, planning and other dimensions of statecraft etc. provides lot of knowledge about environment and its conservation. It describes the maintenance of public sanitation and preservation of environment, forest and wildlife. Even in the affairs of the State, the Administration and the Ruler were directed to preserve and promote environmental welfare. In the *Arthashastra*, Kautilya suggests the need to develop *Abhayaranya* or *Abhayavana*, forest and animal sanctuaries, where trees and animals would both reside free from the fear of slaughter. Kautilya also prescribed the post of a forest superintendent and penalties for poaching and causing damage to forests, especially productive ones. *Arthashastra*’s directives on water indicate that it was regarded as a “Collective, Not a Private Commodity” and was

considered extremely precious. Fines were also prescribed for several acts that adversely affected water bodies, for obstructing or diverting a water course and for damaging embankments etc.

Ancestors of this sub-continent, in ancient time, were the most outspoken defenders of nature's balance. Nature was sacred, to be respected and cared for. This wisdom has continued till recent times also. Dr. Abdul Kalam said, *"Ancient India was a knowledge society that contributed a great deal to civilization. We need to recover the status and become a knowledge power. Spirituality must be integrated with education. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavour will bring peace, prosperity, and bliss to the nation"*.

The relationship of mankind and environment was well-understood, recognized and propagated in ancient India by our fore-fathers. Protection and cleaning up of environment were the essence of *Vedic* culture in Hindu philosophy. Forest, trees, and wildlife protection held a place of special respect. Cutting of trees was prohibited and punishment was prescribed for such acts.

Unfortunately, with Western concept of development Indian great knowledge and respect to environment lost its position and unmindful development particularly, so called industrial development without respecting nature showed its evil. More particularly, the same was realized during Second World War the power gained by Europeans in Indian sub-continent sought industrial development in terms of economic growth in most crude manner. But impact of economic growth on environment attracted attention of the world in a few decades after Second World War Different theories were promulgated and propagated, sometimes to give supremacy to developed countries *vis-a-vis* the developing and under-developed countries. An attempt was made to put more blame on developing and under-developed countries on account of economic inferiority. In 1955, an approach by Simon Kuznets called as Environment Kuznets Curve (hereinafter referred to as 'EKC') was sought to be enforced.

Based on the idea that environmental quality first deteriorates with growth and then improves—that economic growth is both the cause and solution to environmental harm. For this theory, he was awarded Nobel Prize in 1971. The approach was later improved by some other researchers and castigated by some others.

India's tradition of environmental protection spans centuries, and Indians hold deep respect for the natural world. Even in modern times, with unwavering devotion, they worship various forms of nature. Early Indians lived in close symbiosis with their surroundings, recognizing the sacredness of trees like Tulsi, neem, pipal, bel, vat, sal, and banana. These trees were revered not only for their religious significance but also for their medicinal properties.

Indian thinkers attributed religiosity to plants, understanding their role in maintaining ecological balance. The Indian civilization has long been hailed as an 'eco-friendly' civilization. In the past, there existed a profound awareness of the need to strike a harmonious balance in the interaction between humans and their environment, avoiding any harm to humanity itself.

Ancient Indian philosophy and literature contextualized human existence in relation to the environment. Beyond trees, Indians worshipped mountains, land, water, rivers, animals, and birds. Millions recite Sanskrit mantras daily to honor their rivers, mountains, trees, animals, and the Earth.

The famous Chipko movement, where people hugged trees to prevent deforestation, exemplifies Indian environmental leadership and love for nature. The river Ganga, considered the most sacred river in India since time immemorial, remains a symbol of reverence. Mountains like Mount Kailash and Giri Gobardhan, worshipped in ancient times, continue to be revered today.

THE PREHISTORIC SOCIETIES

1. GREEK

Ancient Greek culture is renowned for its contributions to **government, art, architecture, philosophy, and sports**. Often referred to as the “**cradle of culture**,” these cultural movements and ideas laid the groundwork for **modern Western society** and the establishment of **democracy** as an institution. These concepts were not only admired but also adopted and popularized by influential figures such as **Alexander the Great** and the **Romans**. The Romans played a pivotal role in disseminating Greek culture across the globe.

