

Environmental Awareness and Protection in Ancient Bharat based on Dharmaśāstric Literature

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Abstract: *The lifestyles and conventions of the practice for the environment by individuals were the supreme motive of the Ancient Indian society administrators, thinkers, intellectuals and rulers for the sustainable development of the society. The people of Dharmaśāstric period were duly aware of the environmental concepts, natural resources and measures to conserve them. Environment has been given utmost importance in ancient Indian culture. Indian society has always protected the natural resources through its unique religious practices and appropriate behaviors as a way of environmental management. Traditional Indian society has always been spiritualistic about the environment, thus, environment friendly. Many references are found in the Dharmaśāstra (DS) and other eminent texts of ancient Bharata on environmental protection, ecological balance, weather cycle, occurrence of rainfall, hydrological cycle and all the subjects related to them. The concern for the protection of environmental health, preservation of natural resources, proper public sanitation and the concept of cleanliness is deeply rooted in the Dharmaśāstric literature. DS was conceived as the text of society management through viable social institutions and focussing majorly on the society development through the medium of prescribed Achara. The style of environmental protection depicted in the DS is immutable today as well as plays an important role to provide the best solution for the management of global environmental problems and its preservation. The major objective of the paper is to explore the management methods of the awareness of our seers about the environment of ancient Bharata through authentic references from the DS.*

Keywords: Environment Protection, Environmental Awareness, Ancient Indian Literature, Dharmaśāstra (DS)

1. INTRODUCTION

Ancient Bharat has a very rich knowledge tradition of various sciences and technology. The opulent knowledge system was documented in Sanskrit language in the form of compendiums known as Śāstras. These works are related to poetics, dramaturgy, technical treatises on grammar, philosophy, world literature, sciences, arts, legal studies rituals and many more. From time to time, the influence of Sanskrit studies and scriptures, strongly embedded in our academics is clearly visible in Indian literature, philosophy, politics, economics and cultural development. The inclusion of traditional knowledge elements like *ṛta*, *satya*, *ahimsā* etc. in Indian social, educational and political framework proves that the Vedic, philosophical and theological aspect of Sanskrit studies is constantly flourishing. Historians and philologists have proven the certainty of the Sanskrit as a spoken language in the past. Pollock (2001) proclaimed that Sanskrit language was indigenous to Bharat, but now we are witnessing the impact of Sanskritization globally. Sanskrit not only revives the ancient indigenous literature of Bharat, but it is also being used to know the history of various modern sciences. There are many advance texts of sciences which are written in Sanskrit such as Caraka and Suśruta's compendiums on medicine, Āryabhaṭṭa's work on mathematics, Bhāskara's astronomy, Kauṭilya's politics and administration and Pāṇinī's grammar are landmarks for the modern development of science and logic (Biswas & Banerjee, 2016). Ancient Bharata is considered to be the origin of many advanced sciences in modern world. While religion, culture, traditions and

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practices have arisen from the holy land of Bharat, on the other hand expansive scientific streams like financial management and economics, management sciences, psychological studies, Āyurveda, medical science, environmental sciences such as metallurgy, mineralogy, geological sciences, oceanography and marine sciences, climatology, sanitation management, forestry and agriculture sciences, tropical and hydrological studies also emanate. Traditional knowledge refers to the specific cultures of the communities. Ancient Bharat plays an important role in indigenous traditional knowledge in the form of lifestyle conventions such as different cultures, various languages and dialects spoken, apparels and outfits, prescribed food and beverages, culinary tradition, medicinal tradition, concept of cleanliness, preservation of natural resources such as water, air, land, mineral ores etc. Environment and human health are interrelated and mutually dependent on each other. Bharat is the homeland of traditional treatments like Āyurveda, Naturopathy, Yoga and seasonal nutrition. From the beginning of times, Bharat has always been one of the most optimum places to research indigenous cultures to gain and share valuable knowledge of art, music, literature, sculpture, pottery, drama, literature, poetry, natural healing methods, environmental conservation strategies, afforestation etc. Theology represents the customs, indigenous knowledge and beliefs of traditional cultures among local communities. The scriptures are constantly being studied thereby developing applications continuously through adjustment of people's lifestyle, food habits, holistic approach, use of natural resources, defecation, precision and environment. According to DS texts one can purify one's mind by bathing daily, giving up alcohol, meat, sexual intercourse, etc., keeping purity in thought, speech and deed and practicing the principles of cleanliness. A pure heart and pure thoughts lead to a healthy life and positive mental health. This is the reason why the Yoga Sutras prescribe sanitation as one of the four rules or duties (Sridhar, 2020). The similar sentiment is expressed in Yājñavalkyaśmṛti (YS) as wellⁱ.

