

**Backwaters Dirt Business**

**Project submitted to the University of Calicut in partial  
fulfilment for the award of the degree  
of  
Bachelor of Arts in English & History**

**By**

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## **Declaration**

I, **Sana Abid**, hereby declare that this project entitled **Backwaters Dirt Business** , submitted to the University of Calicut in partial fulfilment of the requirements for the award of the Degree of Bachelor of Arts in English & History, is a bona fide record of original research carried out by me under the supervision and guidance of **Mr. Sagive Varghese**, Assistant Professor, Department of B.A. English & History (Double Main) Christ college (Autonomous),Irinjalakuda.

Irinjalakuda  
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## **Certificate**

This is to certify that this project entitled **Backwaters Dirt Business**, is a record of research work carried out by **Ms. Sana Abid** under my supervision and guidance in partial fulfilment of the requirements for the award of the degree of Bachelor of Arts in English & History submitted to the University of Calicut.

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## INTRODUCTION

“I do not wish to see Guruvayoor anymore, not even once, pity on you all, no solution calling on Guruvayoorappa, perhaps he was the one who starved out of breath first”, Guru Nitya Chaitanya Yati. One side a place where millions of people gather a year other side effecting place where thousands of people live, one side a land which is glorified as scared and pure on other side contaminating glory and purity of other land. Guruvayoor Temple is India's third largest temple in terms of number of pilgrims attracting more than seven millions devotees annually, conflicting is a village in the backwaters It belongs to Central Kerala region of the southwestern shoreline of the mainland Indian subcontinent.

It was a serene land with plenty of water, mangrove forests that abounded with fish, birds and butterflies an ecosystem of inseparable relationship between the land and living organisms. It is here the start point of famous Chettuva river set it's foot and empties to Arabian Sea.

An idyllic backwater village, pristine mangrove forest, lush jungles, encircled by trees and wild bushes, surrounded by playful oysters, frogs, shell fish and fingerlings and life of people in village was serene. The picture changed four decades ago when Guruvayoor hotels, restaurants, apartments and other commercial settlements began draining raw sewage through natural channel which eventually reached Chakkum kandam backwaters.

The great temples where people visit for "moksha" are being covered with waste. Fatal diseases emanate from there. The village, though surrounded by water, miles have

to be passed through to collect drinking water. The fact that the growing settlement around temples, will wipe out the purity of the villages. The state of temples that have commercialized devotion is not different from this.

Backwaters of Chakkum kadam that appear picture perfect are actually polluted and contaminated by the raw sewage from nearby Guruvayur temple town. Commercial establishments catering to religious tourism in the temple town of Guruvayur have contaminated the ground and surface water of this backwater village by releasing raw sewage into natural drains. The Chakkum kadam backwaters is part of the central kerala wetland which falls in the Vembanad Kole wetland identified as a Ramsar conservation site.

This research work is a series of verified history account of a backwater village collected simultaneously from several textual reports and several other sources, meanwhile by direct canvass with local residents and civil right activists. Chakkum kadam backwaters of Kerala is a water body situated near a township famous for pilgrimage tourism. A couple of decades back this water body was the main source of income for the native population by means of both capture and culture fisheries which was altered to a present condition of adversity for the sustenance of the aquatic lives.

Two decades ago, the backwater used to be the lifeline of this village and five other downstream gram panchayats. Most people in the region eked out a living through fishing, coir retting, taking silt from the backwaters for manure and farming. Pokkali, an organic rice variety cultivated in saline, marshy coastal stretches of the central Kerala,



used to be the main crop. Hardly anyone grows pokkali these days. The fisherfolk and coir workers are the hardest-hit. Several common fish have gone extinct.

The people who are destined to live in raw sewage speaks the account of protest and sufferings. "They are asking us to drink this urine and stool of Guruvayoor. Throw away or dispose the waste of Guruvayoor in Guruvayoor itself and give us back our village and its purity." This research work is an authentic account of how a Jaivaboomi turned out to be an asshole in three decades. It is raw stool and urine in the ponds, wells, natural channels and wonderfully spreaded backwaters. The raw sewage has dilluted in the drinking water of the backwater village for four decades. The earth here began turning black and dark. Bacterias has spread in the soil and air.

