

# Forest Management in an Ancient Indian Scriptures Prospective with Specific Reference to Ramayana: Literary Evidence

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## Abstract:

The relationship between ecological and culture is more apparent in ancient Indian texts, and this is mirrored in several scriptures. Ancient Indian scriptures including the Arthashastra, Sathapatha Brahmanas, Vedas, Manusmriti, Brhat Samhita, Ramayana, and Mahabharata all represented the sustainable ideas of forest ecology and conservation. The Vedic teachings demonstrate how deeply embedded sustainability was in the minds of the ancient Indians. For example, the Atharva Veda (Chand, 1997) hymn 12.1.11 reads: "O Earth! Pleasant be thy hills, snow-clad mountains and forests; O numerous coloured, firm and protected Earth! On this earth I stand, undefeated, unslain, unhurt." Another hymn from Atharva Veda (12.1.35) reads: "Whatever I dig out from you, O Earth! May that have quick regeneration again; may we not damage thy vital habitat and heart." In particular, our Indian Scriptures such as Aranyakas ("forest" works), Upanishad, and Smritis contains many descriptions on the uses and management of forests, and highlight sustainability as an implicit theme. According to the Vedic traditions, every village will attain wholeness only when certain types of forests are present. Some of these are, however, equivalent to the 'protected areas' and 'production forests' of today. The concept of participatory forest management, an important forest management paradigm today, also was prevalent in ancient India, as illustrated by the example of a village committee overseeing the maintenance of forests.

In this context, Valmiki's Ramayana is the most important source of botanical information. It is very useful in clarifying the botanical identity of various species of plants and also their importance. It contains an extensive list of plants and also their specific geographical location. The epic also covers a vast area from Ayodhya to Lanka and thus gives an accurate account of different landscapes, mountains, river basins, forests and so on. When the Ramayana was being written, there were thick forests in Naimisharanya, Chitrakut, Dhandakaranya and Panchavati. The Bala kanda mentions the plants and forests of the region on the other side of the river Ganges, Kishkinda kanda discusses the geography and forestry and the biodiversity of the Pampa lake area; and the Aranya kanda describes the foliage of Sage Agasthya's hermitage; Panchavati was a model of a modified ecology with fruit yielding and medicinal plants where cereals, millets and rice were found. The plants which are mentioned have an economic value, being sacred and utilitarian.

Despite the prevailing notion that forestry as a "science" and "practice" originated in the Western Europe and further advanced in North America (Lewis, 2005), the principles of forest conservation and sustainable management were well entrenched in the pre-historic India. Forestry traditions have been documented in the Ancient Indian Scriptures for long. For example, the Vedas contain several descriptions on the uses

and management of forests; environment consciousness, besides natural resource and biodiversity conservation, were intrinsic features of rituals and practices. Both productive as well as protective aspects of forest vegetation were emphasized. In this paper authors are making an effort to understand forest management from ancient scriptures perspectives. Vedas, Upanishad, Ramayana and Bhagwadgita has been used to understand. This paper is purely based on secondary, which is based on these research methodologies called **Hermeneutics**, which is the interpretation of ancient or classical literature (Ramayana, Vedas, Bhagwadgita) **Epistemology**, which is knowing and understanding the branch of philosophy concerned with the nature and scope of knowledge.

**Keywords:** Forest Management, Biodiversity, Ancient India, Ramayana, Bhagwadgita, Sustainable Management

### **Introduction:**

Ever since the advent of the industrial revolution, forests and their resources have been subject to overexploitation worldwide. Forests and its resources play a vital role in managing both the ecosystem and the economy of a country. The depletion of forest cover and resources is a significant threat to our country's ecosystem and economy. This research paper focuses on a range of issues that have led to the steady decline of forest resources. Furthermore, the paper also discusses the current forest laws and suggests solutions to replenish the precious forest resources. The histories of humans and forests have long been interlinked. From ancient times, forests were regarded as places of spirituality and striking imagery. They have inspired human traditions and folklore, appearing as symbols of life, knowledge, and fertility. By studying the commentaries on Vedas and other ancient texts it can be deciphered that forests were considered next to Gods. It can also be concluded after looking at Kautilya's Arthashastra and the rules and regulations of the various rulers before the British era that protection and conservation of forest was one of the important goals. However, ever since the British era the policies and legislations that were aimed at forest conservation have instead undermined their true purpose. Most of these policies have been contradictory in nature and further escalated the loss of forest resources and wealth by giving rise to new conflicts and distortions