DSs are an extraordinary amalgamation of arts and science and consists of traditional as well as scientific knowledge of all major fields, hence, the importance of DSs is well renowned. It is a collection of theological texts and contains the treatises of Hinduism on Dharma (duties). Olivelle (2004) define "Dharma holds a cardinal importance in Indian Philosophy, religion, social issues and community laws. It includes the various social institutions such as marriage system, property inheritance, adoption rules and regulations, work contracts rules, judiciary system as well as personal choices e.g. food preferences, suspension of study and sexual demeanors etc." The DS texts are the oldest source of the social, political, economic and religious life of the primitive Indian society. It often includes decisions related to the duties (sects) of the citizens, public management, rules related to the daily routine of man, responsibility towards environment, Āyurveda (Narayanaswamy 1981) etc. The concept of dharma in management of society is the greatest and the most valuable contribution of DS to the world (Bobade 2019). The topics of the DS literatures are divided into three major categories known as; *ācāra*, *vyavahāra* and *prāyaścita* (Dhole, 2017). It is enriched with literature and moral code of conduct which has been prescribed for the betterment of the humanity, establishment of peace and harmony within the civic society and healthy environmental conditions.

DS embraces both traditional moral values as well as modern scientific aspects. The social scientists of this ancient period were aware of the importance of environment. Cleanliness, sanitation, purification of mind, body and soul and the various social rules and methodologies related to it are discussed in DS key texts. Cleanliness of the surroundings and the hygiene of the body has always been the priority, associated with *dharma* and kept as a major part of the *brahmacarya āśrama* to train and learn through tough acclimate. It is included in the ten-fold characteristics of *dharma*ⁱⁱ (Kumar, Mohapatra, & Singh, 2019). Protection of natural resources such as water, land and forests as well as, preservation of water sources was depicted as an eminent significance in the DS. Throwing of waste and filth in these natural water resources were declared as

punishable offenses. This indicates that the primitive sages were extremely aware of the necessity of this natural resource and cautious of the complications of the scarcity of the water. The DSs always deliberated on the issues such as how much water to be used for various essential needs like bathing, cleaning utensils and clothes, drinking and various other purposes such as sweeping the floors, in agriculture, gardening etc., how to keep our water sources pristine, which type of water is fit and suitable for consumption. Similarly, the concept of sanitation and method of defecation is widely propagated in DS. It throws light on subjects like the importance of yoga and exercises, the benefits of a nutritious, healthy and balanced diet, the direction in which the defecation spot must be constructed. MS promotes sustainable community living and harmony with the environment and ecology (Bobade, 2019).

2. OBJECTIVE OF THE PAPER

In the last few decades, the grave concern of natural resources being depleted rapidly and continuous increase of environmental pollution has gripped the nation as well as the whole world. The modern solution provided by the contemporary environmentalists for these problems will not prove to be much sustainable in long run. For this purpose, the ancient Indian methods mentioned in Sanskrit texts are also being scanned to know the ideas about the same. An attempt is being made here to give a brief look into some of the direct and indirect references of nature and environment embedded in the DS texts. Another aim of this research paper is to supplement brief yet critical references from all the major key texts of DS that have pondered on disparate nature related contents. It also supports a strong indexing with appropriate, proper and accurate references. Major objective of the paper is to present a perception on viable environmental perspectives. Explore new approaches and dimensions to enhance the knowledge on ancient aspects of environmental science, natural healing techniques, conservation, climatology, preservation measures of natural resources.

3. ENVIRONMENTAL AWARENESS AND PROTECTION IN DHARMAŚĀSTRIC LITERATURE

The Indian philosophy elucidates that the entire universe is concocted out of the conglomeration of the sub-atomic particles which incorporates the five cosmic elements namely; sky or space, air, fire, water, earth. They are called as *pañca mahābhūtas*. All living beings, animate or inanimate, movable or immovable, fall under this classification. These five cosmic elements inherently configure a link with the five human cognitive (sense) organs. In this *pañca mahābhūtas* (the successor *mahābhūta* acquires the qualities of the former *mahābhūta*. Sky beholds the characteristics of sound, therefore ear, the sensory organ of sound is attached to the space. Air has two qualities such as sound and touch. Therefore skin, the sensory organ of touch is attached to the air. Similarly, fire has three qualities such as sound, touch, and form or shape. Thus eyes, the sensory organ of vision or sight is attached to the fire. Fourth is water has four qualities such as sound, touch, form or shape, and taste. It is attached with the tongue having gustatory sense. Last is the earth which consists of five characteristics namely sound, touch, form, taste, and smell. It is attached to the nose having olfactory senses. Thus, each sense organ has an inherent relationship with each of the cosmic elements. Hence, a symbiotic relationship between macro and micro-level environments is apparent in ancient Indian philosophical thought. “These five *mahābhūtas* are cosmic elements which create, nurture, and sustain all forms of life and after death, it decays and gradually gets absorbed in the elements from which they were created earlier. The term environment is the sum total of all physical and biological conditions affecting the reactance of organisms. It is also called the biosphere, which is the sum of the life-bearing

parts of the hydrosphere (water), atmosphere (weather) or aerosphere (air) and lithosphere (land).