"This is a criminal action of the municipality," reported George, civil rights activist. In the wake of strong agitations against dumping of municipal waste in at least half a dozen places across the state, the Kerala government in November last year issued an ordinance, making the Municipality Act of 1994 more stringent. The ordinance makes it mandatory to treat solid waste and sewage at the source itself. The ordinance was preceeded by a state-wide sanitation campaign. But neither the ordinance nor the campaign could bring reprieve to Chakkamkandam, a backwater village in Thrissur district. Residents in the village have been living with raw sewage flowing from the adjacent temple town of Guruvayur for more than three decades now.

The various reports submitted to the 10th Assembly of Kerala by the Pollution Control Board wax eloquence the truth of how the Chakkam Kandam lagoon has been poisoned to death over the last forty years. It is indeed a shock treatment that elevates one

to the realization of how fundamentally interconnected are all life forms and natural features. The present research work is interdisciplinary in character, and its scope is indeed wide. It is focused on the actual, specific interactions with the environment, conflict of people, while facing threats of pollution, diseases, displacement and migration and their forms of resistance.

This research work explores ecocide prevalent in backwater village near Guruvayur from being a gift in green to a stinking mire of dirt meanwhile ecological destructions, environmental degradation and human right violations as per accurate accounts reported at both national and regional level. This project is the result of investigations into the conceptual, historical, economic and organic significance of the backwater and the village. This research work makes an attempt to explore the idea of inhabitants of chakkum kandam backwater village and their attachment with the land and the harmony between rural people and nature.

The villagers are unfortunately unable to cope with the filthy nauseating. The atmosphere of Chakkum Kandam backwater is highly polluted. Nobody could eat a morsel of food or drink a drop of water. All the water sources that were spread upfront of the backwater village is highly contaminated. Moreover this project work windows the pains of the people who are being evacuated from their own land. They fought and prayed for everything on their land and wanted to save the land from being prey to the consumerist world.

This research work look into cruelties of man towards nature and the socio-political aspects of human rights to water. The lack of accurate evidence and authentic

records, this project fails to provide historical picture of ancient traditional society of the backwater village.

### **METHODOLOGY**

Adopted systematic investigative approach in which perusal study and research was carried out for the development of this academic work. Espoused historical reasoning and argumentative attitude towards the standardized study. Undertook cautious and organised survey simultaneously stucked on only to accurate piece of information.

### **SOURCE**

The study was undertaken based on primary and secondary source of data. Several national and regional level journals have been thoroughly revised and cited.

### **CHAPTERISATION**

This project has been divided into three chapters. The first chapter is a brief historical account of backwater life. The second chapter deals with the issue of receiving end more elaborately and the third chapter reveals a plight of a land and its people whose livelihood is on threat. The research work ends with conclusion.

## CHAPTER ONE

### PURITY TO PUTREFACTION

For centuries the clear water body nourished the village, where the flora flourished and the fresh breeze from backwaters cherished its people. The pure fragrance of crystal clear water enchanted the one who stood on the shore of Chakkum Kandan backwaters. All green and pristine coast where wild bushes and coconut trees stood bowing towards the blessed land surrounded the head of backwaters as grassy emerald crown where its tale emptied straight to Arabian Sea.

The Cheras ruled the western Malabar Coast during classical period, later multicultural society has formed when Jews arrived in Kerala as early as 573 BCE.<sup>1</sup> Palayur which was the stronghold of the Brahmins lies north to the Chakkum Kandan backwater village. When St. Thomas arrived from Kodungallur, Jews had a settlement at Palayur, two thousand years ago. Ruins of an ancient Jewish synagogue are still seen outside of a Brahmin temple about a furlong away from the Church. The popular St Thomas church, the first Christian Church in India is located in Palayoor north of Chakkum Kandan backwater village.

St. Thomas, the Apostle, arrived in 50 AD at Cranganur (now Kodungallur) with Jewish merchants for the propagation of Christ's message and through the sea route reached Palayoor in 52 AD and built the Church there. Palayoor also had an ancient Jewish settlement known as the Jews' Hill.<sup>2</sup>

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<sup>1</sup> Vimala, Angelina. History and Civics 6. Pearson Education India, 2007.