The changing timberland's construction and cover can be solidly associated with the turn of events and change of human headways. All through the long haul, as man progressed the backwoods began one small step at a time depleting. The creating people and man's dependence on the forest have been generally responsible for this. All old texts have a few notification of the timberlands and the activities that were performed there. Woods were adored by people and a tremendous number of severe administrations focused on trees and plants. The Agni Purana, explained 4000 years earlier, communicated that man should guarantee trees to have material increments and severe gifts. Something like 2500 years earlier, Gautama Buddha addressed that man ought to establish a tree at standard spans. Consecrated woodlands were separate around the sanctuaries where certain principles and rules applied<sup>2</sup>. Right when Chandra Gupta Maurya came to control around 300 BC, he comprehended the meaning of the forests and designated a high authority to deal with the forest areas. Ashoka communicated those wild animals and woods should be saved and guaranteed. He dispatched tasks to lay out trees for an immense degree. These principles continued regardless, during the Gupta time span. During the Muslim interruptions a gigantic number of people expected to escape from the attacks and take refuge in the forests. This was the beginning of a time of movement to the boondocks. They got colossal locales liberated from boondocks to make a way for

settlements. The Muslim intruders were all sharp trackers and subsequently expected to have patches of forests where they could go hunting. This reliable that the trees there were not felled, and the boondocks biological system was not adjusted. The Mughals showed more interest in gardens and their development. Akbar mentioned the planting of trees in various bits of his domain. Jahangir was eminent for fanning out fantastic gardens and laying out trees. In around 2000 BC, the Aryan public came to India. Their essential occupation was pastoralism likewise, agribusiness so they got a critical measure free from woods of India for developing. The consuming of Khundava woods by the Kshatriya people was, as depicted in the Mahabharata, 'the first semi-historical verification of forest destruction in Quite a while. In Rigveda, the confirmation of using plants as Remedial flavors is open. For making agrarian completes, chariots, utensils also concerning family purposes, wood and non-wood things used to be assembled all through Vedic period. In any case, Ribbentrop 1(1900) battled that it didn't fundamentally influence Indian forest area or the boondocks tenants, since little of the forest was destroyed. Regardless, during the Brahmanical and the Buddhist time frame, a large portion of the country was covered with woods. From the 'Arthashastra' of Kautilya (350 BC - 283 BC) and 'Indica' by Megasthenes (350 BC - 290 BC), it is found that the heads Maurya (321 BC - 184 BC) and Gupta (280 - 550 Promotion) used to accumulate pay from stumble and non-timber forest area things. They even had a well-organised Timberland Division for the organization of boondocks and forest things. Woodlands authorities used to take drives to assemble boondocks cover and forest area things.

### **1. Research Methodology:**

The objective of exploration process is to deliver new information or extend comprehension of a subject or issue. This review depends on a hypothetical examination procedure called Hermeneutics, which is the translation of old or old style writing (Valmiki Ramayana), Epistemology, which is knowing and understanding the branch of philosophy concerned with the nature and scope of knowledge

### **2. Ancient Literature and Ecology:**

Nature is an integral part in Hinduism. Hinduism has forever been a naturally delicate way of thinking. The Vedas, Upanishads, the Puranas, the Smritis, the Ramayana, the Mahabharata and Bhagavad Gita contain the earliest directives for conservation of climate and natural equilibrium. Nature or earth has never been believed as an unfriendly component to be vanquished or overwhelmed. Man is illegal from taking advantage of nature, truth be told. He is educated to live as one with nature and perceive that divine nature wins in all components, including plants and creatures. Vedic culture and Vedic sacred writings uncover a reasonable idea about the world's biological systems and the need for keeping up with their equilibrium. 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" (Dwivedi and Tiwari, 1987). These verses carry a message to desist from inflicting any injury to the earth and embark upon constant a forestation for survival or else the ecological balance of the earth would be jeopardized (Renugadevi, 2011). 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" those days, but it was referred in terms of "Poisoning" of environment. The Atharvana Veda verse 18.17 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). The Bhumi Sukta or Hymn to Earth in Atharvaveda (12.1) consists of 63 verses,