The word environment composed by two Sanskrit words, “*pari or paritaḥ*” which means ubiquitous and “*āvaraṇa*” which means to cover, hover or enclose. Hence, environment is a natural cover around us in which the living organisms live and breathe. Environment is the external nature of the presiding deity of nature. Pervasively, the sum of all those conditions, that influences the life of the organisms as well as its development, is called the environment. The way environment is embodied in human life, it has been realized very beautifully in *rāmacaritamānasa*ⁱⁱⁱ. Environment and organisms are inextricably linked. It is implausible to ratiocinate an organism isolated from the environment. According to Webster (Mishra, 2002), the totality of external conditions and influences affecting a being or a group of masses is called environment. Elements found on the land and in the foetation of the earth, water, air, medicines and all the things that help the living beings are included in the purview of the environment. “*Atharvaveda*” 18.1.17^{iv} states that the water, air and medicinal herbs are the constituent elements of environment. The external ecosystem of the earth can mainly be divided into three major life supporting elements. First, the lithosphere includes islands, continents, mountains, hills, plains, small rivers, plateaus, forests, deserts, etc. Second, the 7 oceans, glaciers, ice caps, lakes, rivers and underground water makes up the hydrosphere and third, the atmosphere, it is the shield that protects the earth. The biosphere lies between the Earth and the atmosphere^v. The mixture of gases present in the atmosphere in proper quantity is important for human life. The paper is primordially, an attempt to demonstrate the references of life sustaining elements, practices and ideas related to nature and environment as found in the DS texts.

The sanctification and purification of holy rivers are discussed in DS signifying the perpetual value of the rivers, ponds and fountains and their eminence for the nature, environment and mankind. Water is the essential element to survive and rivers were the major sources of natural water. Therefore, the rivers were treated as goddesses and were sanctified in ancient times for their life sustaining qualities and for maintaining the socio-environmental movements. Similarly, the concept of the *Kātyāyana vrata* is also innovated in *Bhāgavata Purāṇa* to protect water resources such as river Ganga, Yamuna, Kalindi through the performing of ablutions in the honor of the holy water of the rivers (Shastri & Tagare, 1978). Trees are also substantive components of the nature. Few trees such as *baṭa*, *pīpala*, *aśoka*, *āma*, *pākad*, *gūlara*, *nīma*, *āmalā* etc. are treated to be godlike and empyrean because they produce higher contents of the oxygen, provide shade and food. Hence, highlighting the need to protect them. Due medicinal property, the plants like *tulasī*, *neem* etc. are extremely sacred and revered. Fruits, flowers and leaves are considered auspicious and thus, offered in every *pūjā*, plantation of trees on auspicious occasions, air purification by performing daily *yajña* and *havan*, daily bathing and worshipping of river, fasting rituals etc. are indicative of the fact that our theological texts are enthusiastic towards the environmental protection. MS verse 5.10^{vi} illustrates knowledge, penance, fire, food, soil, mind, water, *upalepana*, deeds, air, sun and time as the causes of purification.

Endearment and attachment of humans for nature^{vii} is reflected in the entire Sanskrit literature, which clearly indicates their extreme level of awareness for the conservation and protection of the environment. The ancient *Ācārya* made serious efforts in preserving the nature and did not allow the beautiful real ethos of the environment to be destroyed at any cost. Various forms of nature have been depicted according to the context in DS, the concern of pilgrimages description of the strict conduct of defecation, prohibition of throwing wastage, lawful acts and punishments for destroying the nature and water sources all these were preferred to not pollute

the environment and to maintain ecological balance (Mishra, 2002). In the following section the major references to protect the nature are discussed.

3.1 Cleanliness and Sanitation

Environment has been given the utmost importance in ancient Indian culture. The *Vedic* age is considered to be the oldest period in the world and the *Vedic* literature is reckoned as storehouse of various types of knowledges and sciences. The learned people of the *Vedic* period were well aware of the environmental concepts and its importance, natural resources and measures for conservation. The notion of public sanitation and sense of protection of environment is deeply embedded in ancient Indian customs and traditions. The excavations revealed a highly developed sense of health, civic and sanitation that existed in the pre-vedic period of the Indian civilization. Similar, references are found in the DS on environmental protection, ecological balance, seasonal cycle, rainfall, hydrological cycle and all the subjects related to them. This indicates the extreme level of environmental awareness of the sages of that time (Padhy, Dash, & Mohapatra, 2006). Various references to environmental concepts are found abundantly in the *Vedas*, DS and other Sanskrit texts. The concept of cleanliness is not new to the world. It is mentioned in many ancient DS texts and Sanskrit scriptures. The knowledge related to cleanliness is rooted in Indian tradition from the very beginning. MS emphasizes that cleanliness is a practical conduct. The research on environmental health presented by Pushpangadan et al (1987) is very useful for understanding the traditional method of environmental protection. MS divides the concept of sanitation into two types – external cleanliness and internal purity. Vedavyāsa, in his commentary on the *Yoga-sutras*, describes external defecation as the removal of impurities from objects using mud and water, and internal defecation as the body to remove impurities from the mind (Sridhar, 2020). According to MS, external defecation refers to cleanliness in relation to a person's body, various objects that come in contact with a person and the surrounding environment. On the other hand, internal defecation refers to the purity of one's actions, speech and thoughts.