Greek culture has deep roots that thrived not only within Greece itself but also across the Greek mainland and the Aegean Islands. The decline of earlier cultures during what is known

as the **Dark Age** paved the way for the emergence of Greek culture.

Development occurred during distinct periods: the **Geometric, Orientalizing, and Archaic** eras, spanning from **900 BCE to 480 BCE**. During this time, city-states grew in population, and **Pan-Hellenic traditions** took shape. Greek values found expression in art and architecture. Subsequently, the **Early, High, and Late Classical** periods unfolded in Greece, spanning from **480 BCE to 323 BCE**.

Greece thrived during these epochs. Athens, in particular, experienced its **Golden Age** under the leadership of **Pericles**. However, the **Hellenistic period** marked a transition as Greek culture gradually became a subset of **Roman hegemony**. This period, spanning from the death of **Alexander the Great** in **323 BCE** to the Greek defeat at the **Battle of Actium** in **30 BCE**, witnessed the spread of Greek cultural influence across the Mediterranean.

Greek people, collectively, take immense pride in their country as the birthplace of European civilization. They also cherish their rich history, cultural heritage, and significant contributions to literature, art, philosophy, and politics.

2. ROMAN

Ancient Rome, once the center of one of history's largest and most powerful empires, conquered the entire Mediterranean region. Its heart lay in what we now know as **Italy**, but its influence extended to the Middle East, Northern Africa, and Western and Central Europe. The Roman Empire reached its zenith between **100 and 200 A.D.**, but thereafter, it began to decline. One significant reason was its unwieldy size, making effective governance challenging. The Western Roman Empire fell in **476 A.D.** due to invasions by Germanic tribes, while the Eastern Roman Empire persisted for centuries.

The decline of the **Roman Empire** has been associated with environmental factors, as noted by historians. During the centuries when the empire was established and flourished, the climate was characterized by warmth, ample rainfall, and stability across much of the territory the Romans conquered. This period, known to climate scientists as the "**Roman Climate Optimum**," spanned from approximately **200 BC to AD 150**. In an agricultural economy, these favorable conditions provided a significant boost. The population grew, particularly in

city centers, and there was sufficient food to sustain everyone. However, a stark divide persisted between the lifestyles of the elites and the peasants or workers.

Around the middle of the second century, the climate became less predictable. The crucial annual **Nile flood** became erratic, and droughts and severe cold spells became more frequent. The once-optimal climate conditions during the Roman Empire gradually waned.

Additionally, the Roman desire for conquest acted as a catalyst for **deforestation**. Whether for survival, everyday activities in cities (such as heating and building houses), or military occupation, Rome's utilization of nature's resources especially wood was often inconsiderate.

ANCIENT PHILOSOPHERS AND THEIR VIEWS ON THE ENVIRONMENT

Ancient philosophers grappled with fundamental questions about the natural world, ethics, and humanity's place within it. Here are some key perspectives:

Pre-Socratic Thinkers:

The **Pre-Socratic philosophers**, a group of ancient Greek thinkers who lived before the time of Socrates, were deeply intrigued by the natural world and its underlying principles. Their philosophical inquiries laid the groundwork for Western philosophy and natural science.

Historical Context:

The Pre-Socratic era spanned the 6th and 5th centuries BCE, a time of significant change in ancient Greece. City-states were rising, trade was flourishing, and intellectual curiosity was on the ascent. These thinkers sought to understand the nature of reality, the universe, and the fundamental elements that shaped existence.

1. The Milesian School:

The **Milesian School**, centered around the city of **Miletus in Ionia**, played a pivotal role in **Pre-Socratic thought**. Its three prominent members—**Thales of Miletus**, **Anaximander**, and **Anaximenes**—shaped early Greek philosophy with their distinct views on the fundamental substance of the cosmos.

- **Thales of Miletus**, a trailblazer, believed that **water** was the **essential building block** of all matter. His intellectual prowess extended beyond theory; he even **successfully predicted a solar eclipse**. Thales's legacy lies in his transition from mythological explanations to natural philosophy.
- **Anaximander**, another Milesian thinker, introduced the concept of the **“boundless” or “infinite”** as the underlying principle. His philosophical inquiries transcended the tangible, exploring the very fabric of existence.
- **Anaximenes**, the third member of the school, proposed that **air** was the **fundamental substance**. His ideas contributed to the rich tapestry of early Greek thought, emphasizing the interconnectedness of the natural world.