<sup>2</sup> "PALAYUR CHURCH, CHAVAKKAD". thrissurkerala.com. Retrieved 6 June 2014.

Arabs also had trade links with Kerala, starting before the 4th century BCE. They intermarried with local people, resulting in formation of the Muslim Mappila community.

When the kingdom of Calicut was established, they later assumed the title of Samudrāthiri, "one who has the sea for his border". In the 14th century, the sacred land of Chakkum Kandam backwater went in the hands of Zamorin, when Kingdom of Calicut conquered large parts of central Kerala, which was under the control of the king of Perumbadappu Swaroopam.

The king Deva Raya II (1424–1446) of the Vijayanagara Empire conquered about the whole of present-day state of Kerala in the 15th century. As the Vijayanagara power diminished over the next fifty years, the Zamorin of Calicut again rose to prominence in Kerala. Later when north Malabar was organized into district of Madras Presidency the Chakkum Kandam backwater village gone under kingdom of Cochin.

The sole fort ever to be constructed by the Dutch in 1714 as military base was constructed under the supervision of the Commandant of Cochin to thwart any kind of incursion from the Zamorin (ruler of Calicut) lies south to Chakkum Kandam backwater village on the Chettuva coast. The fort was later occupied by Zamorin of Calicut and thereafter Tipu Sultan, ruler of Mysore. Tipu Sultan defeated Zamorin of Calicut and renamed it as Tipu Sultan Fort. The fort was captured and recaptured many times by British Empire, Dutch East India Company, Kingdom of Mysore, Zamorin of Calicut and Kingdom of Cochin. Lastly, the fort was captured by Tipu Sultan and demolishes it partially.

The fort is now dilapidated and conservation drive was started in 2010 by the State Archeological Department. Although it was credited that an underground tunnel was created by the Mysore Tiger for his traveling to other forts, the perception has no strong basis. The Chettuva fort spread across 5 acres of land is presently in a demolished state. Kerala Government has announced several projects to reinstate this fort to become a tourism destination in the map of Kerala Tourism. The walls of the fort are about 12 ft thick and due to neglect from the authorities, the fort is now in a bad shape.

Recalling the days of her youth, 86-year-old Madhavi said, “The backwaters were crystal clear and aquatic life was so rich that we would catch fish when we dipped our pots to collect water.”

The scene changed some 25 years ago with the mushrooming of lodges and hotels in Guruvayur to cater to the needs of the rapidly increasing number of pilgrims. Eventhough the first phase of backwater contamination began four decades ago it was reported from Geetha Sreetharan that “About 25 years ago, Pokkali cultivation, fresh fish and cool climate made our land feel like heaven” and Madhavi reported “About 35 years ago, coir and coir products from this area were transported to Alapuzha in small boats.” “Most of the units have been closed down as no one wants to step into the dirty water to soak the husk for curing.” And still two decades ago, the backwater used to be the lifeline of this village and five other downstream gram panchayats.

The toxic stream has taken the life of the wild bushes, grass, trees in the area surrounding backwaters. The snakes, crabs, small fishes have gathered in a lifeless state

thereby generating foul smell. Toxins has also raised threat to mangrove forest of Chakkum Kandam backwaters.

“The greatest miracle of Guruvayoorappan’s divine powers is that no epidemic has so far broken out in Guruvayoor... What tens and thousands of devotees drink as tea, coffee or theertham is actually water contaminated with shit and urine” (92). Villagers are unable to cope up with the dirty nauseating atmosphere. Woefully none could eat a morel of food or drink a drop of water. The wells, the ponds, the channels, the streams and backwaters, which spread like an ocean upfront of village are covered with layer upon layer of shit. The septic tank facilities in at least 90 percent of the hotels in Guruvayoor are insufficient and substandard. The actual number of people using them exceeds the norm by three or four times. (94) <sup>3</sup>

'If the waste comes from temple, it must be disposed in temple itself, if the waste comes from home, it must be disposed in home, where the waste comes there it must be disposed. It is time to change the mentality of throwing it to as somebody else responsibility,' Devaswom minister backs Nagarasabhaa in the dispute between Guruvayoor temple and Nagarasabhaa as the corporation denied to receive waste from Guruvayoor temple in which Devaswom Board intervened.