The entire chapter 5th of MS is dedicated for the concept of external cleanliness and sanitation. MS verses 5.111^{viii}-112^{ix} and 5.114^x have given various measures on how to sanitize and purify the vessels made of valuable natural resources. It instructs that, utensils made of copper, brass, bronze, rhinestones, gemstone, ivory etc. can be cleaned with ash, soil or water, whereas, utensils and pots made with gold should be washed and cleaned with only water. The objects made of iron, *ranga* and lead should be properly purified with ash, water or acid water. Likewise, the ornaments made of silver, pearl, ivory, conch shells, crystals etc. should also be cleaned with water only. The slight peeling of wooden utensils is considered to be its purification. Grass, wood and straw are purified by the ingestion of water particles. Purification of very fine clothes and products made of conch shell, horns, elephant bone or ivory should be also be cleaned with yellow mustard residue. Clothes made of silk and sheep's hair should be cleaned with saline soil. MS verse 5.113^{xi} discusses the scientific and chemical methods of preservation and enhancement of natural resources such as gold and silver. The refinement of gold and silver is more virtuous with its own cause using water and fire. Strict rules are maintained in the law compendium of Manu. In verse 9.286^{xii}, it is clearly specified that the punishment given to the offender guilty of adulteration of unadulterated commodities, valuable gems and natural resources, is the first level of amercement.

The ancient houses and floors were generally made of specific earthen materials and it needs to be purified using specific types of soils. MS verse 5.124^{xiii} elucidates the traditional methods of cleaning the floor and sanitizing the residential areas by sweeping, by coating of soil liquids by sprinkling water, by scratching or raking and by the abode of cows for one whole day and night. MS has imparted a fair share of importance to the

cleanliness of roads, pathways, streets and alleys. MS verse 9. 282^{xiv} considered squalor and filth a payable offence. It is further asserts in verse 9.283^{xv} that anyone who drops filth on roads, shall be reprimanded and will have to clean that place. Anyone who destroys the roads or lands or walls of a town or breaks the town gate, he shall be instantly banished from that particular area.

3.1.1 Internal Cleaning and Naturopathy

The ancient masters advocated leading a healthy and happy life by following a hygienic and an ethical life which later evolved as customs and value oriented traditions. As discussed in section 3.1.4, it is important to note that, on one hand, observing the *Śrīphalakricarā* fast propounded the idea of growing trees, whereas on the hand, Bilva as a fruit is full of medicinal values having “Aegle Marmelos” (Williams, 1997). Ancient *Ācārya* Sushruta, recognized the medicinal and healing properties of *Bilvā* and mentions it as a vegetable rather than a fruit. One can survive on its leaves for days or even months because of its sustaining and fulfilling properties. The *Śaiva* devotees survived for days only by the drinking the essence prepared by grinding the *Bilvā* leaves with water. Likewise, all the trees listed in the *Parṇākrīcarā* fast find a significant mention in a variety of scriptural, primitive DS and aboriginal medicinal texts in India. The leaves of these plants are very useful, healthy, beneficial and excessively significant as people can subsist on them for days in times of crises. They not only hold medicinal qualities but also planting of such trees help release oxygen, clean the air, provide shade and help calm the anxieties of humans. These are all the major traits auxiliary in ancient healing, natural therapy and cleanliness of mind and internal body. Rivers are considered very sacred. The calm environment, picturesque, tree-lined, silent banks of the rivers are considered to be the best location for spiritual experience, naturopathy and relaxing the mind and body. DS have laid great emphasis on religious worships, fasts and paying tribute to natural resources in the form of godlike creations. The *Matsya Purana* talks of a fasting ritual called *Mandārā saptamī* (Wilson, 1983) which requires its performer to procure eight *Mandārā* flowers in order to worship the God Sun. The botanical name of the *Mandārā* tree is *Erythrina variegata* or *Erythrina Indica* and its flower is *Hibiscus Rosa*. Although the aim of planting this flower is attached with religious attribute, its food and medicinal value is great in treating blood pressure, heart problem and cancers. These therapeutic qualities are the reasons why the ancient Indians chose *Mandārā* flowers for worshipping Hindu gods as well as used in primitive healing and curing therapies. Therefore, its continuous use, plantation and protection have been stressed in Hindu scriptures, DS texts and poetic literature since ages. Another very prominent ancient healing technique is cold treatments for the relief of high fever. Among the many types of cold remedies, one should bathe in rivers with clear cool water, streams filled with lotus flowers and in deep ponds. Cold remedies carried out by fresh, clear and clean water from the reservoirs are full of medicinal properties. They help in healing as well as rejuvenate the body.

