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Sacred Groves as Living Heritage: A Socio-Cultural Analysis of Biodiversity Conservation in Tamil Nadu

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ABSTRACT

Today, numerous global afforestation projects are underway. The United Nations has allocated substantial funds through various conferences to expand forested areas. Deforestation remains a significant contributor to global warming, rising sea levels, and other climate-related issues. Consequently, afforestation is deemed crucial in the current context. To achieve this, various programs and policies are being put into action. Afforestation is also the 15th target of the Sustainable Development Goals (SDGs), and all nations are striving to implement this initiative in diverse ways. This afforestation project has been successfully implemented by the Tamil society through its cultural activities for a long time in the name of '*Kovilkaadu*' known as Sacred Groves, Temple Forest centered on Deity. In India, from ancient times, there has been a tradition of worshiping deities Due to faith in these deities, people everywhere have come to revere and worship rocks, trees, weapons like swords and bows, and even animals. These practices have mostly originated from forested regions. The animals and birds that inhabit the sacred groves, regardless of their origin or reason, have come here without being harmed, and the wild animals play without being disturbed. The elders of each village have passed down stories, myths about the unique way each temple forest is formed, instilling fear and faith among the people, ensuring their protection even today. Therefore these groves are referred to as temple forests. If these forests are converted for any other purpose, the indigenous people who protect them will believe that the deities themselves will punish them, not just through legal action or penalties, but also by destroying the deities. Thoughts on the growth of forests in Tamil sangam ancient literature have been recorded. This article discusses the importance of forests in the current Sustainable Development Goals, the structure of temple forests in the Tamil cultural tradition, how they are conserved, and the biodiversity of Kovilkadu in tamilnadu

Key words

Afforestation, Tamil Culture, Sacred Groves, Indigenous Knowledge System, Sustainable Development Goals

Introduction

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a global call to eradicate poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. The fifteenth

goal is to increase the forest cover. Forests cover 30 percent of the earth's surface. About 1.6 billion people around the world depend on forests for their livelihood. More than 80 percent of the forests are animals, plants, and insects. Provides vital habitats for millions of species, and are vital sources for clean air and water, as well as forests to combat climate change. Every year 13 million hectares of forests are lost. At the same time, 3.6 billion hectares of dry land are turning into desert (https://sdgs.un.org/goals). Various programs are being implemented by the United Nations to increase the forest cover at the international level. Trees play a pivotal role in the betterment of society, the economy, and the environment (Nunez et al. 2020) Actions need to be taken across a broad spectrum of themes at various levels (local, regional, and national) of India for the actualization of the Sustainable Development Goals (SDGs), which require a significant land-use change towards afforestation, largely in Tree Outside Forest (TOF). Magnifying the trees will keep the temperature increase well below 2 °C, enhance carbon sequestration, check CO2 emissions, and provide many more solutions for soil erosion, pollution, the maintenance of biodiversity, and ecosystem services (Turner-SkoffCavender 2019). India is struggling to achieve many SDGs and has a global SDG rank of 117 out of 166 (Sachs et al. 2020). The analysis revealed that approximately 133 million hectares of the TOF landscape have a greater than 60% potential for restoration of afforestation goals for landscape conservation, biodiversity, and ecosystem services and will serve more or less 15 out of 17 Sustainable Development Goals (SDGs) linked to the betterment of society, economy, and environment (Pujar, G. S., et al. (2022). There is a need for 50 billion tree targets in India that will act as a sink for approximately 0.85 billion tons of carbon dioxide (CO2) annually and many of them can be grown in a potentially suitable TOF landscape. This study is important for policymakers because it will serve as an outstanding synergic future strategy with long-term goals for tree expansion in the TOF of India (Ahmed firoz, 2023).

The SDGs and climate emergency are two crucial issues that must be given attention right now, which require huge investments, innovative technology, synergic strategies, adequate infrastructure, and involving many stakeholders in addition to radical reforms in policy, governance and management (Prabhu,2021).The United Nations has been allocating billions of dollars to increase the forest cover through various conferences. Declining forest cover is one of the major causes of global warming, sea level rise and climate change. Therefore, afforestation is considered important in the present context. This afforestation project has been successfully implemented by the Tamil community through its cultural activities for a long time in the name of Kovilkaadu, Sacred Forests, centered on God.

