Ecological Management and Indian Ethos - A Review

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***Abstract*- Environment plays a very significant role in human civilization. Human beings have close relations with the biosphere in which they live. The whole environment and ecology consisting of earth, air, water, plants and animals provide the necessary and sufficient conditions for sustaining human life.**
The last few centuries have been dominated by human beings, and are referred to by some scholars as 'anthropocene', or a period of human domination over the planet. This domination has impacted the planet, leading to the rapid depletion of wildlife and their habitat. In the last few decades, growing human populations and their consumption levels, accompanied by greater need for water, electricity, metal, food, housing and other luxury items has led to the quick erosion of other species. This loss of species has been guesstimated by various scholars at anywhere between one per hour to one per day. Although human beings are considered the most intelligent life form on earth, they are responsible for most of the damage done to planet earth. Developing countries as well as developed countries alike are all suffering from environmental pollution. Therefore, today environmental problems have been the object of discussion everywhere from village to parliament.

***Index Terms*—Environment, anthropocene, erosion, species**

I.INTRODUCTION

Environmental pollution may be traced back to the evolution of Homo Sapiens on the earth and it was realized 2500 years ago during the time of Plato. In the process of metamorphosis of primitive man into a civilized man, environment was neglected; importance was given to science and technology, resulting in environmental pollution. When life of human being on planet Earth was in the stage of embryo, a stage where he was one with nature, he had no moral relations or determinate obligations. When human being was roaming in the forests, he knew neither good nor bad. Human being without any knowledge of shelter, cooking, speech, and industry, he did not need his fellow creatures and could have no desire to hurt them. Thus when man was uncivilized and unpolluted, it was said that nothing was more pure than the state of nature and nothing was more polluted than man in the state of nature.

What has Man done to the only planet where he must live? In the infinite, ever changing Cosmos the space where alone life could be sustained is Mother Earth. But look around and find out what we have done to it. In the frame of competitive Nationhood, scientific advancement and material progress we have come to a stage where holy or otherwise rivers are reduced to becoming sewer lines, where potable water is scarce, lush green fresh fruits are heavy with pesticides and the air that we inhale carries unsustainable antilife germs and killing particles. Life as such has become a misery because we have no time either to reflect on the nature and purpose of life we live; or, to thank the Lord for His wonderful creation which is meant to be kept reasonably peaceful, friendly and pollution-free. Having destroyed the Nature all around and making even the glaciers melt, we are very soon going to clutter up the outer space too because of our unlimited greed for both lucre and power; and a stong desire for killing instantly our potential enemies.

When not engaged in killing each other or plotting to conquer the weak, Man is frightfully busy discovering other solar systems that could be populated by the power -hungry. We refuse to accept the reality that the only enemy Man has is Man himself. There are a few questions that one needs to answer. Do we ever think that the only Reality is change and the only certainty: Death? Time was when there was no Earth and there will again be Time when our solar system itself will have disappeared along with the Earth. But so long as we live, it is our bounden duty to protect it so that Life could be sustained. Still we, the asharful maqhluqat (the best of the Beings), have not learnt enough to live in peace and remain in harmony with the world around us [2].

Developing countries and developed countries alike are all suffering from environmental pollution. Therefore, today environmental problems have been the object of discussion everywhere from village to parliament. Pollution is by far the most rapidly growing problem of the modern technological society. The condition in India is pretty serious. It is no longer, feasible to ignore the alarming nature of India's environmental conditions. Seventy percent (70%) of all the available water in India is polluted [3].During the last decade, there has been five- fold increase in the incidence of blood cancer and lymph node cancer. Nearly fifty three (53%) percent of Indian's total land area is subject to serious environmental degradation. Deforestation, siltation, water, air and noise pollution, insanitation- all these are posing a serious threat not only to the quality of life in India, but also to its basic survival. There are many diseases like which are transmitted through water. Examples are typhoid, cholera, jaundice, etc. According to an

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estimate more than eighty percent Indians suffer from water-borne diseases.

The sanskriti (culture) of every country depends on its environment, climatic conditions and human behaviour. Hence, from this point of view the vedic literature is of great utility to us and to the world society at large. Accordingly if we study the environmental conditions of our society and the world, we shall be greatly benefitted in our living and healthy life.

The Indians Saints prescribed acts for avoiding environmental pollution. But we neglected the instructions of the scriptures, sometimes out of total ignorance of the contents of these works and at other times out of incapability to follow the real intention of the authors of these scriptures. The ancient sacred literature of the Vedas enshrines a holistic and poetic cosmic vision. They represent the oldest, the most carefully nurtured, the most elaborately systematized and the most lovingly preserved oral tradition in the annals of the world. Unique in their perspective of time and space, their evocative poetry is a joyous and spontaneous affirmation of life and nature.