3.2 Natural Resource Protection

The principal components of the environment namely; Sun, Moon, vegetation, medicinal herbs and roots, water, energy, air, heat, land, fuel and minerals are called as natural resources. A very modern contemporary concept of “live and let live” has been highlighted by an ancient text like MS. Verse 5.45^{xvi} has strictly forbidden violence and killing of animals. Wildlife is also one of the major natural resources. Conservation of wildlife promotes biodiversity and prevents the entire ecosystem from being harmed. The few animals such as cows, goats and sheep were also major sources of milk products, and oxes, camels, elephants and horses were used as transportation and in warfare. DS texts have ordained poaching and killing of

animals to be illegal, unlawful and a sin. YS in its verse 2.19.226^{xvii} has declared cow slaughter and killing of animals such as camels and elephants for leather and ivory respectively to be a punishable offence. MS verse 9.280^{xviii} orders the death penalty to those who harm or steal animals such as elephants and horses. Verses 5.46^{xix} and 5.47^{xx} of MS further emphasizes that non-violence is meritorious and virtuous.

3.2.1 Protection of Water and Water Sources

The Ayurvedic *Ācārya* have repeatedly reckoned the importance of pure water for all the purposes in the maintenance of good health. Water is a natural resource and most important element of the living creature. Any living creature cannot survive without water. Water is also essential to purify the body and create a clean and a healthy environment. Rivers are the major sources of water and multitude description of rivers are found in the DS scriptures, it is not only important from the geographical point of view, but it also significant from the religious point of view. Rivers are not only an integral part of the environment but also an artery of the nation's life. Rivers are synonymous with the dynamics of the historical and cultural tradition of Bharata. The intact flow of rivers enriches the culture and meaning of that country. In ancient times, all the major cities of Bharata were located on the banks of rivers. The water route was the most accessible means of transportation. Important pilgrimages of Bharat are still situated on the banks of rivers, oceans or lakes.

MS verse 5.28 puts a great emphasis on the conservation of water and states that in order to clean and purify the impure substances, only a limited amount of water, sufficient enough to satiate the thirst of a cow, should be used. Similarly, a very miniscule amount of sand and water as required for cleansing the body organs from which urine and faeces are ejected. The rules and regulations were formulated to preserve and protect the water sources such as ponds, rivers etc. MS has considered the punishable offences for polluting or destroying sources of water. Verse 9.279, 9.280 and 9.285 state that anybody who breaks or destructs the water dam or spoils a water sources offender shall be slayed by completely drowning in water or liable to repair the damage done to that particular water source and made to pay the highest amercement. Capital punishment to be given to offenders for spiking the water or makes it dirty or impure. Pay the first level of amercement to be imposed to the person for illegally takes away or steals the water from a tank or cuts off the water supply. Therefore, such measures indicate the significance of water and its importance as depicted in the DS literature.

3.2.2 Protection of Air Quality

Air is an essential component for human life. Every living organism is dependent on the oxygen available in the atmosphere. So the polluted air creates huge problem in respiration. MS verse 4.61 states that the perfect place for the residential areas and it must be located away from the *Śūdra* residence because the majority of *Śūdras* work on the leatherwork. The MS verse 4.49 and 50 states that defecation must be done in the south direction of the residential areas and everyone must be covered the place of defecation with soil, sand, sticks, clods, leaves and grass. Similarly verses 3.75-77 clearly render that the air can be purified through performing the various *yajna* by households (*grihasth*) on daily basis. Performing of *yajna* in the sacrificial fire by lighting firewood and offering holy *samagari*, it releases beneficial fumes which mixes in the atmosphere and makes the environment free from impurities.

3.2.3 Protection of Plants, Tree and Forest

Trees have played an important role in human life since time immemorial. The living beings depend on trees for their food and shelter etc. Trees are very useful in balancing the environment. Ancient Indians had a lot of affection and devotion for trees and were worshipped. *Jalābhiṣeka* of the trees has always been a part of daily

routine. Trees are believed to bring merit and virtue. In today's context *jalābhīṣeka* of trees is nothing but the watering of trees and plants. Forests play an important role in environmental protection. *Viṣṇupurāṇa* is one of the oldest text of DS, it elucidates an expiatory fast known as *Śrīphalakricarā Vrata* (Krishnamacharya, 1953) observed by the *Śaiva* (the devotees of *Śiva*). In this fasting ritual the performer has to survive on *Śrīphala* (*Bilvāphala* or wood-apple) for a month. This fruit is considered significant in worshipping the Lord *Śiva*. In order to worship and revere the lord, the *Śaiva* devotees began to plant and grow *Bilvā* trees in their homes as well as in all *Śiva* temples in India. They also preserved the forest plantations and forests for *Śrīphala* cultivation. This ancient practice of worship is exemplary in showcasing the protection of trees and forests. *Viṣṇusmṛti* presents another example of an expiatory fast known as *Parṇākrīcarā vrata* (Krishnamacharya, 1953), which prescribes its performers to subsist for 7 days on 7 different kinds of leaves of trees like *Palāśa*, *Udumbara* (*Ficus Glomerata*), *Padmā*, *Śamkhāpuṣpī*, *Brāhmī* and others. These trees are still respected and planted all across the Bharata. The *Matsya Purana* refers to a festival of nature celebrated by planting of trees and worshipping them called as *Vṛkṣotsava*. In this the performer of the ritual should plant the trees and water them. This is a wonderful religious festival prescribed to be celebrated even when there is no dearth of trees but the value of trees, their plantation and preservation was recognized which has become an environmental duty for all. Likewise, The *Rājāmārtaṇḍa*, a literary digest on *jyotiṣa* and DS is ascribed to the famous and illustrious King Bhoja Paramāra, depicts a fasting ritual called as *Aranyaśaṣṭhī*. In this fasting ceremony, all the women enjoin and visit the forest, on the sixth of the bright half of *jyeṣṭha* lunar month. It is to be noted that “*Aranya*” symbolizes the bountiful forest, nature, the greenery and signifies fertility, resources, and prosperity. The hidden indication is the maintenance of the forest for all kinds of resources, trees, leaves, herbs, forest products, animals and environment (Bharadwaj, 2021).