"We can't live here because of foul smell," villagers reported. It is always the rural population being the victims of urban development mismanagement. There one can witness poor people of Chakkum Kandam backwater village who are being destined to live in the raw human waste of Guruvayoor temple town's millions of visitors. "It is raw

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<sup>3</sup> Sarah, Joseph. Gift in Green. Harper Collins, 2013.

human waste which is gathered here, flowing into this backwaters, diseases spreading, this is a subject which is directly effecting the thousands

Septic waste problem is increasing by the passage of time where readymade septic tanks are trending. Government does not have a standard or clear policy on concerned issue is one of the major weakness. Septic waste dilluting in water bodies is reporting dangerous health issues as the level of coliform bacteria is increasing. The most septic waste cleaning agencies are working with no licence, no registration, no consolidated rate. Not even one agency has it's own septic waste disposal system. It is approximately fifty agency working in the district and there is high requirement of such agencies for the society. One side when shopping mall, apartments, flats are increasing other side septic waste problems are growing.



## CHAPTER TWO

### BACKWATERS AT RECEIVING END

Madhavi of Chakkum Kandam backwater village has seen the pristine backwaters turn into a cesspool, contaminating even their open wells. With hotels and restaurants in Guruvayur dumping waste and letting raw sewage, the natural channels have been reduced to sewage lines.

The Chakkum Kandam backwater is the lifeline of 3,000-odd families in five panchayats. The residents of Thykkad panchayat are mainly farmers, coir workers and fishermen. Their lives are linked with this river.

Paddy cultivation also flourished. Pokkali, an indigenous rice variety cultivated in saline, marshy coastal areas was the main crop grown in Chakkum Kandam backwater village. “We called it Pandipadam (Tamil fields) as the seeds had been brought from Tamil Nadu,” Madhavi. The villagers used the silt from the backwaters as manure. They recall having fish and rice in plenty.“

“This was a land of agriculture, it was a land where one could witness a true culture of rural community, almost in all field like health, livelihood, drinking water, is all worstly affected this dreadful matter. Although problem is this danger, still Government has not yet ready to move against this violation of law.”

How sewage from the temple town of Guruvayur is harming people in this Kerala village? Hundreds of hotels, restaurants, service apartments and resorts cater to the needs of the visitors in Guruvayoor. Chakkum Kandam backwater village is at the receiving

end of the influx, with the villagers being affected by the sewage from the commercial establishments, and with no reprieve in sight.

"Lack of scientific planning and inefficient management are affecting the common people adversely," president of Pouravakasa Vedhi (Civic Rights Forum) and former municipal councilor Noushad Thekkumpuram.

Valiyathodu and Cheriyaathodu are two natural freshwater channels in Guruvayur that run for 3km through the town before joining Chakkum Kandam backwaters. Though the Municipality Act insists on complete waste management at source, the commercial establishments let the raw sewage into the two channels and dump waste too.

Once the lifeline of Guruvayur town, the channels have been reduced to sewage lines. Now the channels carry all the sewage and deposit it in the backwaters. When it rains, the entire area gets covered with thick, black slush as the channels overflow. In short, Chakkum Kandam backwater village people have been suffering for many years.

Public and private institutions from the state and national levels tested the drinking water of Chakkum Kandam backwater land and adjacent areas several times. The results always showed faecal contamination with very high count of coliform bacteria in all water bodies including ponds and domestic wells.

With irregular piped water supply, the villagers are left with no option but to use the contaminated water. For four decades, around 5,000 families living in both sides of the backwaters have been demanding potable water. A few other localities of Guruvayur and Chavakkad municipalities, and Orumanayur and Pavaratti panchayats also suffer the consequences of untreated sewage being let into the water courses.

### **Is treatment plant the solution?**

Chakkum Kandam backwater village was part of Thykkad panchayat, but was later brought under Guruvayur municipality. The municipal authorities proposed a sewage treatment plant (STP) at Chakkum Kandam backwater village as the solution. This being a densely populated village with a fragile ecosystem, the villagers opposed.

“Chakkum Kandam backwater is a part of the central Kerala wetland and they will have to fill one hectare of wetland for the plant,” KU Karthikeyan, secretary of Civic Rights Forum. “The mangroves of the entire area will be destroyed.”