which are very important. It does not view earth as a lifeless inanimate object as the modern physical scientist does. It begins with the idea that earth is supported by not mere gravitational forces, but by Truth, Consecration (Diksha) and Askesis (Tapas). Earth can be made a happy abode for humans only when they live by Satya and Rita i.e Truth and Right. Earth spreads out for us and makes us prosperous. A.V (12.1.12) refers to the self-cleaning nature of earth. Further, 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” (Joshi and Namita, 2009). This is very relevant in the context of pollution of rivers and lakes and the resulting ecological diseases which the modern civilization is experiencing. The Yajurveda too mentions about plants and animals, the ill effects of cutting the 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 air” (Y.V.13.37). 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.” The Upanishads are appeared in the later period of Vedic Age. The Upanishads sages perceived the existence of God in trees and other plants and those were gifted to man as a companion for mutual survival. “The God who exists in the Universe, lives in air, water, in fire and also in trees and herbs, men should have reverence for them”. The Iso-Upanishad has revealed the secrets of existence of life on earth and the importance of every organism for mutual survival. We have 18 main Puranas and 18 Sub-Puranas. All Puranas contain messages related to conservation of environment. For example, in Narasimhapuranam mentioned that killing of birds for eating was prohibited. “O, wicked men, if you kill a bird then you are bathing in a river, pilgrimage, worship and yagnas are all useless”. In the Skanta Purana, “The inhabitants of a house which has sacred basil (*Ocimum sanctum*-Tulsi plant) are fortunate. In Varah Purana (172.39) says that “One who plants a peepal (*Ficus religiosa*), one neem (*Azadirachta indica*), one Banyan (*Ficus benghalensis*), two pomegranates (*Punica grantum*), two orange (*Citrus reticulata*), five Mango trees (*mangifera indica*) and ten flowering plants or creepers shall never go the hell’. The Matsya Purana mentions about ‘Vanamahotsava Festival’. In Padma Purana (56.40-41) ‘the cutting of a green tree is an offence punishable in hell.’

### 3. The Epics & Forest:

Epic is one of the most established and generally famous beautiful classes on the planet. Epic is a conventional type of story verse that depicts chivalrous deeds of extraordinary legends in a conflict or experience and the mediation of Divine beings and Goddesses on human existence. This is an extremely lengthy sonnet that utilizations raised or lofty language-meaning conventional language. Culture and history of a country or race is in many cases reflected in an epic. For instance, Greek artist Homer's extraordinary legends - Iliad and Odyssey-are immensely founded on Greek folklore and in this way it mirrors the Greek culture. Exactly the same thing goes to Indian sagas Ramayana and Mahabharata through which Indian culture is uncovered.

It is said, 'Vedah Prabhu Sammitam', that implies Veda behaves like a ruler, yet Veda was not accessible for all segments of the general public; to grant the information on Veda to everybody, in a basic language, Sage Vyasa re-coordinated the more seasoned type of Purana in to 18 Mahapuranas. In this manner a Purana dislike a ruler but rather turns into a companion of its peruser, "Puranam mitra sammitam" as how

a companion directs an individual towards beneficial things of life, the Purana likewise directs the perusers well in to right way of the life. As years passed, Vedic substance came in to considerably more an easier structure, and that how an epic was conceived and it was 'Ramayanam' Adikavyam, the primary epic. 'Kavyam kanta sammitam' that implies an epic resembles one's own cherished can direct, motivate, benefit, be calming and engage, Kavyam engages and drives its perusers towards the way of illumination.