4. MAJOR CURRENT ENVIRONMENTAL PROBLEMS

There are various factors which harm the environment like improper waste management, manufacturing industries and their effluents, affluent lifestyle of the people, global warming, air and water pollution, overuse of fertilizers, the negative implication of use of plastic and polythene etc. Modern industrialization and the increase in population has put extreme pressure on all the natural resources of the whole world. Although, the development in machinery, fertilizers, pesticides and high yielding varieties caused unprecedented increase in agricultural productivity, it has severely devastated the quality of the land in general. Overgrazing, widespread destruction of forests and intensive agricultural practices have converted productive regions to barren areas. Discharging of waste material and draining of poisonous chemicals and pesticide into water sources, deforestation, desertification, urbanization, air fouled with noxious gases are major environmental problems of the current times.

The great epic *Mahābhārata* also identified environmental pollution to be detrimental for the whole society and the major reason for various diseases causing because of improper waste management. Waste has been generated for as long as the human beings has dwelled on this planet. Solid waste is the unwanted or useless solid materials generated from residential, industrial and commercial activities of a particular area. It is categorised according to its origin such as domestic, industrial, commercial, construction or institutional or according to its contents like organic material, glass, metal, plastic paper etc or according to its hazard potential ie. toxic, non-toxin, flammable, radioactive, infectious etc.

The rivers are being constantly polluted. Due to the construction of big dams on the rivers, the rivers which carry abundant water throughout the year are now facing

shortage of water, the water streams are severely drying up. The cities which are situated on the banks of rivers and industrial units, the sewage and petro-chemical waste are being drained into the rivers. Efforts to reduce pollution by physical method are not being successful as expected. For this there is a need to awaken public consciousness and reverence of the natural elements like the people of ancient times. In the absence of this respect and mentality, the virtuous rivers cannot be saved from pollution. Conservation campaigns are underway to clean these rivers.

5. ANCIENT INDIAN STYLE FOR ENVIRONMENTAL PROTECTION AND MANAGEMENT

Waters, trees, flowers, leaves and fruits have been lauded in hundreds and thousands of ancient texts and inscriptions right from the Vedas, puranas, DS until now. The whole society was being governed by the administration and various religious rites, rituals and social intuitions in ancient Bharat. Environmental Protection and Management was the supreme priority in ancient Bharat. Indians have articulated the need to sustain and promote the ecological balances of nature through sacred incarnations and systematized rituals for the sustenance of life on the earth. Ancient Indian philosophy provides a solid foundation for the doctrine of *ahimsā* that is non-violence and this presupposes the doctrines of *karma* (actions) and *punarjanma* (rebirth). Bharatiyas have a staunch belief in the cycle of birth and rebirth, wherein a person incarnates as an animal or a bird in his next life. Therefore, attaching theological connotation makes citizen not only respect the different species, but also pay reverence to them. This institutionalizes the profound concept of refraining people from killing animals, birds and fishes for commercial purposes and as well as for human consumption. There are many great Bharatiya religious traditions like the *vratas* and *utsavas* (Kane P., 1955), *tīrthas*, *śrāddha* ceremonies (Funeral rites) and *pūjās* (ritual worships of gods and fire sacrifices etc.) in which rituals are performed based on these constituents of nature. The world community today is amazed at the ancient Indian religious culture which has treated nature and its constituents with such respect and reverence. Bharat has an ancient tradition of protecting the environment. Most ancient texts teach us that it is the *dharma* of each and every individual in the society to protect nature. This is why people have always worshipped the nature. The importance of environment protection in India can be traced back to the period between 321-300 B.C. In *Kautliya's Arthashastra*, great importance has been laid on environment protection and clear punishments have been prescribed if the citizens fail to do so. MS promulgates about the optimum use of the natural resources and also prescribes different punishment for causing any harm to them. The ancient Indians were the custodians of a highly evolved civilization with great awareness on the importance as well as the vulnerability of natural environment. The sages and Rishis had considered human environment from the point of view of physical, chemical, biological and social process that influences directly or indirectly the health and well-being of the human kind. Their approach towards life was very comprehensive, highly integrated with the environment and, therefore, was ecologically sound and sustainable. It was aimed at promoting a peaceful coexistence with all the living organisms as well as a fuller harmony with the physical environment.

