

Environmental Issues in Vedic, Epic and Purāṇic Literature (A Study of Forest Fire Anecdotes)

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Abstract: The need for this research is current trends in environmental changes and degradation. Climate change, floods, droughts, Pollution, Environmental degradation and resource depletion, bio-diversity loss etc are the outcome of anthropogenic exploitation of natural resources. There is a sudden rise in the Green House Gases in the atmosphere of earth and hence the average temperature of the planet earth is rapidly uprising for the past hundred years. This, in turn, is responsible for the weather changes, Sea Level Changes, Land Use Patterns – collectively termed as climate change. Environmental Pollution is a major challenge for the World in the years to come. Massive burning of woods in Amazon of Brazil and Indonesia Archipelago for the unending human greed, the recurrent seasonal forest fires in the woods of California, the trans-boundary Asian Brown Hedge formed in between Earth and Ether of South and South East Asia are the environmental issues of prime concern for this decade. This paper deals with the solution to modern pollution problems in the Vedic, Epic and Puranic Literature. It also explores the sustainable mechanism as mentioned in the above-mentioned pieces of literature. These Forest Fire anecdotes are described, analysed, critically discussed and arrived at a conclusive resolve of the research problem.

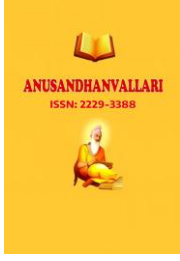
Key Points: Environmental Issues, Forests, Forest Fire, Climate Change, Sanskrit Literature- Vedic, Epic and Puranic Anecdotes.

1. Why Forest Fire?

“Fire is not a mere technical problem. It is a complex socio-economic, cultural, as well as institutional problem that requires a holistic and integrated approach and long-term strategies,” Daniel Murdiyarso.

The cultural traditions and literary sources illustrate (to be examined later in this paper) that both Fire and Forests have been sacred to the South Asians and have been wisely exploited by them in the earliest centuries for the purpose of human settlements, land expansion, safeguarding from wild animals etc. However, the current instances of forest fires in the region are indicative of paradigm shift in case of both the key words: Fire and Forest. Human greed has overpowered human need. The religious and cultural sanctity of the Fire and Forest is in dormant phase and awakens occasionally in the form of mass movements.

Forest Fires ((Amorim))have multifaceted impacts on societies. Due to the increase in the frequency and severity of large wildland fires and wildland –urban interface fires, these have been identified by the World Health Organisation as one of the threats to the public health security in the 21st century. Smoke is the prime outcome of the forest fires. Its causes environmental pollution and adversely affects the health of humans and other living beings since large amounts of pollutants, like particulate matter(PM), carbon monoxide(CO), volatile organic compounds(VOC) and nitrogen oxides(NOx), are emitted to the atmosphere due to the smoke caused as an outcome of burning of Forests.



2. Climate Change and Forest Fire:

Climate change is one of the many environmental issues that are threatening causative of destruction of many coastal areas all over the globe and consequently causing extinction of many species and disturbing the ecological balance. The world will see many big cities submerged under the water and hence will witness the uncounted loss of human life and assets in the years to come.

As Per United Nations Environment Protection Agency, Climate change could affect coastal areas in a variety of ways.. Greenhouse gases come from a variety of human activities, including: burning fossil fuels for heat and energy, clearing forests, fertilizing crops, storing waste in landfills, raising livestock, and producing some kinds of industrial products. (<http://www.epa.gov/climatechange/impacts-adaptation/coasts.html>)

“South Asians have contributed comparatively little to the total amount of climate change causing greenhouse gas emissions in the atmosphere. The main responsibility for climate change falls on the industrialized North where oil and coal-driven economies and luxury living has led to very high per capita emissions.” South Asia Disaster Report Special Copenhagen Issue (Dissanaik)

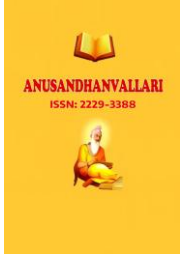
3. Forests, Fire and Forest Fire in Sanskrit Literature:

The first civilizations of mankind emerged and expanded themselves in the lap of nature. There was a balanced synchronization between the nature and the man. At the same time, lack of advanced techniques of science and its application were a major challenge for the man to force him to surrender before the mighty Nature. No wonder, most of the ancient myths all over the globe are knitted around one or the more aspects of nature. The South Asian traditions are no exceptions to it. There are hundreds of myths and Meta myths in Vedic and Post Vedic Literary Traditions of early Northern India that are woven around the common themes of Environmental deities. Western world has shown meticulous concern in exploring these myths to outline the earliest life and history of ancient South Asia. Eastern scholarship exploring the Sanskrit Literature is categorised mainly in two streams: The West Bound Intellectuals, and the Religion Bound Nationalists. The gap between these two categories is as evident as the colour of waters of river Gaṅgā and Yamunā of the Prayāga region in Allahabad, as mentioned by the famous Sanskrit poet Kālidāsa in the 13th Canto of the famous Epic Raghuvansam.