2. Heraclitus and Change:

Heraclitus, the enigmatic philosopher of ancient Greece, left an indelible mark on our understanding of existence. His cryptic writing style and reclusive demeanor added to the mystique surrounding his teachings. **Emphasizing change as the sole constant**, Heraclitus famously declared, “You cannot step into the same river twice.” This profound statement encapsulates his philosophy—a philosophy that revolved around the dynamic, ever-shifting nature of reality.

For Heraclitus, fire held a central place in his cosmology. To him, fire symbolized more than mere combustion; it represented transformation and flux. Just as flames consume and renew, so too does existence perpetually evolve. Heraclitus's insights continue to resonate, urging us to embrace change, seek wisdom, and recognize the eternal dance of creation and dissolution.

3. Cosmology and Environment:

The Pre-Socratics' interest extended beyond cosmology to encompass the workings of the natural world. These early thinkers, situated before the classical era of Greek philosophy, were curious observers of the universe. Their inquiries spanned not only the grand cosmic questions but also the intricate mechanisms governing everyday phenomena.

They sought naturalistic explanations, moving away from mythological interpretations. Rejecting the prevailing mythopoetic narratives, the Pre-Socratics sought rational and

empirical understandings. Their quest for underlying principles led them to explore the fundamental elements earth, water, air, and fire as the building blocks of reality.

Their observations of the environment and nature influenced their philosophical views.

Whether contemplating the ceaseless flow of rivers or the transformation of seasons, these philosophers drew inspiration from the natural world. The changing tides, the growth of plants, and the patterns of celestial bodies all informed their metaphysical musings.

While their focus was primarily on physical elements, they also considered spiritual and aesthetic aspects. Beyond the tangible, they grappled with questions of existence, ethics, and beauty. Their intellectual endeavors laid the groundwork for subsequent philosophical traditions, leaving an indelible mark on the evolution of human thought.

4. Legacy and Influence:

The Pre-Socratic style of thought, often referred to as natural philosophy, laid the groundwork for subsequent philosophical developments. These early thinkers grappled with fundamental questions about the nature of reality, existence, and the cosmos. Their explorations, rooted in curiosity and observation, paved the way for scientific inquiry, challenging prevailing mythological explanations. Through their diverse theories—whether focused on elements, numbers, or the eternal flux—they shaped our understanding of the world. Although their individual perspectives varied, their collective impact reverberates through the annals of intellectual history, influencing not only philosophy but also science, mathematics, and the very fabric of human thought. Their legacy reminds us that intellectual progress thrives on questioning, exploration, and the pursuit of knowledge.

In summary, the Pre-Socratic thinkers grappled with questions about the natural world, its essence, and the forces that govern it. Their musings, diverse and profound, continue to resonate as we explore the intricate relationship between philosophy and the environment.

1. Plato and Aristotle:

The environmental perspectives of **Plato** and **Aristotle**, two influential ancient Greek philosophers:

Plato, in his work “*The Republic*”, intertwines environmental sustainability with social justice

and political stability. He contends that any just society inherently aligns with environmental sustainability. Plato's vision extends beyond mere ecological balance; it encompasses the well-being of both humans and the natural world. His view emphasizes the need to change human behavior particularly the thoughtless and destructive patterns of consumption. Sustainability, according to Plato, is essential for a harmonious society and a stable political order.

Aristotle, in contrast to Plato's metaphysical speculations, anchors his philosophy in **biological reasoning**. He posits that the universe's essence emerges from a **Thinking thought**, setting all things into motion. Unlike Plato, who claimed that substance cannot arise from nothing, Aristotle asserts that the universe consists of substances originating from nothingness. His focus extends beyond the allegorical "cave of shadows," urging direct experiences and empirical understanding.

Aristotle observed that species with lower reasoning abilities exist to serve those with higher reasoning abilities. He viewed nature as hierarchical and expressed the following opinion:

"Plant exists for the sake of animals, brute and beast for the sake of man domestic animal for his use and food, wild one for food and other accessories of life such as clothing and various tools. Since nature makes nothing purposeless or in vain, it is undeniably true that she has made all animals for the sake of man"

In summary, while Plato emphasizes justice and sustainability, Aristotle's biological lens shapes his perspective on the environment. Both philosophers contribute to our understanding of humanity's relationship with nature.