#### 4. Ramayana & Forest Management:

Ramayana is the First Poem (Adi Kavya) in Sanskrit language. The communication among man and nature is very clear all through the poem. The absolute first occurrence which shaped the wellspring of the Legendary verse is the episode of Valmiki reviling a tracker who killed a heron bird when it was in association with the female partner. The accompanying stanza blasts forward from the mouth of Valmiki which turned into the "first" section to be made by a man:

Maa Nishaada pratishtaam tvam agamah saashvatee samaah, | Yat Krauncha-mithunaad ekam avaadheeh kaama-mohitam || "O Hunter! You won't live for since a long time ago you killed the male one out of a couple of heron birds as it was having intercourse." (Gita Press) This proposes the significance appended to the conservation of lives in timberlands. None was qualified to kill any creature, bird or creature nearby the tapovana (repentance forests) or even the woods except if it was totally fundamental. In the Bala Kanda, Sumantra, the minister of King Dasharatha, details the importance of Sage Rishyasringa and beseeches the king to invite that sage to preside over the contemplated Vedic ritual, for that Sage's entry into any kingdom is auspicious for that land and people. Sage Rishyasringa loses no time with his servitor-ship to the Sacrificial Fire and also to his celebrated father, and during this period alone there will be a famed and very strong king Romapaada, a valiant in Anga country... [1-9-7, 8a]

It plainly mirrors the demonstration of men ought to be to get the downpour in season, in time. Woodlands are the most striking elements of the land surface. During the Ramayana age there were thick woodlands e.g., Chitrakoota, Naimishaaranya, Dandakaranya, Panchavati and so forth, which had large amounts of untamed life. An exceptionally fascinating and exciting piece of Rama's life is related with his wanderings in the thick woods of India. At the point when Sri Rama was exiled for Vanavas, Sri Ram came to Sita to illuminate her about forest. Sita requests that Sri Ram take her to the woods. Sri Ram portrays different difficulties of remaining in backwoods and entreats Sita not to go to forest: "Sita, I am preventing you to come with me for your own welfare. You are the princess who cannot even withstand the heat of Sun's rays, then can bear with the hard life in the forest? There will be havoc created by wild animals, cruel birds, reptiles, rakshasas, yakshas, ghosts etc in the forest. There will be danger every moment. The roads hard enough, covered with thorns and stones. More than that I have to live as a Sage and should perform rituals strictly"

Aranyakanda dwells on the forest at length. Typically (AK III.7.13-15), the forest is described as full of flowers, roots and fruits—beneficial and familiar vegetation. It is depicted, in other words, as an idyllic extension of the domesticated rather than as a repugnant or frightening 'other.' There is little that is awe-inspiring or daunting in such descriptions. This notion of a benign wilderness is evident in references to tame animals and birds, to lotuses and peacocks (ibid.). Pancavati, the spot to where Rama, Lakshmana and Sita are directed by the sage Agastya, and which becomes their abode during this period of exile, for instance, is described as abounding in fruits, roots and birds (AK III.12.19). The animals that flock around the hermitage include an odd assortment—yaks, antelopes, apes, deer, monkeys and the kinnaras (AK III.41.10-11). Also intriguing is the landscape that Ravana surveys as he makes his way to Pancavati. This



includes the typical fruit and flowerbearing trees (AK III.33.11-32), the lotus ponds, the hermitages with their altars, trees, a whole array of sages classified in distinctive ways, serpents, birds, the semi-divine gandharvas and kinnaras, apsaras, heaps of jewels, conch-shells, gold and silver, cities, and a banyan tree that had been the abode of sages, who were protected by Garuda. The evocation of the fantastic is unmistakable, and, the forest then becomes impenetrable from the point of view of the historian in search of the real or the tangible. This fantasy world is perhaps is perhaps best example.

