

## ECOLOGICAL STRAIN AND ENVIRONMENTAL IMPACTS OF SABARIMALA PILGRIMAGE

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### ARTICLE INFO

**Keyword:** Environment; Sabarimala;pollution;Deforestation;River pollution; Devaswom Board

### ABSTRACT

*Sabarimala, one of the most popular pilgrimage destinations in South India, receives millions of visitors each year. Millions of pilgrims gather here to bathe in the Pampa River, also known as Dakshina Kashi, and offer devotion to the deity. The temple is located in a forest area within the Periyar Tiger Reserve. The sheer number of worshipers attending the shrine creates considerable environmental issues. This study looks at the ecological consequences of pilgrimage, specifically deforestation, water pollution, and biodiversity loss in the Periyar Tiger Reserve. It examines the conflict between religious practice and environmental deterioration and evaluates the efficacy of current sustainability initiatives. The study also covers policy solutions, environmentally responsible pilgrimage practices, and community involvement in conservation activities. By emphasizing the delicate balance between faith and the environment, the study calls for sustainable pilgrimage management to ensure that Sabarimala's hallowed territory is conserved for future generations.*

### Introduction

Sabarimala, one of India's most prominent pilgrimage destinations, draws millions of visitors each year, and the environmental impact of large-scale pilgrimages has become an increasing concern. It causes a complex interaction between faith and environmental sustainability. The temple is located within the ecologically fragile Periyar Tiger Reserve in Kerala, and its environs are rich in species, making conservation efforts vital. The Sabarimala pilgrimage during the Mandala-Makaravilakku season creates substantial environmental hardship. The inflow of pilgrims causes deforestation, poor garbage disposal, water contamination,

and higher carbon emissions. This article investigates the environmental effects of the Sabarimala pilgrimage, including the influence on forest ecosystems, wildlife, and water supplies. This study aims to add to the greater issue of sustainable pilgrimage by encouraging a dialogue between tradition and environmental ethics.

### Significance of Study

Sabarimala Temple exemplifies community unity and religious tolerance..The temple is a popular pilgrimage destination, drawing visitors not just from the southern states

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of Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh, but also from other areas of the country and internationally. It is estimated that three to four crore people visit the temple each year to worship. The temple is governed by the Travancore Devaswom Board, an autonomous body created under the provisions of the Travancore Cochin Hindu Religious Institutions Act XV of 1950. It is a famous temple in Kerala with a rich historical background. The temple is unique in that it welcomes all faiths, regardless of religion, caste, creed, or socioeconomic status.

Sabarimala temple is always a cynosure of the media as well as the public due to various reasons of socio-economic, political, ecological and spiritual importance. Besides corruption in administration, mismanagement, misappropriation of funds, lack of coordination among various governmental agencies, serious issues are prevailing here like administrative delay in allotting sufficient land to the shrine, lack of infrastructure, proper sanitation, basic amenities to pilgrims, environmental issues etc. (Rajagopal, 2022). An average of about 70000 people congregate every day at *Sannidhanam* during the peak season; the area coverage being a little above 50 acres (John, 2020). As such, the pilgrims have to confront challenges due to environmental issues such as Pamba river pollution, threat of plastic and other non-biodegradable products etc. Due to poor waste management practices, and inability to distinguish between wet and dry solid wastes, sewage leaks and the resulting unclean environment, *Sannidhanam* and Pamba have turned into breeding grounds for wild boars.

## Major Environmental Challenges in Sabarimala

The temple is located in Perunad Grama Panchayat of the Pathanamthitta District in Kerala. Indiscriminate human meddling on the environment causes hazards for life in this planet by a significant loss of natural resources (Aji, 2005). Numerous environmental issues have arisen as a result of the annual assembling of huge crowds in an environmentally vulnerable area. Massive inflow of pilgrims into the temple has created serious problems of spatial management resulting in unimaginable miseries to the devotees. Inadequate accommodation, lack of proper sanitation amenities, transportation, and communication are major issues that prevailing here. Pilgrimage-related ritualistic practices have had a significant impact on the organic natural system in Pamba valley (John, 2020).

Sabarimala is located within the Periyar Tiger Reserve, a biodiversity hotspot home to endangered species and fragile ecosystems Periyar Tiger Reserve was established as a centrally funded programme of the Government of India commenced during 1978-1979 as one of the best-preserved forest regions in the state. It is the largest protected area in

Kerala, which serves as the primary watershed for the Periyar and Pamba, and is home to rare, endemic, and endangered plants and animals. Indiscriminate human activities have disastrous effects on forests particularly in the biodiversity hotspots like the Western Ghats. Studies pointed out that nearly half of the forest land in the Pamba range of the Periyar Tiger Reserve has been lost as a result of the pilgrimage. 18<sup>th</sup> Report of the Public Accounts Committee of the Parliament (14<sup>th</sup> Lok Sabha) called for the development of Sabarimala without disturbing the ecology.