2. Natural Philosophy:

Natural philosophy, also known as **philosophy of nature**, was the dominant field of study before the advent of modern science. Rooted in ancient times, it encompassed the philosophical exploration of **physics**, which pertained to nature and the physical universe.

Plotinus, a prominent figure in Neo-Platonism, emphasized the interconnectedness of all existence. His teachings centered on observing living environments and recognizing cyclic variations. Through contemplation and introspection, Plotinus sought to reveal the underlying unity that binds the material and spiritual realms, fostering a holistic view of the cosmos.

These ancient ideas continue to shape our understanding of environmental ethics and our responsibility toward the natural world.

3. Chinese Philosophers

Confucianism and Harmony - Confucianism, rooted in ancient China, emphasizes harmony between humans and nature. Confucius believed in the virtue of balance and moderation. His teachings encouraged responsible stewardship of the environment, emphasizing the need to maintain equilibrium. The Confucian concept of *li* (ritual propriety) extended to respecting natural cycles and ecosystems.

Taoism and Natural Flow

Taoism celebrates the natural flow of existence. Laozi, the founder of Taoism, advocated for simplicity, humility, and alignment with the Tao (the Way). Taoist sages observed the rhythms of nature, seeking to live in harmony with the natural order. Their reverence for mountains, rivers, and forests exemplifies an eco-spiritual connection to the environment.

Ancient philosophers, across cultures, grappled with questions about the world's essence and humanity's role within it. Their insights continue to guide us today. As we face climate change and ecological crises, let us draw inspiration from their wisdom. By embracing interconnectedness, reverence, and ethical balance, we can forge a sustainable path for generations to come.

PROTO-HISTORIC HARRAPAN CULTURE

Evidence of India's environmental history can be traced back to the proto-historic **Harappan culture** or the **Indus Valley Civilization**. Originating in the northwestern part of the Indian subcontinent, it is considered India's first civilization. The people of the Indus Valley Civilization emphasized sanitation and environmental awareness.

They worshipped trees like the **Pipal** and revered various animals, including humped bulls, elephants, and rhinoceroses. From the Harappan era to the present day, the tradition of tree worship has become a popular form of reverence in Indian culture and social life.

The environmental consciousness of the Indus Valley Civilization was keenly aware of the need to protect nature and utilize it judiciously. Notably, sites like **Dholavira** demonstrated

sophisticated techniques for water harvesting and storage. The drainage system was a hallmark of this civilization. Main drains, lined with bricks or stones, ran beneath the streets, connecting to house drains. These main drains efficiently disposed of waste into culverts, which then emptied into the river.

The drainage system of **Mohenjo-Daro** was equally impressive. The Harappan civilization stands out for its meticulous attention to health and cleanliness, setting it apart from many other ancient civilizations.

ANCIENT LITERATURE ON ENVIRONMENT CONSERVATION

In the ancient Rigvedic texts, deities like Indra (the God of rain, thunderstorms, lightning, and war), Agni, Varuna, Vayu, Maruta, Surya, and goddesses like Usha, Aditi, and Saraswati were closely associated with different aspects of nature. Hindu philosophy holds that the **Pancha Mahabhutas** (the five great elements) weave the intricate fabric of life, manifesting in the interconnectedness of the cosmos and the human body.

According to Hinduism, these five great elements—**air, space, water, fire, and earth**—constitute the environment and are all derived from **Prakriti**, the primal energy. Among the five sacrifices performed by a Hindu householder, the **Bhutayajna** involves daily offerings of food to animals, birds, and other creatures, presumably to maintain ecological balance.

To promote tree plantation, many **Puranic texts**, such as the **Skandapurana**, provide recommendations on which trees to plant and in which direction. For instance, the Skandapurana suggests planting a **Vilva tree** at the center, surrounded by four other Vilva trees on its four sides. In each of the four corners, Banyan trees should be planted, along with twenty-five Ashoka trees forming a circle. Additionally, a Myrobalan tree (Amla) can be grown on one side.