II. ENVIRONMENTAL CONCERNS IN ANCIENT INDIA

India being socialist and secular country a good environmental sense has been one of the fundamental features of Indian philosophy. The civilization of India has grown-up in close association with nature. There has always been a compassionate concern for every form of life in the Indian mind.

India being rich in its culture and heritage, inherited the values like tolerance, non-violence, equity, and compassion for animate objects, apart from this, nature is the common heritage of human beings. To preserve and protect nature human being must make sincere efforts. Ecological imbalances and environmental destructions are good examples to say that human being failed in his duty voluntarily then compulsory action must take over it. It is this process of human negligence and careless ness dealing with the environment gave birth to environmental jurisprudence.

Ancient India was the richest county, where in the gold was said to be sold and the streets. India has been rich not only financially but also intellectually. The scientific knowledge which now discovered is not new for India even with least pollution. But now India after invasion by many foreigners is suffering from poverty which is the main cause for environmental degradation and is striving for development. Since development and degradation, progress and pollution, economics and environment go together; development cannot be stopped, as it is being a natural instinct of man. Similarly, there is no escape form pollution because human being himself is the generator of pollution.

The examples are the air he respires and emits, the odor he emits etc. Industry is the other cause for pollution and if industry is necessary evil then pollution is surest sufferance. The pollution is unsolved problem which has been termed as „slow poison" and is as old as human civilization itself [3] .But this does not mean that India has no concern for environment at all. The instinct of protection of environment is inherent among Indians which motivated them to lay down certain religious precepts and rules and to take corresponding measures in an attempt to protect environment.

Historical Analysis Of Indian Law The significance of environment and environment protection are not new to India. It is traced to 300 B.C. The principles of environment protection are found in Arthashastra written by Kautilya, the prime minister of the Magadha dynasty during the period of Chandra Gupta maurya. Arthashastra also deals with environment protection and lays down various rules in all angles minutely with great detail 5. The Arthashastra is divided into 14 books which provide in detail the law, administration, industry, commerce and foreign policy, book two contains provisions relating to environment. T

he Arthashastra provides rulers to protect preserve and improve forests and animal species (protection of wild life). Killing animals and birds, cutting trees are forbidden, if any harm is caused or pollution is caused in city, then penalty is prescribed. Even the person maintaining slaughterhouse shall pay severe fine. Even if the wild animals from forests are seen where people live, they shall not be killed or inflict injury to them, they shall be driven out7 . This was based on principles of Manusmruti. During the period of Ashoka the 5th pillar edict lays down that killing different species of animals and birds which are harmless, which are of utility and are not eaten.

Those animals which are with younger ones and are giving milk should not be killed and during fast days and full moon days deforestation must be prohibited. The forests maintain ecological balance; they are reserve of food, and to sustain cultivation on hilly areas and products of medicinal plants. The great emperor Chatrapati Shivaji also ordered not to injure animals and plants. Plantations were made by the road sides to help travelers to have rest. He commanded the people to protect forests and preserve the water resources without polluting. This kind of gratitude was shown towards nature anciently which disappeared now. Despite of all ancient wisdom, with the development of science and technology the environment is damaged and ecological balance is disturbed.

To control these ecological imbalances and to protect environment, India has developed a form of environmental jurisprudence which is unique. The Indian environmental jurisprudence has relied on three inter-connected elements. First, it manifests the new Indian Constitutional law rationale which clearly accords importance to public concerns rather than to protecting private interests. Secondly, it reflects certain aspects of Indian legal culture through implicit and explicit reliance on autochthonous values based on ancient, precolonial indigenous nations and concepts of law. Thirdly, it bears testimony to the uniquely activist role of the higher Indian judiciary in promoting this new rationale. These three elements characterize the manner and approach adopted in the recent development of Indian environmental jurisprudence.

The Indian environmental jurisprudence proceeds closely in line with legal ideologies towards creating a human right for a clean environment which has been frequently voiced in

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international fora. After discussing a traditional approach towards environmental jurisprudence of India there is need for discussion of Indian environmental jurisprudence regarding early legislations.

III. VEDAS- A TREASURE OF ECOLOGY

The Vedas are ancient Indian compilations of the Aryan period ranging between 2500 to 1500 B.C. All four Vedas 'the Rig, Sama, Yajur and Atharva' recognize the importance of maintenance of the seasons' cycles that are likely to get altered due to the climate change owing to inappropriate human actions. It is remarkable that the 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. ''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----. Tranquility be to the atmosphere, to the waters, to the crops and vegetation.''