## Pamba River Pollution

Kerala is a land of rivers. Many people visit Kerala to admire the natural beauty of the state and to travel via its waterways. The Pamba River is the third-longest among the silently flowing rivers. The presence of the Sabarimala temple has transformed the Pamba into a holy river. The Pamba River, also known as the Dakshina Bhagirathi, begins at Pulachimala, Peerumedu, at an elevation of 1650 meters above sea level. The Pamba is a constantly flowing river that is intertwined with the life of the inhabitants of nine taluks. It flows through the taluks of Ranni, Pathanamthitta, Kozhenchery, Chengannur, Thiruvalla, Changanassery, Kuttanad, Karthikappally, and Ambalappuzha before emptying into Vembanad Lake. This water body is also important. This body of water is also a significant water supply in Kuttanad. In ancient times, this river was known as Baris.

The main rivers of Kerala join the Pamba. The Achankovil river and Manimala river are the Pamba's main tributaries. The Kakkiar and Njunangar rivers merge at the Pamba Triveni. The Puthussery, Azhutha, and Panamkutthantha rivers then flow into the Kakkattar and Pamba near Mukkam in Perunadu. The Pamba-Kallar, which rises in the Punnamed hills, flows into the Vadasserikkara, and the Manimalayar, the largest tributary, meets the Pamba at Valanjavattom, and the Achankovilar at Veeyapuram. The Pamba and its tributaries are estimated to be 4466 kilometers long. Pathanamthitta district accounts for 1550 square kilometers, with the remainder spread throughout Alappuzha and Kottayam districts. The Pamba River is generated by the confluence of 288 tributaries from the Sahyadri mountains. It comes from a source in the Pulachi Mountains at an elevation of 1650 meters in Peerumet. It flows west through Sabarimala and Aranmula, then meets the Manimalayar and Achankovilar rivers in Alappuzha before emptying into the Vembanad lake. Thottappally Pozhi, in the Alappuzha district, is where a tributary of the Pamba River flows into the Arabian Sea. Pamba River in Kerala is slowly dying off as a result of environmental deterioration. Sabarimala, the source of the river Pamba, provides water to half a million people in Pathanamthitta, Alappuzha, and Kottayam districts (Ameerudheen, 2018). The river starts from the Sabari hills

in the Western Ghats and runs west through the districts of Idukki, Pathanamthitta, and Alappuzha, where it is also referred to as *Dakshina Ganga* because of its long-standing connection to the Temple. The river is under constant anthropogenic pressure, as a result of the influx of pilgrims during the *Mandala Makaravilakku* season that causes devastation to the water resource. Pamba river gets polluted due to the ritual baths of the pilgrims to Sabarimala. Disposal of human excreta, dumping of solid wastes and other anthropogenic activities cause degradation to the river. Since all of the untreated sewage ends up in the Pamba river, the ecosystem gets polluted. The lack of suitable infrastructure and treatment facilities for liquid waste purification makes the situation more precarious.

Pamba River is highly polluted, especially in the proximity of Sabarimala and its surroundings due to the input of sewage and various kinds of wastes (Aji, 2005:212). Direct dumping of human wastes into the river creates concerns among the environmentalist. Coliform bacteria level in Pamba is 190 times higher than the permitted limit, according to the report of the State Pollution Control Board. The water is considered potable, if there are fewer than 2,500 Most Probable Number (MPN) of faecal coliform bacteria in 100 ml. However, water sample collected from the Pamba in 2014–15 was found to contain an astounding 13,20,000 MPN of faecal coliform (Ameerudheen, 2018). This reckless pollution puts at risk the health of millions of people who depend on the Pamba river water for their daily needs. Besides, dumping of solid garbage from hotels and other such activities have also caused the river to its current deteriorating state. All these factors have led to water contamination and the spread of waterborne diseases.

## Soil pollution

Plastic carry bags used by pilgrims in the protected forest in the Western Ghats, a region that is environmentally in peril, have raised significant environmental concerns. The Suchitwa Mission, the state's nodal body for sanitation, and the neighbourhood civic organisation are working together to implement the "Mission Green Sabarimala" initiative in order to strictly enforce the green protocol at the temple and its premises. At the Chengannur railway station, which is close to Sabarimala, a 24-hour kiosk has been established to provide pilgrims with eco-friendly cloth bags and warned

them with informational leaflets, against discarding clothing or plastic items in the holy River.

Plastic garbage has turned into a major environmental issue in Sabarimala. The health of wild animals that live in the forests of the district is in jeopardy due to the authorities' negligence to remove plastic debris from the site even after the pilgrim season has ended. The Kerala High Court banned the use of plastic in Sabarimala in 2015, in response to a report submitted by the Pollution Control Board. There is an instance of detecting plastic garbage inside an elephant's body in the deep forest as reported in the Court by the Deputy Director of Periyar West Division, Peerumedu. By avoiding plastic products and promoting the use of eco-friendly products, the Kerala government is making every effort to make the annual pilgrimage season at Sabarimala "green."