The Valmiki Ramayana was the very first rendition written in script, just about a few centuries after its development on the grounds that for such a significant stretch there was no content accessible to compose and the epic was being passed on by oral practice from age," said KN Ganeshiah, PhD, co-writer of the review (email, November 10, 2009). "This implies during these long stretches of oral practices there might have been a great deal of twisting/modification brought into the story and maybe just Valmiki would understand what he built." The Ramayana epic gives short notices of a spice named sanjeevani, and that signifies "what gives life" in Sanskrit and should revive the dead. There are numerous interpretations of the first Sanskrit rendition which will in general confound the subtleties of the specific section on sanjeevani, yet there is a sure measure of agreement for this short piece of the story: Rama's sibling Lakshmana is injured and becomes oblivious or generally in a condition of death. Hanuman, the lord of the monkeys, is approached to go to an Indian mountain range (however there isn't an agreement about which one) to accumulate restorative spices to recuperate him: sanjeevani (one that revives the dead), sandhanakarani (restorer of skin), savarnyakarani (restorer of skin tone), and vishalyakarani (remover of bolts). Hanuman brings the entire peak to the combat zone to guarantee that he brings the right spices. It is after Lakshmana inhales a fragrance remedial plan of the accumulated spices that he is awakened from his dead state. Since sanjeevani is said to restore the dead, it is the spice accepted to have done most of the mending. The scientists additionally call attention to that different spices recorded in the definition are not frequently referenced in that frame of mind of Indian fables and sanjeevani has been referenced in passing different spots. *Cressa cretica* has a few normal names in Sanskrit including Sanjivani. It has been customarily utilized in the treatment of disease, asthma, biliousness, urinary release, outside irritation, and torments, as per the Jeeva Sampada data set, the natural surroundings of this plant is along lakes, shores, dry fields, and timberlands so it isn't found in a mountain range. In this manner, because of the geological rule, the way that there is no proof of its treating a close passing state is debatable. Backwoods assets additionally were a significant basic part of the Ramayana. In the Ramayana, Rama, Sita and Lakshman took cover in the Chitrakoot timberland and committed their life to preserving and cherishing the greenery until Ravana came and snatched Sita. The rich restorative plants got from the timberlands were additionally referenced in the Ramayana as Sanjeevani spice was utilized to treat Lakshmana when he was injured in fight. These are only a couple of models with regards to how timberland asset protection tracks down its premise in the old strict texts of India. The Ramayana hence gives huge and intriguing data about Nature with regards to all her assortment. Living in congruity with Nature is the method of the cultivated and this was invited by all. Conflicting with Nature was viewed as exploitative and sad.

The blessed sages living in woods and mulling over the banks of waterways were regarding The earth's life force. The people who made the woods and hallowed recognizes their safe-houses for grotesque and corrupt exercises were put somewhere around Rama with an iron hand. This was essential for the plan of laying out Dharma, as articulated by Krishna in the

Dvapara Yuga:

Paritraanaaya Saadhoonaam vinaashaaya cha Dushkritaam | Dharma-samsthaapanaarthaaya

Sambhavaami Yuge || (Gita IV. 8) "I will show myself occasionally, to safeguard the temperate, to rebuff the evil and to lay out Dharma on a solid groundwork."

Major forests of the Ramayana as mentioned in the Ramayana are:

- A. Chaitraratha Vana: Located north of the source of Yamuna and west of the Bhagirathi around Dehradun and Mussoorie. It was a very dense forest belonging to Kubera.
- B. Nandana Vana: It was also a thick forest in the Himalaya belonging to Kubera and was noted of its scenic beauty. Lodhraka, Padmaka (a species of sandal wood) and Deodara were the main trees found in the Himalayas during the Ramayana period. Deodara (called Devadaru) is one of the most important timbers of India.
- C. Saala Vana: This was to the west of Ayodhya, stretching between the Gomati and Sarayu rivers. It was a huge forest during the Ramayana age.
- D. Kurujaangala: A forest stretched between the upper portions of the rivers Sarasvati and Drishadvati in the northwest of Hastinapura was known as Kurujaangala.
- E. Bhaarunda Vana and Varootha Vana: These were located in the northern India and it is very difficult to identify them now.
- F. Naimishaaranya: It was a very famous forest tract noted for sacrifices and known as the abode of ascetics. It stretched on the left bank of the Gomati and is identified as Nimsar, 45 miles to the northwest of Lucknow.
- G. Saravana: It was a forest of reeds and was stretched in the Himalayan region.
- H. Taatakaa Vana: The district of Shahabad (Bihar) was occupied by Maladas and Kaarushas in the epic age. In these principalities, there was a dense forest inhabited by lions, tigers, wild boars and elephants and thickly set with Dhavas, Asvakarnas, Kakubhas (Arjunas), Bilvas (Aegle marmelos), Tindukas, Patalas and Jujubes. The forest region was occupied by a Yaksha woman called Taatakaa, who was the sovereign ruler of the forest. It also included some parts of Chotanagpur plateau.