I prefer to term this two tiers and bipolar approach as “Glassed Vision”. They saw, what they wanted to see –is the core idea behind this theory of Glassed Vision.

It would be relevant to quote K. Robert Dentan (1970), “.....In recent years anthropology has begun to face up to the implications of the truism that people do not respond directly to their environment but rather to the environment as they conceive of it: e.g. to animals and plants as conceptualized in their minds and labeled by their language. In other words, understanding human ecology requires understanding human conceptual systems. It is not enough to understand the role of a type of organism in economics and/ or ritual. One must also understand how the people involved classify and think about it.”

India’s intellectual past has been very fully opened up in the various stages of its literature, and can be read from its very beginnings by the modern world. The literature, the languages, the religions, and the social institutions of the country can here be followed without a break throughout a period of some 3,000years. The civilization thus revealed well deserves study in both in itself and for the light it shows on the present (Macdonell). India’s forest wealth in past and its present forest inventories show a remarkable degradation pattern. To arrive at some concluding comment on this, there arises a need to examine carefully the travel accounts of foreigners in India.



Megasthenes, the Greek traveller, travelled to India in 300 B.C. and lived in the city of Pāṭliputra. His work Indica has been reconstructed by scholars on the basis of his reference made by later writers such as Strabo (Greek Geographer, 64/65 BC to AD24) , Arrian(Greek Historian 92 AD- 175 AD), Pliny (Roman Naturalist and Philosopher AD 23- AD 79) and Clemens Alexandrinus or Titus Flavius Clemens (Christian Theologian, 150AD- 215 AD).

The immensity of the Indian rivers, especially of the Indus and Ganges system, is noted and commented upon by Megasthenes. The Ganges, “which at its source is 30stadia broad, flows from north to south, and empties its waters into the ocean forming the eastern boundary of the Gangaridai....” It is accordingly affirmed that the famine had never visited India and that there has never been a general scarcity in the supply of nourishing food.(Goyal).

Vedic literature invokes various aspects of nature as divinity. These divine powers play a pivotal role in the origin and existence of human life on the planet earth. Fire is the second most invoked deity of the R̥gveda. Fire is the physical form of one of the five primordial elements and has been expressed as the powerful Solar Energy, Wind Energy, and Hydel Energy in the cosmic form and lives within mortal beings as an abdominal energy. Fire in the forests kills demonic enemies and life threatening poisonous snakes and expands land mass by purifying with its lustrous flames. Gods, Demons, Priests and householders- all offer their oblations through Fire.

Vedic Hinduism did not make use of temples or icons of any kind: all one needed for worship was Fire, the proper offerings, and the assistance of highly trained priests.(Cummins)

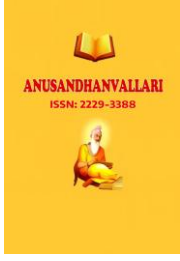
The knowledge of Fire and its various forms and appropriate usage of its each form was not unknown to Vedic seers. Today’s world is much in conflict with sustainable development and technological advancement. Alternative sources of energy are being explored to compose harmony amid man and nature. Vedic literature not only quest, inspect and introspect to bring such a harmony, but also bestows us the wisdom to utilize the natural resources.

One of the examples of soil and water conservation is in the Puśyaparva of Mahābhārata. Āruṇi had saved his guru’s agricultural farm from a broken and leaking reservoir. The modern concept of conservation (Mukherjee) – The wise maintenance and utilization of earth’s resources-is the combination of two ancient principles: - the need to plan resource management on the basis of accurate inventory and the need to take protective measures to ensure that resource do not become exhausted. Conservation is not a protective ‘locking away’ of resources by powerful elite. If you ‘lock it up’ it is anti -development work.