Forests provide support not only for human beings but also for all life on earth. But today the earth is moving towards destruction due to the anthropocaccy of everything instead of eco-centric thinking. The ecological and cultural relationship between trees and man is being forgotten due to the growing tendency to look at trees only economically. Trees were the earliest abode of human beings. They lived in holes in trees and in lofts on trees. Trees were worshipped as gods in nature worship. Though the cults

of spirit worship and idol worship have changed with time, the importance of trees has remained unchanged. In India, the worship of deities dates back to the Indus Valley Civilisation (Swamy, P. S., Kumar, M, 2003). In places where people lived, they placed a stone, a weapon or a tree and worshipped it as a deity (Subramania Pillai, G, 1948). They were mostly in forested areas. They and their descendants protected the vegetation and poaching of animals in this biodiversity rich area.

Each temple forest is known as Sacred Forests or Temple Forests, as it is still preserved to create fear and trust among the people by the story told by their ancestors about the origin of each temple forest. These sacred forests are protected in the belief that if any destruction is caused, the local people who protect them will not only fine/punish them but will also be punished by the deity. In Tamil tradition, folk deities are worshipped under trees and trees. Trees are important to the classical deities in the name of Nandavanam and *Sthala* Vrikshas (Kent, E, 2009).

Forests are important in the worship of folk deities. The place where these deities are worshipped is surrounded by dense forests of various trees. Forests are worshipped like gods. These forests are called *Kovilkadu*. Thoughts on afforestation are recorded in Tamil literature. This article discusses the importance of forests in the current Sustainable Development Goals, the structure of temple forests in the Tamil cult tradition, how they are conserved, and the biodiversity of *Kovilkadu* in tamilnadu.

Thoughts on Afforestation in Tamil Culture

Nature worship was an ancient tradition in India and all forms of living beings were considered sacred (Gupta, S. S. 1980). There was a general notion among the primitive peoples that the divine element was active in scenic places. So the trees were sacred to the ancient Tamils. They considered trees to be the abode of spirits and gods, and believed that the sanctity of living beings and inanimate objects ensured their protection and stability. Many villages set aside sacred lands to appease celestial angels i.e. tree spirits. In some groves entire plants were considered sacred and worshipped. Such groves persist to the present day and play an important role at various socio-cultural and economic levels (Malhotra, 1998).

They identified themselves with every tree that ruled Tamil Nadu during the Sangam Age. The Cheras had palm, the Cholas Athi (*Bauhinia racemosa*) and the Pandyas neem as their totemic symbols (Walter, K. J. 2015). They wore garlands of their flowers. The ancient Tamil kings protected one of the totem trees as a symbol of their power at the border of the town (Swamy, P. S, 2003). Sangam literature refers to this tree as totemic tree and it was praised as a sacred tree. There is a tradition of warfare in the Sangam age that if the totemic tree falls into the hands of the enemy king despite the protection of the soldiers, the king of the tree also falls. Our ancestors have been following the method of conserving water by digging tanks in every temple for water management and conservation. '*Sirupanchamool*am', one of the moral literatures of Tamil, preached the moral and ecological justice of nature thousands of years ago. It says that those who perform five acts – one who digs a pond, one who plants trees, one who

digs a canal to drain water, one who makes a field of land and one who digs a public well, will live well on earth and attain a heavenly life.

Kuḷam toṭṭu, kāvu patittu, vaḻi cīttu,

uḷam toṭṭu ūḻu vayal ākki, vaḷam toṭṭup

pākupaṭum kiṇaṟṟōṭu eṉṟu ivai pāṟpaṭuttāṉ

*ēkum cuvarkkam iṉitu. (Sirupanchamool*am - *65)*

The people who created and nurtured trees and water bodies have also made it their way of life to cherish forests.

Goddesses like Kaliamman, Mariamman, Chelliamman, Ponniamman, Ellaiamman and male deities like Muneeswaran, Karuppusamy, Veeran and Ayyanar are worshipped in every village. These guardian deities are mostly in the midst of a dense area of plants, creepers and trees near the banks of rivers and tanks near the place. These are called temple forests. In Tamil Nadu, these forests are known by different names such as *Sholaikadu, Samichcholai* and *Kovilkadu* (Manikandan, P,2011). It is estimated that there are about 1670 temple forests in Tamil Nadu. No trees are cut down here as these forests are a combination of people's faith, fear and devotion.