The **Varaha Purana** emphasizes awareness by stating: ‘He never goes to hell who plants an Asvatha (peepal), a Pichumarda, a Banyan, ten Jessamines, two pomegranates, or five mangoes.’ It is remarkable that people during Vedic times regarded nature and the environment holistically, revering each constituent and entity by carefully preserving them.

A profound Vedic prayer invokes divine intervention: ‘Do not harm the environment, the water, or the flora. Earth is my mother, and I am her son. May the waters remain fresh. Let tranquility

pervade the atmosphere, the earth, and the crops.’ This prayer seeks blessings and protection for the environment.

The Vedic people, whose primary occupations were animal husbandry and agriculture, were devout nature worshippers with a profound concern for the environment. Vedic literature, including the Vedas, Brahmanas, Aranyakas, Upanishads, Samhitas, and Upavedas, is replete with references to various environmental aspects.

The Vedas vividly describe the diversified range of flora and fauna, urging human beings to protect, preserve, and nourish the natural world. They envision an environment characterized by sweet breezes, flowing rivers, beneficial herbs, pleasant day and night, fertile earth, fruit-bearing trees, nurturing sunlight, and healthy cows.

Vedic wisdom encompassed knowledge of seasons, which facilitated agriculture. The Rig Veda even mentions **five seasons**. The Atharva Veda emphasizes water purity and advocates for the protection of wildlife and domestic cattle.

Among the oldest and most evocative environmental invocations is the **Prithivi Sukta** in the Atharva Veda, dedicated to the Earth goddess. These hymns seek blessings and protection for the environment. Interestingly, Vedic educational institutions were often situated in serene forest environments, fostering pious ideas and noble thinking.

ARTHASASTRA AND THE MAURYAN EMPIRE

The book **Arthashastra**, written by the celebrated Indian author Kautilya during the Mauryan period, serves as a treatise on government and economics in ancient India. Within its pages, Kautilya emphasizes the protection and management of forests, gardens, and orchards. He considers it the duty of every individual in society to safeguard nature. Kautilya also prescribes fines related to tree cutting.

Furthermore, Kautilya recommends creating sylvan surroundings for residences and highlights the importance of lakes, groves, gardens, and hillocks in making a city worth living. This emphasis on greenery gave rise to a comprehensive science in ancient India called **arboriculture**, which dealt with the construction and maintenance of planned gardens.

During Emperor Ashoka's reign, the focus shifted toward a clean environment. Ashoka believed that the state's responsibility extended beyond the welfare of its people to include the protection of forests, wildlife, and the environment. He banned hunting of certain wild species, established forest and wildlife reserves, and prohibited cruelty to both domestic and wild animals. Ashokan edicts from the 3rd century BCE provide the earliest constitutional checks against environmental degradation and animal cruelty.

The Mauryan state also maintained forests, groves, botanical pharmacies, and herbal gardens for cultivating medicinal herbs. In fact, Ashoka likely established the world's first veterinary hospitals. Fa Hien, the Chinese traveler, even wrote about veterinary hospitals in Pataliputra. Ashoka's rule stands as a prime example of ecologically responsible statehood in India's ancient history.

POST- MAURYAN AND IMPERIAL GUPTA EMPIRE

Following the Mauryans, the Sungas and Kushans in the north, and the Satavahanas of Andhra in the south, continued to emphasize the preservation and protection of the environment. Post-Mauryan art and sculpture prominently featured depictions of animals, trees, and vegetal motifs.

Valuable information about various environmental aspects during this period can be found in works like the **Periplus of the Erythraean Sea** and writings by **Ptolemy**. The conservation practices that existed during the Mauryan period persisted, more or less unaltered, in subsequent reigns until the end of the Gupta Empire. The Gupta period, often regarded as the golden age of ancient Indian history, witnessed significant developments in environmental awareness. Poets, astronomers, and scientists of the Gupta era were deeply influenced by their surroundings and the natural world.

Among the renowned Sanskrit poets of the Gupta period, **Kalidasa** stands out as the greatest. He likely lived in the court of **Chandragupta II**. In his work **Ritusamhara**, Kalidasa eloquently describes the six seasons in relation to **Sringara** (romantic love). Another significant work attributed to him is the **Meghaduta**, which reflects various aspects of nature, particularly the beauty of clouds. In the field of astronomy, **Aryabhata**, the first astronomer, posed fundamental problems around **A.D. 499**. He believed that the Earth was a sphere rotating

on its axis, and he explained the shadow of the Moon causing eclipses—an invaluable contribution to natural science.