Petitions to the administration, campaigns and public protests went in vain. The administration started work on the STP. “The pipes would have reached the end of their lifespan by now, as the plant was proposed way back in 1974 and the main pipes were laid then,” said Karthikeyan. The work is yet to be completed.

Majority of the Chakkum Kandam backwater village population, including children and the elderly, suffer from skin diseases and breathing problems.

The coastal stretches were once dotted with plenty of coir units. Coir retting and spinning provided livelihood for the villagers. About 35 years ago, coir and coir products from this area were transported to Alapuzha in small boats. “Most of the units have been closed down as no one wants to step into the dirty water to soak the husk for curing,” said Madhavi.

“About 25 years ago, Pokkali cultivation, fresh fish and cool climate made our land feel like heaven,” Geetha Sreedharan reported. “Now people don’t want to eat our fish catch, calling it faecal fish.”

### **Solution in sight?**

“Though centralised STPs are not successful anywhere, the authorities maintain that they would solve the problem,” CF George, one of the anti-STP campaigners reported. Those protesting the STP point out that the courts cannot intervene now, as the STP is neither completed nor commissioned.

According to a municipal official, the municipality gives building permits only if sanitary waste management plans are also included. “But we have no system to assess if the system is functioning or not, after the building is completed.”

“Health department and the pollution control board need to look into these problems,” said Thekkumpuram. But officials in the departments concerned were reluctant to respond to the villagers’ pleas. In spite of two meetings with human rights commission also, the villagers say that there is no solution in sight to the decades-old problem.

The protestors allege power and politics behind the inaction. “Before we formed the Civic Rights Forum, we came together under Chakkamkandam Azhukkuchal Viruddha Samithi (Chakkum Kandam STP protest) and raised our voices,” KA Sreedharan told VillageSquare.in. “But we, the village folks, are not influential and we are always defeated by influence, power and money.”

“The plant that has swallowed money by the millions, appears to have been abandoned now,” said Sreedharan. The villagers demand waste management at source. If that is not possible, they seek decentralised STPs to reduce the extent of environment damage; so that their water sources would remain clean.

On February 22, ombudsman for local bodies asked the municipality to state what action it has taken so far for controlling the discharge of direct excreta into open drains and submit a time-bound plan for solving the issue.

## **CHAPTER THREE**

### **LIVELIHOOD THREAT**

Every pollution has its own politics. One side the culprit of the pollution other side misfortune of the people suffering the pollution, the opposition between two parties is what figuring the politics. How unfortunate is the plight of those living in a village who use water, including for drinking, from wells into which human excreta flows from a nearby town. This is the authentically reported tale of Chakkum Kandam, a low-lying backwater village in Thykkad panchayat, neighboring Guruvayur.

Raw sewage containing human excreta and other wastes from lodges, restaurants and wedding halls in Guruvayur town are discharged into the Valiathode, a drain, which flows to Chakkum Kandam Backwaters. (The Valiathode winds 2.5 km through the Guruvayur town before reaching the Chakkum Kandam backwater village). Many of these 200-odd lodges and as many restaurants have no septic tanks and they route their waste into the drain, according to C.F. George, a Chakkum Kandam Azhukkuchal Viruddha Samithi activist.

According to the estimates of the Guruvayur municipality, over 3.5 crore devotees visit Guruvayur each year. The people of Chakkum Kandam backwater village are forced to live with a substantial portion of the bio-waste of these visitors. The situation worsens during the rains. When it rains, the entire area gets flooded. The canal overflows and black filth gets deposited in our courtyard. The stink is nauseating, says Chemberi Sulochana, a resident.

On a directive from the Ombudsman for Local Self-government Institutions, M.R. Hariharan Nair, the Kerala State Pollution Control Board (KSPCB) had recently tested water samples from twelve wells in the area. The results indicated faecal contamination with very high count of coliform bacteria. The board had asked the local people to desist from using well water for drinking purposes.