In ancient times (Rawat) forests were regarded as abodes of spiritual solace and the concept of preserving forests and wildlife developed around the hermitages of sages. These forest based hermitages propagated “Aranya Sanskriti” or a forest culture and human understanding of the fundamental ecological utility of forest ecosystems and their economic importance, which led to trees and animals being treated with veneration. Bahuguna (1985) stated that the solution of present day problems lies in the re-establishment of a harmonious relationship between man and nature. To keep this relationship permanent we will have to digest the definition of real development: development is synonymous with culture. When we sublimate nature in a way that we achieve peace, happiness, prosperity and, ultimately, fulfillment along with satisfying our basic needs, we march towards culture.”- Sunderlal Bahuguna.

4. Forest Fire Trilogy in Sanskrit Literature: Interpretations and Analysis:

The Forest Fires cannot be separated from the problems of a growing population, resettlement and a desire to more democratic participation in Government (Brimblecombe, Peter.2001).



I shall review the fire episode of Śatapatha Brāhmaṇa in the light of Brimblecombe's abovementioned inference about forest fires. Let me also mention that this review of forests and fires in Vedic and Epic literature is not new in itself. Many scholars in past have academically explored and conducted the researches and have concluded their findings. I am not questioning their intellectual interpretations, as their views have led my research to a little farther destination. Before enlisting the reasons for this disagreement in treating trilogy of episodes of King Mathava in Śatapatha Brāhmaṇa (Kāṇḍa 1, Addhyāya 4, Brāhmaṇa 1, Kaṇḍikā, 10-21), Forest Fire episode of Khāṇḍavadāh in Mahābhārata (Ādiparva, Addhyāya 214-225), and Forest Conflagration episode of Bhāgavata Purāṇa (SKANDA X, Chapter19); this background information for reading and understanding of the abovementioned Sanskrit texts is very important.

In the beginning of the later Vedic age the need for more land, the incentive to find access to the metal rich south-eastern lands started a new process of burning of jungles, as the Śatapatha Brāhmaṇa tells us and perhaps the Mahābhārata legend of the setting fire to the Khāṇḍava forest alludes to.¹ (Gupta, 2010)

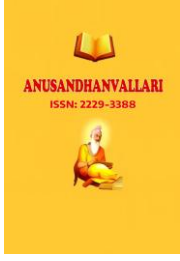
The legend as described in the Śatapatha Brāhmaṇa clearly indicates that as a result of the pressure of the expanding Aryan population in India, the process of deforestation started as a major factor in the age of the Brāhmaṇa. The myth of the Fire God (Agni) moving from the bank of the Saraswati up to the Sadānīrā (Gaṇḍaka) river, burning the forest on his way symbolically tells the storey of the clearing of jungles to accommodate the growing population. The legend is integrally reproduced here in order to offer an exact idea about the process of deforestation in the period of Brāhmaṇas. (Gupta, 2010)

Forest Fire as released from the mouth of King Māthava in Śatapatha Brāhmaṇa is very different in nature and description of the Forest Fire episode of Khāṇḍavadāh in Mahābhārata. The Forest Fire concept in Mahābhārata is more advanced in terms of technique, intensity, outcome and repercussion. The number of people involved and affected, the forest cover burnt the articulate sequential exposure of forest fire and aftermath by the writer of the great epic Mahābhārata is suggestive of the fact that the Khāṇḍavadāh was much more than a massacre of forest tribes to create landscape for the throne deficient king of Pāṇḍavas. The further corroborative facts are the knowledge of Fire and its various types in Mahābhārata are unmatched in other Sanskrit texts prior or posterior to itself. It seems quite evident that the forest fire episode is more close to science, technology and is nuclear in nature than to be defined as an anti-tribal condemnable act that is the key feature of Vedic Hinduism, as is expressed by key writers and scholars of eminence of the present times, to name a few: Ram Chandra Guha, Wendy Doniger, Romila Thapar etc.