The Gupta period also witnessed advancements in medical science. **Hastayurveda**, a veterinary science authored by **Palakalpya**, attests to these developments. Additionally, the **Navanitakam**, a medical manual of recipes and prescriptions, was compiled during this era. **Varahamihira** shed light on subjects such as **Astrology, Geography, and Botany**. Interestingly, **Brahmagupta** anticipated Newton's ideas by asserting that the Earth attracts everything toward itself.

THE TRADITION OF ANCIENT SACRED GROVES

The tradition of sacred groves was common in ancient times and continues to be practiced by folk and tribal communities. A sacred grove typically consists of a cluster of old trees, often located on the outskirts of a village. These trees were intentionally left untouched when the original settlers cleared the forest to establish the village. Sacred groves were regarded as abodes of gods, goddesses, or spirits and were protected with utmost care.

These small forested pockets were dedicated to local deities and remain a common phenomenon in various parts of the country, particularly in the northeastern regions and the Western Ghats. These dark evergreen forest patches have been preserved from time immemorial, believed to be sacred to the village gods and goddesses.

Historical cities like **Vaishali, Kushinagar, and Champa** also maintained sacred groves. Ancient Indian texts have highlighted the concept of sacred groves throughout the ages. Protected groves in the hills of **Garhwal** and **Kumaon** find mention in old Hindu scriptures such as the **Puranas**.

In the **Bhagavad Gita**, Lord Krishna metaphorically compares the world to a single banyan tree with unlimited branches, where all species of animals, humans, and demigods coexist—a reflection of the concept of community ecology.

These groves can be considered ancient equivalents of natural sanctuaries, where all forms of living creatures receive protection from a deity. Many communities have specific categories of protected groves associated with certain deities. The presiding gods not only ensure the well-

being of the people but also safeguard the groves by punishing any offenses committed within them. The practice of oath-taking within these groves was widespread across the country.

MAHATMA GANDHI AND THE ENVIRONMENT:

Mahatma Gandhi, the revered leader of India's struggle for independence, left behind a legacy that extends far beyond political freedom. His profound insights into environmental consciousness and sustainable living continue to inspire generations.

Mahatma Gandhi, the father of the Indian nation, had profound thoughts on the environment. His philosophy, rooted in simplicity, compassion, and sustainable living, continues to inspire us. Some of his key environmental insights:

1. Limitation of Wants:

Gandhi believed that true wealth lay in contentment and restraint. *He famously said, "Earth provides enough to satisfy every man's need, but not every man's greed." By limiting our desires, we reduce our impact on the environment.*

2. Non-Violence and Compassion:

Gandhi's philosophy of non-violence (ahimsa) extended beyond human interactions. He advocated compassion toward all living beings. His vegetarian lifestyle reflected this commitment. For him, harming animals or exploiting nature was incompatible with spiritual growth.

3. Village Economy and Sustainability:

Gandhi envisioned a decentralized economy based on self-sufficient villages. He championed local craftsmanship, cottage industries, and community-based living. This vision aligned with ecological principles—reducing dependence on distant resources and minimizing ecological disruption.

4. Sarvodaya: Welfare for All:

Gandhi believed in **Sarvodaya**, the welfare of all. His community-centered approach emphasized betterment of human life and fulfilling basic needs for everyone. Sustainability, for him, meant ensuring the well-being of all, not just a privileged few.

5. Spirituality and Nature:

Gandhi's spirituality led him to have compassionate views of nature. He believed that self-realization (Svachetna) was essential. This issue of human values should create a balanced interconnection between society, economy, and environment. *Imbalance would lead to suffering and curses from nature.*

6. Gandhi's Holistic Approach

Gandhi's environmentalism extended beyond mere ecological concerns. It was closely linked to his views on politics, economy, health, and development. He believed in extracting from nature only what was absolutely necessary for human sustenance. His approach aligned with the ancient Indian tradition of reverence for nature, emphasizing interconnectedness.