The poet Karuvur Kandapillai Sathanar in a poem in *Akananuru* mentions that during the Sangam period, the deity was worshipped by offering meat thinking that the deity was residing in the neem tree "*theivam serntha barar vemble kozhuppua erinthu*"(*Akananuru –Palai* -309). The banyan tree is called *'God Alam'* and the Vengai (*Pterocarpus marsupium*) tree is worshipped as '*erimarul vengaik kadavul kaakkum'(Natrinai* -216*)*. The Tamils have an ancient history of worshipping trees as gods. There is a continuity of it even today. In many villages of Tamilnadu, if Arasu (*Sacred fig*) and Neem grow side by side, they not only worship that place but also consider the state as male and neem as female and perform marriage ceremonies for both the trees.

The Tamils loved trees like blood relations. It is said in the literature that a girl blushed in front of a *Punnai (Calophyllum inophyllum)* tree because she had nurtured it as her sister, not wanting to converse with her lover (*Natrinai - Neithal 172*). A woman is recorded as saying that she had sent a message through the birds to at least tell the Vengai tree, which was a sweet companion when she and he met at night, as her lover had gone to another place without telling her. The Tamil tradition was to celebrate trees as gods, totems and relationships. Even if something was inevitably plucked from the trees, they apologized to the trees and did it. Kaniyan Poongundranar has recorded in *Natrinai* that when people take parts of the trees for medicine, they will not take the tree to the point where it dies *"maram saa marunthum kollaar*" (*Natrinai -226*). In *Purunanuru,* Kapila extols the generosity of Parambu king Pari who gave his chariot to the *Mullai* (*Jasminum auriculatum*) which was starved of a horn. Vallalar has sung in his Thiruvarutpa that whenever he saw a withered crop, he withered

Ecological significance of temple forests.

Many of us have been talking about the importance of planting trees. Trees provide oxygen for the survival of human beings. It gives food to eat. It gives medicine for the disease. It will give you a cottage to stay. It gives wood to burn, shade to stand and rain to cool the heat. It will become a tree and give a handful of money. In this way, we have been emphasizing the importance of trees for the survival of human beings by listing out the various benefits of trees for human beings. Trees are not only useful to human beings. Trees are the source of all life on earth. But with the Industrial Revolution, we, who have developed the tradition of thinking about everything in terms of ourselves, have also measured trees in terms of what is useful to us. When we talk about the uses of trees, we are approaching trees economically, but we are forgetting the ecological and cultural relationship between us and trees.

Gadgil and Wadak have studied the temple forests in detail. In 1975-1976, they published information about temple forests in the Western Ghats (Gadgil, M., & Vartak, V. D.,1976). CPR from Chennai As of 1994, the Trust has listed 499 temple forests. Theni district has 33 temple forests, Kolli Hills 240, Sivakasi 10, Sankarankoil 10 and Tenkasi 8 (Ramanujam, M. P. 2017) The temple forests are densely covered with tall trees and shrubs. They also trap carbon dioxide and release oxygen. Many rare endangered plants including medicinal plants are still alive in these natural forests. The leaves that fall from the trees here are not removed and mix with the soil, which makes the soil nutritious by acquiring carbon sources. They help in desertification of land and prevent land erosion (Sivakumar, K. P., Nair, A. S, 2014). They also help to absorb rain water and store ground water. Clean air is available. These forests cool down the heat. Due to the density of trees in the forests, the speed of cyclones and storms is prevented (Ramanujam, M. P. 2017). Ponds in the forest fringe areas are the source of water for the people of the area during the summer months.

These forests are home to snake mounds and termite mounds, trees like Banyan, sacred fig, Neem, Tamarind, Mango and plants and grasses like Pandanus fascicularis, Hibiscus, Holy Basil and Scutch grass. The creatures living in our environment know more than us what is native and what is exotic. The innumerable variety of birds, insects and other creatures that merrily assemble on the native trees are witness to this (Walter, K. J. 2015). They don't seek foreign trees as much as they seek their own trees. Native trees are not solitary trees. Each one is a forest. They are the food and habitat of innumerable species. But we are replacing our own trees with mahogans and teaks in the hope that we will get millions of rupees in ten years. Nature did not create any of the trees wrongly. When nature weighs trees on its evolutionary scale, it considers whether they are environmentally friendly, not whether they are useful to humans. The role they play in the ecological balance and vitality of the soil of which nature has created them as their native trees is indispensable;