Benjamin Strauss wrote in his paper published in the *Proceedings of the National Academy of Sciences*, if global warming continues at its current rate through the year 2100, at least an additional 1,100 cities and towns will be mostly under water at high tide in the distant future because climate change multiplies their impact over hundreds of years. Even if greenhouse gas emissions stop, the problem of sea levels rising will not go away because carbon dioxide stays in the atmosphere for centuries — even millennia — and contributes to two factors that raise sea levels: higher temperatures and the loss of Greenland and Antarctic ice sheets. "The current trend in carbon emissions likely implies the eventual crippling or loss of most coastal cities in the world," writes Strauss, who directs Climate Central's program on rising sea levels. Strauss concluded that tragedy can be avoided or mitigated with deep global pollution cuts followed by technology that sucks CO₂ from the atmosphere. (Koch)

Is he talking about two main types of fire, the ritual fire- mainly used in Vedic sacrifices which is responsible for generating good quality, environment-friendly gases in abundance and the forest fire- resulting in the loss of life and habitat of forest dwellers and causing increase in green house gases sufficient enough to cause increase in

¹ Sukumay Bhattacharya, Literature of the Vedic Age, Vol.2, p.209



earth's temperature. The great epic of Mahābhārata illustrates many varieties of ritual fires- in the Āngirasa episode. This knowledge and classification of various types of fires- is suggestive of some advanced knowledge of environment –friendly techniques of sacrificing particular Havya at a particular time.

The entire episode of Khāṇḍavadāh in Mahābhārata and forest conflagration episode of Bhāgavata Purāṇa is suggestive of demonic Fire responsible for damaging the environment.

Sanskrit sources, ranging from Vedic Literature to most contemporary modern literature of new millennium have illustrated multi-faceted Fire in most magnificent manner. Fire is God, Carrier of Sacrificial Oblation to Gods, The most important of terrestrial deities is Agni (the God of Fire), next to Indra, he is the most prominent of Vedic gods, being celebrated in more than 200 hymns. He invades the forest and shears the hairs of the earth, shaving it as a barber a beard. His flames are like the roaring waves of the sea. He bellows like a bull when he invades the forest trees; the birds are terrified at the noise when his grass-devouring sparks arise.²

In a number of hymns of Ṛgveda, Agni is described in close relations with the forest, underlining the process of deforestation. He is the close comrade of the Rivers as is a brother of his sisters. He devours the earth's forests as a King his enemies. When driven by the breath of the wind he rages around the forests, the flame tears, asunder the hairs of Earth's body (Gupta)

There is a mentioning of forest conflagration and demonic fire in the Bhāgavata Purāṇa – this demonic fire wants to kill Kṛṣṇa on the orders of king Kāṁsa of Mathurā- My question is how can Fire play enemy to Kṛṣṇa in his childhood and beg before him for the animal fat in the Khāṇḍava episode of Mahābhārata wherein Kṛṣṇa is in his adulthood? Such a different attitude shows that the Fire God of Vedas faced a change in its identity, role and powers in the times of Mahābhārata and Bhāgavata Purāṇa.

There were mainly two types of Fires in the abovementioned literature: Divine Fire and Demonic Fire. It is, however relevant to mention that the Fire God in Hindu life is still considered to be pure and truthful. It carries oblations to the Gods and Pitaras. How can such divine Fire God be illustrated as demonic fire desirous of killing the reincarnation of lord Viṣṇu?

The answer is that the demonic fire is the name of fire producing weapons responsible for mass destruction. It's a well known fact that the nuclear experiments are done away from towns and during wars, those are targeted at townships. Mahābhārata is no such exception to this fact. Khāṇḍavadāh was a nuclear trial and the great war of Kurukṣetra was its war usage.

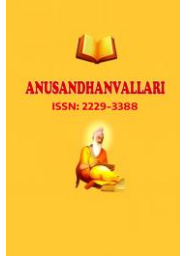
5. Research Findings and Conclusion:

1. Anthropogenic influence on global climate is well accepted by many scientists today. This idea was known to Sanskrit literature.

2. There are some limitations of this study : there is a gap between antiquity and modernity on the basis of following :

Geomorphic changes due to time, population, industrialization, advanced needs and expectations from life, philosophy and ethics.

² A. MacDonnell, A History of Sanskrit Literature, pp.76-78



3. There are many similarities between contemporary environmental issues and past concerns in Sanskrit writings.

4. Forest Fire incidents are either due to natural turbulence or due to human interference. Many of such disasters occurring in South Asia are found to be an outcome of negligence, greediness to expand the landscape and sometimes to hide the evidence of criminal activity in the woods. The objectives are individual and consequences are Global! In many such cases the offenders are unaware of the intensity and long-term devastation caused by their neglect.

5. It is therefore strongly suggested to the policy makers that environmental education at early ages shall play pivotal role in safeguarding the forest wealth of South Asia.

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