7. Limitation of Wants

In contrast to the materialistic pursuit of modern civilization, Gandhi advocated for a model centered on **limitation of wants**. He cautioned against unrestricted industrialism and warned that imitating the West's resource-intensive lifestyle would deplete the Earth's resources. Gandhi recognized that industrialization and machinery had adverse effects on human health.

8. Non-Duality and Unity

Gandhi's worldview embraced **non-duality**—the essential unity of all living beings. He saw humans as an integral part of nature, rejecting compartmentalization. His economist, J.C. Kumarappa, emphasized that nature did not recognize divisions; it dealt with all life as a whole.

9. Inspiration for Environmental Movements

While Gandhi's Collected Works may not explicitly mention terms like "environment" or "ecology," his ideas had far-reaching implications. Many environmental movements in India drew inspiration from his holistic perspective. His emphasis on sustainable livelihoods and protection of the environment resonates even today.

10. Post-Gandhian Challenges

In the post-Gandhian era, rapid industrialization led to environmental hazards. Gandhi's

critique of modernity highlighted the exploitation of nature for short-term gains. His legacy reminds us to tread lightly on the Earth, considering the long-term consequences of our actions.

CONCLUSION & SUGGESTIONS

The ancient Indian civilization, steeped in wisdom and spiritual insight, left behind a rich legacy of environmental thought. In the article “Vedic, Pre-Vedic, Post-Vedic: Tracing Environmental Thought in Ancient India,” we delve into the profound teachings of the Vedas and their relevance to our contemporary environmental crisis.

Ecocentrism, Deep Ecology, and Non-Interference: The Vedic Environmental Gospels the Vedas, the most ancient scriptures in the world, reveal a deep understanding of the natural world. They address weather cycles, rainfall phenomena, hydrology, ecological balance, and related subjects. The seers recognized that human actions could disrupt the delicate balance of nature, leading to abnormal weather patterns, water pollution, and environmental degradation. To maintain harmony, they prayed to deities responsible for nature’s equilibrium.

Three fundamental environmental principles emerge from the Vedas:

1. **Ecocentrism:** The Vedas emphasize the interconnectedness of all life forms. Nature is not merely a resource for human exploitation; it is a sacred web of existence where every element plays a vital role. Ecocentrism encourages reverence for all living beings and ecosystems.
2. **Deep Ecology:** The Vedas recognize that humans are part of a larger cosmic order. Deep ecology goes beyond anthropocentrism, urging us to view ourselves as stewards rather than conquerors. It invites us to protect not only our species but also the intricate tapestry of life.
3. **Non-Interference:** The Vedas advocate non-interference with natural processes. Rather than imposing our will upon the environment, we should allow it to unfold naturally. This principle aligns with sustainable practices and minimal ecological disruption.

Inspired by timeless teachings, we advocate for a theoretical model that grants legal protection to nature and natural objects. By doing so, we can proactively prevent harm, safeguard nature’s rights, mitigate conflicts between development and conservation, and promote sustainable

growth. In a world grappling with climate change, biodiversity loss, and pollution, the wisdom of the Vedas transcends time. Let us heed their call to protect our planet, recognizing that our well-being is intricately linked to all life forms. As we navigate environmental governance, let ecocentrism guide our decisions, deep ecology inspire our actions and non-interference remind us of our place within the cosmic order. The ancient seers revered divinity in every leaf, stream, and sunrise. Perhaps it's time we rediscover that sacred connection and become custodians of the Earth, echoing Vedic hymns celebrating unseen divine glory in various forms.

Ancient India embraced environmental management, enshrined in scriptures and smritis. Their philosophy blended spiritual and philosophical thinking with social awareness and environmental ethics. Recognizing nature's immense value, ancient Indians protected it from destruction and pollution. Environmental ethics applied not only to common people but also to rulers and kings. The term "Paryavarana," meaning that which envelops us, encapsulates their concept of environment. Texts like the Vedas, Upanishads, Smritis, Puranas, Mahabharata, Bhagavad Gita, Bible, the Holy Quran, and Guru Granth Sahib abound with revelations about harmony with nature. India's environmental policy has ancient roots, reflecting a philosophy echoing through the ages.

Our ancestors' wisdom, rooted in ecology and sustainability, can address modern environmental challenges. Today, raising awareness among the younger generation about environmental protection remains crucial, drawing from our rich ancient Indian heritage.