In ancient times, to maintain the purity of rivers, religious rituals such as dunking in rivers were made and one who did not follow these rules was called as the partaker of sin. The fear of being attributed to sins and going to hell in afterlife was the biggest fear of humans. This made, people to follow those rules. Warnings were issues to not to pollute the holy rivers in Bharat such as Ganga, Yamuna, Narmada etc. DS have strictly prohibited discarding of excreta, rinsing and spitting, rubbing the body and bathing, washing and squeezing clothes etc. in the river. Water

pollution can be prevented by following the rules prescribed in the ancient scriptures. Water loses its quality due to pollution and its medicinal properties are destroyed. When water is treated with fire, the water becomes pure and it also prevents water from being polluted. Kanan (2017) has proposed a solution to the issue of waste management as mentioned in the scriptures. MS and AS have declared the misuse of water sources as a punishable offense (Kannan, 2017). Management of waste reduces or eliminates adverse impacts on the environment and human health and it further, supports economic development and improved quality of life. Since the ancient *vaidika* time the primary motto of Bharat social life was to live in harmony and unison with nature and in hygienic environment. *Vedas, upaniṣads, smṛtis* and DS preach a worshipful attitude towards plants, trees, earth, sky, water, land animals and all living creatures. These natural resources were revered as God and goddesses and to maintain them pure was considered to be the duty of everyone. Thus, polluting air, water, or land was regarded as sin. MS first systematic treatment of Hindus law prohibited the throwing of garbage, dust, rubbish and pieces of meat etc. on the roads and in water bodies and declared it to be a punishable offence. AS has mentioned that maintaining sanitation habit was essential and in-viable.

The ancient masters tactfully implemented much of their value oriented teachings through certain rituals, taboos and totems and made the people to observe it as spiritual duty; the violation of which was feared an antispiritual. This approach had its astonishing impact and the people accepted these value oriented practices as a way of life and which in course of time became traditions for ages ensuring peaceful coexistence of human kind with other living organisms as well as with the physical environment. Another primitive Indian style for environmental protection and management is the concept of *iṣṭāpūrta*. The *likhita smṛti* has described the greatness of *iṣṭāpūrta* as '*iṣṭena labhate svarge pūrtemokṣāmāpnuyāt*', which means a person who does the positive deeds attains salvation and transcends to heaven in the afterlife. One can understand the importance of environmental protection through *iṣṭāpūrta* such as the methods of *yajñas*, worship and the construction work of pond, pools, reservoirs etc. utilitarian for daily behavior comes under this. *Yajñas* are the best means of environmental protection. *Yajñas* prove to be of a great utility for the protection of the environment and maintaining its balance. Such a notion mentally trains the citizens to follow the environmental conservation and protection protocol. This was an indirect yet a very effective way of environmental preservation at a larger scale (Mishra, 2002).

6. CONCLUSION AND FUTURE DIRECTIONS

As conclusion it can be stated that the major components of the environment protection was the strict punishment and these practices was associated with dharma, rituals, and religious activities. There was two types of punishment namely earthbound (□□□□□□□□) and supernatural (□□□□□□□□) were explored to manage the environment and society. The MS verse 9.279, 9.280 and 9.285 clearly state about earthbound punishment that anybody who breaks or destructs the water dam or spoils a water sources offender. There are huge references are available for punishment in MS. Supernatural punishment was the key concept of the MS to protect the environment, follow dharma and right path. The concept of sin, *punya* and liberation. Each and every aspect of the society and environment was protected and managed using these two types of punishments.

Environmental protection is about ensuring the usage of natural resources in such a way so as to protect the environment from the negative effects of the economic and other activities and also to ensure sustainable development. To illustrate an example, a fifth century AD festival called *vrkṣotsava* in which trees are planted signifies the importance of trees and the oxygen supplied by them. It indicates the

environmental awareness of the ancient seers. Similarly, in the contemporary times India along with the world celebrates the “world environment day”. This celebration is basically an inspiration from our primitive techniques of environment management. The whole world today is pivoting towards the positive environment management, preservation of natural resources, sustainable development and judicious use of non-renewable resources such as coal, oil, natural gas and nuclear energy.