The temple forests are densely covered with tall trees and shrubs. They also trap carbon dioxide and release oxygen. Many rare endangered plants including medicinal

plants are still alive in these natural forests. Many herbs with medicinal properties cure the diseases of the villagers (Chinnappan, B.,2019). It is a habitat for birds, insects and living animals. The leaves that fall from the trees here are not removed and mix with the soil, which makes the soil nutritious by acquiring carbon sources. They help in desertification of land and prevent land erosion. They also help to absorb rain water and store ground water. Clean air is available. These forests cool down the heat. Due to the density of trees in the forests, the speed of cyclones and storms is prevented. Ponds in the forest fringe areas are the source of water for the people in the area during the summer season.

The creatures living in our environment know more than us what a native tree is and what a foreign tree is. The innumerable variety of birds, insects and other creatures that merrily assemble on the aal, arasu, fig and itthi trees are witness to this. They don't seek foreign trees as much as they seek their own trees. Native trees are not solitary trees. Each one is a forest. They are the food and habitat of innumerable species. But we are replacing our own trees with mahogans and teaks in the hope that we will get millions of rupees in ten years. Nature did not miscreate any of the trees. When nature weighs trees on its evolutionary scale, it considers whether they are environmentally friendly, not whether they are useful to humans. The role they play in the ecological balance and vitality of the soil of which nature has created them as their native trees is indispensable; Immeasurable. But when they are forced to migrate to a new environment, some of them disturb the balance of the environment and become ferocious weeds. Seemaikaruvelam in Tamil Nadu are familiar examples. Recent studies have shown that the area of temple forests is decreasing. Many areas that were dense forests have shrunk and many forests have become unknown. After independence, many areas in the Western Ghats have been converted into tea and coffee plantations (Chandran, M. S., Gadgil, M., & Hughes, J. D. 1998).

Threat to sacred Groves

Tamil Nadu Forest Department with the assistance of the C.P.R. Environmental Education Centre, Chennai have carried out survey of Sacred Groves in Tamil Nadu during 2011. The survey listed about 1262 Sacred Groves in Tamil Nadu. Many of the Sacred Groves are reservoirs of rare fauna and flora especially those located within Protected and Notified areas. They are protected under Tamil Nadu Forest Act 1882 and Wildlife Protection Act 1972. Forest Department had identified various threats to Sacred Groves in Tamil Nadu. Human activities such as dead wood collection, biomass gathering, lopping of tender branches and green leaves for goats, creation of footpaths, cattle grazing, mining of sand and clay for brick-making and collection of wild fruits and vegetables and also collection of plant parts for medicinal uses are affecting the ecology of the Sacred Groves. In addition, invasion of exotic weeds has become a serious problem in the ecology of some Sacred Groves. The domination of alien species such as Eupatorium odoratum, Lantana camara, Prosopis juliflora and Hyptis suaveolens often

threatens and depletes the local species. Conflicts among the Sacred Grove managers have also resulted in the loss of biodiversity in certain Sacred Groves.

Biodiversity heritage Site:

Biodiversity Heritage Site is a unique concervation approach recongnised under Section 37 (1) of the Biological Diversity Act, 2002 the State Government may, from time to time, in constulation with local bodies, notify inth official Gazette of areas of biodiversity importance as Biodiversity Heritage Sites.

Those sites that are unique , ecologically fragile ecosystem – terrestrial, coastal and inland waters, and marine, having rich biodiversity comprising of any one or more of the following components: richness of wild as well as domesticated species or Intra – species of evolutionary significance, wild ancesters of domestic/cultivated species or their varieties, past pre – eminence of biological components represented by fossil beds and having wild ancestors of domestic / cultivated species or their varieties, past pre – eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values and are important for the maintenance of cultural diversity, with or without a long histoy of human association with them. So far, 44 Biodiversity Heritage Site have notified by 16 states.

1. Under Section 37 of Biological Diversity Act, 2002 (BDA) the State Government in consultation with local bodies may notify in the official gazette, areas of biological importance as Biodiversity Heritage Sites (BHS)
2. Under sub section (2) of section 37, the state Goverrnment in consultation with the Central Government may frame rules for the management and conservation of BHS.
3. Under sub section (3) of section 37, the State Government shall frame schems for compensation or rehabilitating any person or section of the people economically affected by such notification

Considering the above povisions of Act the National Biodiversity Authority (NBA) issues guideline for selection and management of the BHS.