Tests indicate that groundwater in Guruvayur is contaminated. A recent test by the Environmental Engineering Laboratory of the Department of Civil Engineering, Government Engineering College, Thrissur, had found that the coliform count in the theerthakulam of the Guruvayur temple was one thousand one hundred per hundred ml of water. (The permissible levels are fifty per hundred ml for drinking and 500 for other uses). The manikinar, from which water is drawn for temple rituals, is hardly hundred metres from theerthakulam.

We used to cultivate Pokkali rice (a salinity-resistant rice variety raised in water-logged fields) on both sides of the lake, says Madhavi, local resident. The banks of the lake were then dotted with coir looms. Coir-matting was a key source of livelihood in those days. The Chakkum Kandam river was the lifeline of three thousand-odd families in five panchayats. The residents of Thykkad panchayat are mainly farmers, coir workers and fishermen. Their lives are linked with this backwaters.

The scene changed some twenty five years ago with the mushrooming of lodges and hotels in Guruvayur to cater to the needs of the rapidly increasing number of pilgrims. Chakkum Kandam Backwater village was directly hit, she adds. The people of Chakkum Kandam Backwater village are paying the price for the development of the

Guruvayur municipality, says Laila Hamsa, Thykkad panchyat member. High levels of contamination have made farming impossible. Skin diseases and allergy conditions are common among residents of the village. The fish resources are also fast depleting.

People refuse to buy fish from Chakkum Kandam Backwaters, reported Sankaran, a fish worker. The coir industry collapsed as people do not want to venture into the water to soak and process coconut husk. Nobody from outside visits Chakkum Kandam Backwaters anymore, says Ms. Hamsa. The young men here have difficulty finding brides from other areas because of the reputation of Chakkum Kanadam Backwater land as a stinking place.

The proposed Chakkum Kandam Backwaters sewage treatment plant will address the issues, according to Guruvayur municipal chairperson Geetha Gopi. Why should the plant be here? The municipality should find space for the plant in Guruvayur. Why should we bear the brunt for the convenience of others? reported samithi office-bearers.

In the absence of adequate potable water, they are forced to drink water contaminated with human excreta. To worsen their woes Guruvayur municipality has hastened the long-pending construction of a sewage treatment plant (STP) in Chakkum Kandam Backwater Village, ignoring the concerns of residents and warnings by experts. They say an STP along the backwaters will turn it into a sewage lagoon.

Chakkum Kandam Backwater village residents' miseries began as Guruvayur, famed for its Krishna temple, emerged as one of the major pilgrim centres in south India. Today the temple is the fourth largest in the country in terms of number of devotees. According to Guruvayur Devaswom, the temple administration board, on an average



twenty thousand people visit the shrine every day. As many as thousands of hotels, lodges, restaurants and wedding halls cater to the needs of the visitors.

“Most commercial establishments and apartments in the town do not have properly functioning septic tanks and discharge the raw sewage directly into two open drains,” says C F George, a retired teacher and staunch activist of Chakkum Kandam Drainage Action Committee, which is spearheading the struggle against mismanagement of municipal waste. The drains, Valiyathod and Cheriyaathod, flow three kilometers through the town before joining the backwaters of Chakkum Kandam.

Hardly anyone grows pokkali these days. The fisherfolk and coir workers are the hardest-hit. “We get skin rashes and sores when we get into the water,” says Kumaran Chulliyil from Chakkum Kandam Backwater village. Most of the coir units, dotting the seven-kilometre stretch of backwater, have been closed down. Fish catch has reduced considerably.

“Several common fish have gone extinct. Even if we manage to catch some, there are not many takers for the fish from theettaakkaayal (shit lake),” says Gopinath P, another resident. “Whatever little we earn, we spend on medicines.” People here live in the midst of black, thick, stinking sewage, says Laila Hamsa, a former member of Thykkad panchayat council and convener of the committee. Chakkum Kandam Backwater village is part of Thykkad gram panchayat. During the monsoon, when the drain overflows, excreta gets deposited in the courtyards.

Decades of raw sewage discharges into open drains and backwaters has contaminated the groundwater. In November 2009, the Kerala State Pollution Control

Board (PCB) tested water samples from 12 wells of Chakkum Kandam Backwater land. The results indicated faecal contamination with very high count of coliform bacteria. The board had asked people not to drink well water. The municipality has been providing Chakkum Kandam Backwater village residents with piped water since 2010, when the village was attached to the municipality. “But the supply is irregular and erratic,” says K. A Sreedharan, whose well, according to PCB officials, cannot be used even after disinfecting.