There is a huge challenge in determining how to enable future growth while ensuring environmental protection. This challenge calls for such regulatory frameworks and legal structures that facilitate socially acceptable and ecologically sustainable development. This is where the Environmental Law comes into scene. This legal mechanism gives the opportunity to systemize the nature of the law’s effects and impact on the public environmental relations. The possibilities, peculiarities, complexities and challenges of the environment are included in the life of a person at the level of knowledge, skills and values in such a way that he can harmonize with his physical, socio-psychological, economic, cultural, educational environment and the conditions of distortions and pollution available in these areas. Thus, it can be seen that the ancient Bharatiya texts and traditions pertaining to *vratas*, *utsavas* and *pūjā* systems have made trees, flowers, leaves, rivers and waters as the most important part of bhartiya tradition as they are the basic constituents of nature and environment. Today, there is an urgent need to reinvoke and re-establish these useful traditions in the original or in the modified form to suit the changing conditions of modern living. It is evident from the depictions in DS texts that ancient seers had a strong foresight for nature preservation and were far more conscious of the environment. They had formulated excellent environmental laws to overcome problems of pollution, contamination and as well for the conservation of the biodiversity. The ancient environmental laws were held ethical significance and pursue citizens not to commit any offence of harming the ecology. The aim of the concept of penance in ancient texts was to make the offender conscious of his misdeeds thereby preventing him from repeating the same mistake. The religious ideologists and DS authors and *smṛti* writers are nothing like modern environmentalists or environmental scientists but their concern for nature, ecology and environment is more than obvious from the above stated facts. The various constituents of environment are embedded in almost all DS literature. The modern environmentalists and lovers of nature and ecology can immensely benefit from the ancient religionist ideas, conservation measures and love for nature.

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- ⁱ ahimsā satyamasteyam śaucamindriyanigraha: dānam damo dayā śānti: sarveṣāṃ dharmasādhanam. Yājñavalkya, 1.122.
- ⁱⁱ dhṛtiḥ kṣamā damo'steyam śaucam indriyanigrahaḥ. dhūrvidyā satyam akrodho daśakam dharmalakṣaṇam. Manusmṛti 6.92
- ⁱⁱⁱ kṣiti jala pāvaka gagana samirā, pañcaracita adhama śarīrā. kiṣkindhā kāṇḍa
- ^{iv} trīṇi chandāmsi kavayomvi yetire purarurupaṃ darśanaṃ viśva cakṣaṇam. āpo vātā ośadhayaḥ tānyekasmina bhuvana ārpitāni. Atharvaveda 18.1.17
- ^v tābhyāṃ sa śakalābhyāṃ ca divaṃ bhūmiṃ ca nirmame. madhye vyoma diśas cā'stāvapāṃ sthānaṃ ca śāśvatam. Manusmṛti 1.13
- ^{vi} jñānaṃ tapo'gnirāhāro mṛn mano vāryupāñjanam. vāyuḥ karmārkakālau ca śuddheḥ kartṛṇi dehinām. Manusmṛti 5.105
- ^{vii} ye trisaptāḥ pariyanti viśvārupāñivibhrataḥ. vācaspatirbalā teṣāṃ tanvo adyādadhātume. Atharvaveda 19
- ^{viii} taijasānām mañinām ca sarvasyā'smamayasa ca. bhasmanā'dbhir mṛdā caiva śuddhiruktā mañiṣibhiḥ. Manusmṛti 5.111
- ^{ix} nirlepaṃ kāñcanaṃ bhāṇdamadbhireva viśudhyati. abjamaśmamayaṃ caiva rājataṃ cā'nupaskṛtam. Manusmṛti 5.112
- ^x tāmrā'yaḥkāmsyaraityānām trapuṇaḥ sīsakasya ca. śaucam yathā'rham kartavyam kṣārā'mlodakavāribhiḥ. Manusmṛti 5.114
- ^{xi} apāmagneś ca saṃyogād dhaimaṃ raupyaṃ ca nirbabhau. tasmāt tayoh svayonyaiva nirṇeko guṇavattaraḥ. Manusmṛti 5.113
- ^{xii} aduṣitānām dravyānām dūṣaṇe bhedane tathā. mañināmapavedhe ca daṇḍaḥ prathamāsāhasaḥ. Manusmṛti 9.286
- ^{xiii} sammārjanopāñjanena sekenollekhanena ca. gavāṃ ca parivāsena bhūmiḥ śudhyati pañcabhiḥ. Manusmṛti 5.124
- ^{xiv} samutsrjed rājamarṅge yastvamedhyamanāpadi.sa dvau kārṣāpaṇau dadyādamedhyaṃ caśu śodhayet. Manusmṛti 9.282
- ^{xv} āpadgato'thavā vṛddhā garbhiṇī bāla eva vā. paribhāṣaṇamarhanti tacca śodhyamiti sthitiḥ. Manusmṛti 9.283

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- ^{xvi} yo'hiṃsakāni bhūtāni hinastyātmasukhecchayā. sa jīvāṃś ca mṛtaś caiva na kvacit sukhamedhate. Manusmṛti 5.45
- ^{xvii} liṅgasya chedane mṛtyau madhyamo mūlyameva ca . mahāpaśūnāmeteṣu sthāneṣu dviguṇo damaḥ, YS-2.19.226
- ^{xviii} koṣṭhā'gārā-"yudhāgāra- devatā'gārabhedakān. hastyaśvarathahartṛmś ca hanyādevā'vicārayan. Manusmṛti 9.280
- ^{xix} yo bandhanavadhakleśān prāṇināṃ na cikīrṣati. sa sarvasya hitaprepsuḥ sukhamatyantamaśnute. Manusmṛti 5.46
- ^{xx} yad dhyāyati yat kurute dhṛtiṃ badhnāti yatra ca. tadavāpnotyayatnena yo hinasti na kiñcana. Manusmṛti 5.47