Legislations

The Wildlife (Protection) act, 1972 empowers the State Government for declaration of any private or community land, as a community reserve, for protecting flora fauna, traditional or cultural conservation values and practices.

Wildlife (Protection) Amendment Act 2002: this act introduced the concept of 'Community Reserves', hich can be used to provide government protection to sacred groves on community – conserved lands. This act prohibits hunting and logging within these areas.

Biological Diversity Act 2002 (The Biological diversity (amendment act, 2023)

Several stepes are being taken for the conservation of biodiversity, wwhich includes survey,inventorisation, taxonomic validation , and threat assessment of floral and faunal resources assessment to develop an accurate database for planning and

monitoring as well as conservation and protection of forest; establishment of protected area network of National Parks, wildlife Sanctuaries, conservation and community reserves; designating biosphere reserves for conservation of representative ecosystems; undertaking of species oriented programmes, such as Project Tiger, Project Elephant, Project Dolphin; complemented with ex – situ conservation efforst in the 10 biogeographic zones of the country. For ensuring protection of flora and fauna within protected areas, management plans are prepared by State Forest Departments which inter alia include a schedule of activites to be taken up over a period of ten years. This amendment act shall come into force on 1 April 2024.

Constitutional Protection:

There is no specific article directly mentioning sacred groves bu there are a few articles that can be interpreted to some level of protection of sacred groves.

Article 25 (1): this article guarantees the freedom of conscience and the right to practice and propagate religion. This right extends to the protection of practes associated with sacred goves, as long as they do not violate the rights of others.

Article 48A: Directs the state to protect and improve the envionmnet and to safeguard the forests and wildlife of the country. This can be seen as providing an indirect mandate both environmental and cultural impoartance.

Article 51A (g): this article imposes a fundamental duty on every citizen to protect and impove the environment and to have compassion for living creatures reflecting the respect for nature inherent in sacred groves

Conclusion

Kovilkaadu is an area left untouched by the village guardian deities to reside. Such forests exist in many parts of India. These forests play a very important role in the conservation and sustainability of forest resources. The temple forests are the ultimate remnant of the natural resource present in every region. The village temple forests, which were not only a place of worship but also a natural haven, were home to rare species of plants and medicinal plants. But with environmental degradation worsening, the future of the temple forests is uncertain. As a mark of respect to nature, our ancestors worshipped nature. Later, they considered a certain area of the forest in the areas where they lived as the dwelling place of their family deities and used only the rest for their own purposes. Those are the temple forests.

Most of the temple forests are places of worship of the village guardian deitty. The use of forest produce available in this forest area will be banned. There are temple forests all over India. Many rare species of plants are left in these forests adjacent to the groves. Like natural forests, these forests are rich in biodiversity. Today, the protection of the temple forests has been questioned due to cutting of trees, use for grazing and reduced water flow in the rivers. With the dominance of science that teaches trees as air washing machines and cooling preservatives, and economics that teaches lifesaving trees

as money trees, it is necessary to recreate the ancient cultural relationship between us and trees. It is this cultural relationship that fosters a love for trees. It is also essential to identify and prioritize the trees that belong to the soil and to us. In addition, double attention is also required during the introduction of exotic trees. When we talk about tree planting and environmental protection, nothing is complete without taking these into Responsibility. If nature is continuously exploited, the quality of natural services such as rainfall, wind, forest products etc., will be drastically reduced and there will be no economic benefit. Therefore, proper management of the affected temple forests can reduce the environmental damage and destruction. Not only that, the temple forests can be saved only if modern technology is combined with traditional knowledge.

It is important that people recognize the values of these remaining patches of forest and that levels of resource extraction be kept low and regulated; this would facilitate sustainable resource use. Identifying the socio-economically important species of the sacred grove and raising them in buffer zones might be a viable strategy for their conservation and sustainable use. This would not, however, address the social changes that have contributed to the sacred groves' decline. Where spiritual and ethical traditions no longer ensure the conservation of these forests, the public may need to be educated and informed about other reasons – environmental, social and economic – for conserving the forest and using it sustainably.

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