## 5. Significance of the Study:

Our forest resources are extremely essential in our lives. They work well for us. There is a ton of reliance on backwoods by individuals. It helps in making a solid environment for creatures, birds, and different species. Timberlands assume a fundamental part in making oxygen for us people. It swift through the carbon dioxide from the air and, through that produces oxygen for us to relax. In the event that the trees are not safeguarded, then we are imperiling ourselves. We are doing this by chopping down every one of the trees to increment framework and guarantee formative activities happen. These timberlands likewise assume a significant part in guaranteeing that environmental change doesn't occur in our Planet Earth. Environmental change happens because of the expansion in degrees of ozone depleting substances. These ozone harming substances increment the possibilities of environmental change happening. There can be an expansion in degrees of temperature. Due to these, we see an expansion in sea levels, which occurs because of the liquefying of glacial masses and ice shelves. Presently we have discussed the couple of advantages of woodlands and its significant job. In any case, these days our backwoods are being chopped down for our own advantages. Nonetheless, these advantages are not for the right reasons. Our woodlands should be saved to keep up with biological equilibrium. Consequently, we will take a gander at ways of monitoring our forests.

### 1. The role of indigenous communities in conserving our forests-

Almost 68 million individuals have a place with these kinds of clans and have resided in the backwoods all through their whole resides. They live in the shut region of the timberlands. These kinds of individuals eat or eat crude and uncooked food. They might consume crude blossoms or natural products. These individuals have fostered a nearby bond and relationship with the timberlands and have spent their whole lives there. There are numerous manners by which they have saved the forests, like

- a. **Preservation through strict techniques:** These woods clans have a profound confidence and faith in nature divine beings and goddesses. They trust that to ration the nature and the climate, and we should have a profound confidence in the trees and plants. The ancestral in a real sense treat these plants and trees there in those timberlands as divine beings and goddesses. They feel that their requests would switch over completely to good energy for these plants and trees who might have a long life later on.
- b. **Saving crop plants to be consumed as sources of food:** These tribal's likewise attempt to preserve the harvest plants in the woods, so they can be utilized later for utilization. These incorporate different yields like rice, millets, and grains. These yields have been consumed by clans who have a place with the locales of the North-East of India. The names of these clans are as per the following: - a) Jhatin b) Garo and c) Khasi clans. They have likewise been monitored in areas of Focal India. The clans here are as per the following: - a) Santhal b) Gond and c) Munda Tribes

### 2. Significance of Establishing trees in saving our Forests:

Because of the rising population on the planet, the necessity for modernization increments, an ever increasing number of individuals come into enormous urban areas for their positions. Because of this, to oblige these individuals, the public authority specialists put resources into additional foundation and formative tasks. The trees accordingly get down due to oblige space for the streets and the foundation project. This is in the urban areas, where there is no woodland accordingly. Yet, we have been seeing of late that numerous formative and framework have been started in the backwoods. This has prompted the chopping down of trees in the backwoods. These trees go about as a permanent place to stay for some species. Region of the Western Ghats, which is viewed as one of the eight focal points of natural variety in India, have been brought down to guarantee that framework happens around here. Numerous species that consider these backwoods their home have lost their unique living space because of expanding urbanization and framework. The manners by which we can address this is by establishing more trees in void spaces. This will assume a significant part in reestablishing the biology and giving another rent of life to the species that have lost their normal territory. The advantages of establishing trees are on the grounds that: - They help in reestablishing the biology and the climate. It helps in giving us oxygen, goes about as a permanent place to stay for wild creatures and different species. A portion of the timberlands are the spots where streams start in India. They help in saving the water.