"mātā bhūmih putruahan pṛthivyā:''

Mother Earth is celebrated for all her natural bounties and particularly for her gifts of herbs and vegetation. Her blessings are sought for prosperity in all endeavours and fulfilment of all righteous aspirations. A covenant is made that humankind shall secure the Earth against all environmental trespass and shall never let her be oppressed. A soul-stirring prayer is sung in one of the hymns for the preservation and conservation of hills, snow-clad mountains, and all brown, black and red earth, unhurt, unsmitten, unwounded, unbroken and well defended by Indra [6]. The Hymn says, in prayerful thanksgiving and homage:

" Earth in which lie the sea, the river and other waters, in which food and cornfields have come to be, in which lives all that breathes and that moves, May she confer on us the finest of her yield. Earth, in which the waters, common to all, moving on all sides, flow unfailingly, day and night, may she pour on us milk in many streams, and endow us with lustre. May those born of thee, O Earth, be for our welfare, free from sickness and waste. Wakeful through a long life, we shall become bearers of tribute to thee. Earth, my mother, set me securely with bliss in full accord with heaven, O wise one, upholds me in grace and splendour".

Rig-Veda especially mentions about environment on several occasions. The plant ecology has a great importance to keep the environment in balance. The Rig-vedic people exploited nature in a very judicious way, making full use of the Indian psyche, the compared trees to human beings, Gods etc [7]. They prayed to Indra (God) not to separate trees from the forests and the sons from their fathers (Rig-veda,8/1/13). A verse from the Rig-Veda states that "the sky is like father, the earth like mother and the space as their son. The universe consisting of the three is like a family and any kind of damage done to any one of the three throws the universe out of balance" [8]. Rig-Veda has dwelt upon various components of the ecosystem and their importance.

The vedic sages also know that mountains cause rains and fresh air and also provide medicines----"parvateṣu bhesajam''(Rig-veda-8/20/25). Therefore they gave importance to save mountain and said that it is better to live in the forests or mountains than the villages—

"iman jibebhyah paridhin dadhāmi meshaṇ nu gādaparu arthametat. satan jibantu saradaḥ puruchirantamṛstun dadhatan parvatena''. tuje nastane parvatah santu svaitavo na virah. panita aptyoada no vardhannah sansan naryo ahistou''. (Rig-veda,5/81/9)

The Athravana Veda also mentions about the importance of air, water and green plants essential for human existence. Although there was as such no concept of the word "Pollution" [9] those days but it was referred in terms of "poisoning" of environment. The A.V. 18.17 (Atharvana Veda) recalls that three things cover the universe the air, water and the plants and they are essential for all lives on earth to exist. "Plants and herbs destroy poisons (pollutants)" (A.V. 8.7.10); "Purity of atmosphere checks poisoning (pollution)" (A.V. 8.2.25).

Some herbs purify the air. The fragrance of guru (Commiphora mukul) purifies the air and cure diseases (A.V. 19.38.1). Atharvaveda has also warned not to dirty and add toxic substances into water bodies as it may lead to spread of diseases "he who dirties or spoils ponds, lakes, rivers, etc., or cause smell near residential areas is liable to chastisement [9].

This is very relevant in the context of pollution of rivers and lakes and the resulting ecological diseases which the modern civilization is experiencing. Great significance is being attached to the peepal tree (Ficus religiosa) with respect to environment. The National Botanical Survey of India (NBRI) Lucknow, has identified about 150 trees and herbs including peepal which are pollution fighters. They are able to intercept several toxic gases and dusts and also infuse the atmosphere with plenty of oxygen [10]. The Yajurveda too mentions about plants and animals, the ill effects of cutting of trees; and the poisoning of the atmosphere; but it also discusses about energy relations of the global ecosystem. "No persons should kill animals helpful to all" (Y.V. 13.37).

"O King you should never kill animals like bullocks useful in agriculture or like cows which gives us milk and all other helpful animals and must punish those who kill or do harm to such animals" (Y.V. 13.49). The oceans are treasure of wealth protect them" (Y.V. 38.22); "Do not poison (pollute) water and do not harm or cut the trees (Y.V. 6.33); "Do not disturb the sky and do not poison the atmosphere" (Y.V. 5.43). About the flow of energy in the global ecosystem the Yajur Veda says "the whole universe is full of energy in which the sun is at the centre and the ultimate source of energy for all living organisms on earth. The net energy flows from the point of production to the point of consumption through the plants, animals, human beings, the air, water and land, and is completely under the control of Almighty. While energy flow and balance is maintained in the universe yet some imbalance this causes several natural disturbances like untimely rain, heavy rain, drought and flood, warm winter and cool summer.