## Deforestation

Deforestation is one of the major challenges to the eco system in Sabarimala hill shrine. Sabarimala Forest Reserve is rich in biodiversity and its preservation is crucial to environmental sustainability. In Sabarimala, deforestation is one of the most significant environmental issues. Pilgrims depend on the forest for a variety of needs, which affects the ecology of the area (Aji, 2005:208). Over the years, substantial portions of forest land have been changed for non-forestry purposes. During every festival season, forest fires were a common occurrence in Sabarimala. Many unique and endangered species struggle to survive in this area as a result of these natural or man-made fires. The use of numerous shortcuts by the pilgrims to reach *Sannidhanam* causes severe soil erosion in this area (Aji, 2005:209). Environmental considerations should be given priority while planning any type of development activity in Sabarimala.

## Commission Reports

The Report of the Environmental Committee of the Kerala Legislative Assembly suggested a master plan for Sabarimala to safeguard its serenity and sanctity. The Report also contained suggestions for providing basic amenities to the pilgrims without affecting the natural environment of the forest (KLA, 1998).

**Table 1:** Various Commission Reports on Sabarimala

Sl No	Committee Report	Appointing Authority	Chairman of the Committee	Published Year
1.	Report of the Committee on the Development of Sabarimala	Government of Kerala	Mahabala Rao. V	1985
2.	Environmental Pollution Problems in Sabarimala	Legislative Committee on Environment	A.V. Thamarakshan	1998

3.	Commission of Inquiry on Sabarimala Stampede Tragedy	Government of Kerala	Justice T. Chandrashekhara Menon	1999
4.	Report of the Parliamentary Panel on Sabarimala	Lok Sabha	O. Rajagopal	1999
5.	Environmental Impact Assessment of Diversion of Forest Land at Sabarimala	KFRI	Dr. S. Sankar	2000
6.	The Precautions of Environment Problems in Sabarimala Pilgrimage	Legislative Committee on Environment (KLA)	George. J. Mathew	2002
7.	Human Problems and Ecology - Preliminary Report	Public Accounts Committee, Lok Sabha	Buta Singh	2004
8.	Sabarimala-Human Problems and Ecology	PAC, Lok Sabha	V. K. Malhotra	2005
9.	The Report of Sabarimala Pilgrimage and Development Programmes	Petition Committee, KLA	V. Surendran Pillai	2009
10.	Commission Report on Pullumedu Tragedy	Government of Kerala	Justice M. R. Hariharan	2011

Source: Rajagopal, P, K. (2021). *Politics of Temple Administration in Kerala. Unpublished PhD thesis, University of Kerala.*

The Committee however, noted that instead of constituting a high-level political body, only a coordination committee comprising of officials at the state level under the Chairmanship of the Chief Secretary, the President of the TDB and the representatives from different departments as members is needed.

A Study Report submitted by the Kerala Forest Research Institute (KFRI) in 2000 revealed that the Travancore Devaswom Board should adopt a pro-pilgrim approach rather than a revenue-centred approach in Sabarimala (KFRI, 2000). V. K. Malhotra Committee suggested for de-linking of Sabarimala temple area from the Periyar Wildlife Sanctuary and long-term development of the area in consonance with a Master Plan and the broader considerations of the ecology of the region (Malhotra, 2005: 42). The Committee stressed the need for setting up a statutory body for the administration of Sabarimala and a professional approach in the pilgrim management similar to that of the Vaishno Devi temple in the western Himalaya (Gaur, 2006: 69). Rajan Gurukkal, historian and former Member of the National Tiger Conservation Authority who has made several human-ecological studies and impact assessment of the developmental activities in respect of Sabarimala, has accused the TDB of considering Sabarimala only as a money-making spot (Gurukkal, 2015).

## Conclusion

Eco system in the Western Ghats, one of the world's most active biodiversity hotspots, is put under a great deal of strain when a lot of people are concentrating in a small, highly sensitive area. To encourage "responsible pilgrimage" and

maintain the cleanliness of the Sabarimala and Pamba Rivers, the idea that cleanliness is equivalent to godliness has been propagated. The Travancore Devaswom Board (TDB) is negligent for maintaining a clean environment, which contributes to the pitiful and unsafe conditions in Sabarimala. Serious environmental risks are there due to the careless waste management and not adhering to the most minimal regulations.

It can be surmised that an eco-friendly and pilgrim friendly approach should be initiated from the part of Devaswom authorities and the Government for a durable solution to the development of the hill shrine. The most significant fact is that in 2001, the Supreme Court prohibited non-forest activity at Sabarimala. As a result, rather than constructing concrete buildings around the shrine, the Travancore Devaswom Board may adopt a strategy for sustainable and eco-friendly development. Even after preparing several master plans for Sabarimala development, still the problems are remaining unsolved. To address the issues affecting both people and the environment, a pragmatic and humanitarian strategy is an imperative one.

## Conflict of interest:

The authors declare no conflict of interest.

## Funding:

This research received no specific grant from any funding agency in the public.

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