### 3. Reducing the impact of forest fires in India

A large portion of the woodlands lose a greater part of their area because of the effect of the timberland fires on them. Because of these woods fires, numerous creatures and plants lose their normal environment. There can be an expansion in ozone harming substances being delivered to the climate because of the effect of the timberland fires. This prompts environmental change in the end. As of late we have found in Karnataka that the Bandipur we have lost a large number of its forest regions because of the effect of backwoods fires. Numerous creatures lost their homes and many were additionally seen as dead. Consequently to guarantee that these kinds of woods fires don't happen in backwoods in India. Certain strategies must be embraced. These strategies are as per the following: -



- A. The public authority should guarantee that a fire peril survey framework should be executed. This is one technique embraced in most far off nations to recognize woods and prevent them from spreading.
- B. The public authority should likewise teach the woods networks on the right and viable utilization of timberlands energizes in the woodlands. More often than not, the backwoods networks know nothing about the perils these fills might cause to the timberlands Even a little light of matchstick might cause destruction in the woodlands. Thus, this can be constrained by instructing the woods networks on the effective utilization of timberland assets.
- C. Putting frameworks where the weather conditions can be recognized. It can likewise be ascribed to the way that backwoods fires happen because of dry season like circumstances. A framework should be executed to take a gander at whether dry spell like circumstances are there in the backwoods. These are the arrangements that should be carried out so our woods assets are not taken advantage of. Our people in the future priority the opportunity to observe the backwoods in their full magnificence and we should endeavor as people to safeguard them. This should be possible by outlining thoughts and most significant the execution should happen at the ground level. If not, the thoughts would be of no utilization. In all decency, our woods assets should be saved so we can have a more promising time to come and, later on, we should keep on saving it.

### **Discussion: Plants and Animals in Ramayana in relation to Biodiversity:**

The Ramayana, written by Valmiki, includes detailed descriptions of plants, water features, and forest vegetation. India's epic poems are filled with references to stunning mountains, lakes, rivers, and forests. The text includes passages that describe the land's surface, biodiversity, vegetation, and the degree of wildness. The descriptions in the Ramayana emphasize the dominance of nature. The Ramayana's geographic scope ranges from Ayodhya in modern Uttar Pradesh to Sri Lanka, encompassing four major ecosystems: tropical deciduous forests, dry and moist deciduous forests, Sri Lanka's evergreen tropical forests, and the Himalayan alpine region's semi-forests (Roy, 2005). the animals mentioned by Valmiki in the Ramayana. Valmiki provides descriptions of the fauna—animals and birds—that are just as extensive as his descriptions of the epic's plants.

The Ramayana uses a number of technical terms. A common example is "vana" and "aranya," which can be used interchangeably and appear to have the same meaning. Vana refers to a cultivated forest, which could otherwise be classified as a sub-forest. Aranya means "wilderness," and the characteristics of an aranya, or forest, are reflected in the meaning itself. Other forest characteristics, such as land surface, biodiversity, vegetation, and wildness, can be used to describe it. A good example is Rama's warning to Sita about the numerous dangers lurking in the forest, where wild animals like lions, snakes, scorpions, and thorny bushes abound (Ayodhya Kanda, Adhyaya, 28). The wilderness is particularly described as "raudra" (fury) and "vibhatsa" (terror). These terms are among those used to describe the four rasas, or emotions, that permeate the forest (Lutgendorf, 2001). Valmiki's Ramayana offers not only remarkably precise descriptions of flora but also of fauna.

### **Chitrakuta Forest and Hill**

The Ramayana describes Chitrakuta as a "Maha-vana," or great forest. However, it's not a frightening wilderness. On the contrary, Valmiki's description of Chitrakuta evokes a sense of purity and spirituality about the location. This area has two natural ecosystems: the Chitrakuta hill and the Mandakini river. Valmiki frequently uses the terms "ramya" (beautiful) and "tirtha" or "punya" (spiritual abode) to describe

this breathtaking landscape. In fact, during the first part of his exile, sage Bharadvaja advises Rama to settle in the Chitrakuta forest.

Valmiki offers a vivid description of the hill and its surroundings (Ayodhya Kanda: 54.29; 94.4-13). When it comes to fauna, Valmiki makes specific references to both carnivores and herbivores. Elephants, various deer species, bears, monkeys, tigers, cheetahs, and deer, the most prevalent animal in this forest, are all specifically mentioned. The peacock, cuckoo, and small cranes are among the birds mentioned.