"The earth provides surface for vegetation which controls the heat buildup. The herbs and plants having union with sun rays provide congenial atmosphere for the life to survive (A.V. 5.28.5). Now global warming is an established phenomenon.

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The carbon dioxide build up in the atmosphere (due to burning of fossil fuels) and the global deforestation are major factors of global warming [11]. The green plants (forest) through the process of photosynthesis (utilizing the sun"s energy) works as a natural sink absorbing all the carbon dioxide and help in reducing the warming effect. Green plants give out plenty of oxygen during photosynthesis and also directly absorb the solar heat radiation of the atmosphere to give out water vapour in the process of transpiration [12]. The combined effects of the two processes make the environment cool and congenial for survival of all life.

Similarly the Hindus have worshipped the Bilva, Kadamba, Rudrāksha, Champaka, Bakula etc. In the Maitrāyani Samhitā, the earth has been described as"devajayani', adorable by deities and aushadhinam mulam, the source of all kinds of medicinal plants. So the Indian sages, like Manu suggested punishment for him who cuts down such valuable trees. [14]During the vedic age yajnas were conducted for purification of the environment. Perfumed haven material and ghee were used during these yajnas.

The fire and Sun play the most significant role in the purification of environment. Animals and birds are part of nature and environment. The vedic seers have mentioned about their characteristics and activities and have desired their welfare.

All three types of living creatures found in the universe have different environments and every living creatures has an environment of its own [15]. But when we look from man's perspective all of them constitute his environment. There is a general feeling the vedic texts that animals should be safe, protected and healthy. Protection of birds, animals is a norm of Hindu religion. The Hindu mythology believes fourteen avataras (births) of the god like Matsya, Kurma, Varaha, Nrisingha etc. signify the devine forms in such animals and thereby making their life secure. The cobra is worshipped on the eve of Nagpanchami and cows are offered adoration on the occasion of the Balabhadrapuja. Killing of certain animals and birds who acted as scavengers by feeding on carcasses and filth was religiously banned according to the Vedas [16]. It is need of the day to follow in the root steps of the ancient period---

"kincideva tu vipryāya dadyadasthimatan vadhe.
Anasthanancaiva himsayah pranayamena śudhyati.'' (Manu - samhita-11/142)

IV. CONCLUSION

Earth is our mother and her natural resources are sacred; they are God's energy and how we respect and utilize them is what will determine the fate of the world. We could be happy with the simple things that God provides if we just learn the art of using them in harmony with the will of God. The Vedic solution to environmental pollution is to change our consciousness from exploiting the earth for our own purposes to protecting and honouring the earth for God's purposes.

Ecological problems coupled with unequal access to resources results in human ill-being and threats to the livelihood security of the world. Humanity faces exceptional challenge of eroding natural resources and declining ecosystems services due to a multitude of threats created by unprecedented growth and consumerism [17]. Also imperiled is the biodiversity and sustainability of the essential ecological processes and life support systems in human dominated ecosystems across scales.

Nature the mother earth in its essence is not a machine. Living matter exists only by the order of the transcendent life, the one which is formless, invisible, but knowable through its effect. Nature constitutes a set of self-originating, self-organizing and self sustaining forms. The rhythm of Vedic Rta the earthly balance is within us. The above discussion makes clear that our Vedic texts revealed that closer our connection with the natural environment and the more aware we are about its forces and life-supporting energies, the clearer is our perception of its rhythm.

From the digesting activity of our intestines to the firing of the neurons in the brain, every single function of the organs and cells in our bodies reflects the beat which mirrors the rhythm of nature so we have to be in harmony with Rta the cosmic rhythm which balances the earth. The state of our health: physical, emotional, and mental is entirely dependent on this rhythm [18]. When the rhythm stops beating through the vital trinity of each individual's nature: body, mind, and soul, individual perishes.

The health of the natural environment, with all its variety of animated and non animated entities is entirely Rta-dependent as we humans are the part of this Rta we have to play our role in saving the mother earth revising and following the preaching of our ancestors of worshiping the earth as deity and saving it. The self-organizing capacity of nature's dynamics is sustained through the constant interactions of the astonishing variety of the living creatures and their environment. What is crucial to be underlined in the context of wholesome ecology is that every single entity existing in nature, be this entity animate or non-animate, is equally important for the realization of the dynamic interactions of the living creatures and their environment, and therefore the

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