The meandering river and its peaceful surroundings provided a natural habitat for a variety of aquatic birds, including the Rathanga (ruddy sheldrake), Kaarandava (coot), Krauncha (pond heron), Plava (heron), Hamsa (swan), and Natyuha (gallinule), as well as more common species like the cuckoo and Cakora, which added to the beauty of the scene with their melodic background songs.

Animals mentioned in the Chitrakuta forest include the Golangula (cow-tailed monkey), Karandava (coot), Koyasthi (green-bill coucal), Kraunca (pond heron), Mahisha (buffalo), Natyula (gallinule), Plava (possibly a grey heron), Prisata (spotted deer), and Riksha (bear). He has also mentioned singing birds like Kokila (Indian koel), Mayura (syn. Varhi peacock), and a migratory bird like Siarasa (Indian crane). This demonstrates that Valmiki was not only a skilled botanist but also a zoologist.

## 6. Conclusion:

In tracing the historical trajectory of forestry in India, it is evident that the relationship between humans and forests has undergone dynamic shifts. From hallowed forests in old times to the complexities of Mughal nurseries and English period backwoods regulations, the story unfurls a complicated transaction of social, strict, and monetary elements molding woodland the executives. Forest is the main asset. Since from ancient times in India its considers as Mother Nature, Mother Earth. Our old sagas specifies about significance of woodland, its assets and protecting the important assets as well. In this paper an endeavor is made to understand Forest Management from old Indian Sacred text perspective.

## References:

1. Bhargav gowd,” evolution of forest management in india: from ancient wisdom to modern challenges”
2. Aneshaiah, k.n., r. Vasudeva and r.uma shankar, 2009, “in search of sanjeevani”, current science, vol. 97, no.4, pp.484 – Lutgendorf, P., 2001. “City, Forest and Cosmos: Ecological perspectives from the Sanskrit epics”, Hinduism and Ecology, ed. Christopher Chapple, Key and Tucker, Mary Evelyn, pp. 276-278, Oxford University Press.
3. Roy, Mira, 2005, “Environment and Ecology in the Ramayana”, Indian Journal of Historical Science, Vol. 40, No. 1, pp. 9 – 29.
4. David Lee, 2001, “The Natural history of Ramayana”, Hinduism and Ecology, ed. Christopher Chapple, Key and Tucker, Mary Evelyn, pp.260-61, Oxford University Press.
5. Vyas, S.N., 1967, India in the Ramayana Age, Atmaram and Sons, Delhi.
6. Agrawala, V.S. 1970, Ancient Indian Folk Cults, Prithvi Prakashan, Varanasi.
7. hatla, N., T. Mukherjee and G. Singh, 1984, Plants: Traditional worshipping, Indian Journal of Historical Science, Vol.19, No. 1, pp. 37 - 42.
8. Ganeshiah, K.N., R. Vasudeva and R.Uma Shankar, 2009, “In search of Sanjeevani”, Current Science, Vol. 97, No.4, Pp.484 – 489.
9. Reena, Antony and Rini Thomas, 2011, “A mini review on medicinal properties of the resurrecting plant Selaginella bryopteris (Sanjeevani)”, International Journal of Pharmaceutical & Life Sciences,

Vol. 2, No. 7, Pp. 933 – 939.

10. Roy, Mira, 2005, op.cit. pp. 9 – 29.
11. Brockington, J.L., 1984, Righteous Rama, Oxford University Press, New Delhi.
12. Srimad Valmiki Ramayana, translated and presented by Sri Desiraju Hanumanta Rao (Bala, Aranya and Kishkindha kanda), and by Sri K.M.K. Murthy (Ayodhya and Yuddha kanda) with contributions from Durga Naaga Devi and Vaasudeva Kishore (Sundara kanda) retrieved from <http://www.valmikiramayan.net/>.
13. Chandarashekara Aiyar, N., 2013, Valmiki Ramayana, C.P.R. Publications, The C.P.Ramaswami Aiyar Foundation, Chennai
14. PLANT & ANIMAL DIVERSITY IN VALMIKI'S RAMAYANA May 2019 C.P.R. Environmental Education Centre, Chennai ISBN: 978-81-86901-20-5