Studies indicate that open discharge of raw sewage has also contaminated groundwater in Guruvayur. In 2008, an independent fact-finding team of engineers and scientists studied the municipality area. Even the temple tank was found to have high faecal coliform count—1,100 per 100 ml of water against the permissible limit of three per 100 ml.

A petition filed before the ombudsman for the local self government institutions early this year by the Association for Public Welfare & Social Justice, a rights group, says wells and other water sources within one kilometre of the temple are highly contaminated, seriously afflicting the health of the residents.

Municipal authorities say the allegations are exaggerated. “Only a few old hotels and lodges are without proper septic tanks,” says T.T Sivadas, chairperson of the municipality council. For all the new ones, he says, the municipality insists on setting up waste treatment facilities.

But he contradicts himself by saying that all lodges, rest houses and public comfort stations under Guruvayur Devaswom discharge their sewage directly into the

drains. “Guruvayur devaswaom is very rich. Still it does not take proper waste management measures nor does it make financial contributions for sanitation work,” Sivadas alleges.

## CONCLUSION

Paddy fields, that yielded harvests of gold, the lagoon waiting to be milked of bounties worth millions, fishermen and mussel pickers, boats loaded with coir... Chakkum Kandam lagoon resounded with noise and bustled with activity.... The enchanting blue back waters of Chakkum Kandam... blessed by its exquisite coolness. For years thereafter, the backwaters of Chakkum Kandam were the unfailing source of our livelihood and well-being. (83-84)

A simple problem and a very simple solution: to obey the law, George. 'Only thing we villagers demand is dispose the waste in it's origin itself.' Authorities hands never dare to raise for people, nature and land against the crore profit holders. One time in the Chakkum Kandam backwaters, in which boats went is presently in a situation where water stopped flowing.

Chakkum Kandam Backwaters of central Kerala is a water body situated near a township famous for pilgrimage tourism. A couple of decades back this water body was the main source of income for the native population by means of both capture and culture fisheries which was altered to a present condition of adversity for the sustenance of the aquatic lives. To assess the pollution status of the water body field visits were done at regular intervals and water samples were collected monthly for one year during 2009 to 2010. Water quality was estimated as pH, dissolved oxygen, turbidity, and ammonia. The CCME Water Quality Index was calculated. It was inferred that Chakkum Kandam lake has a CCME WQI value which can be categorized under the Poor status. Fish diseases were reported by native fishermen during this period, which was in accordance with the study inferences. The water body is under pollution risk.

If the temple administration violates the rules, why the municipal council does not take action against it, says George. Activists point out that the licences of erring establishments hardly get cancelled as some of the lodges and hotels are owned by municipal council members and their relatives. Besides, there is unholy nexus between politicians and hotel and lodge owners.

The municipality now highlights the STP, being constructed at Chakkum Kandam since 1995, as the solution to the issue. But the plant has a capacity of three million litres a day, which is just sufficient to treat the sewage generated by 1.4 sq km around the temple, or around three per cent of the total municipal area. “We hope to complete the work in six months,” says Mathews Philip, environmental engineer in-charge of the plant. The treated effluent from the STP will be released into the backwaters and can be used for agricultural purpose, he adds.

Chakkum Kandam residents have been opposing STP since it was proposed in 1974, saying it will only compound their plight. They say the plant was originally proposed to be set up in Kalathode in Guruvayur municipality. But the site was close to a political leader’s home. So the authorities shifted it to Chakkum Kandam, ignoring that the village is thickly populated. The villagers fear if the STP leaks—which is more likely because the main pipes of STP were laid in the 1970s and have reached the end of lifespan—it would further pollute the wetland and fill the area with obnoxious stink. George alleges that the municipality is constructing STP by filling a hectare of the backwaters, which is under Coastal Regulation Zone I and without an environment impact study.

A study by the Kerala Forest Research Institute in Thrissur district in 2010 pointed out that construction of the STP had destroyed mangroves in the area. Fish and birds would be directly affected as effluents from the STP would alter salinity of the backwater. The study notes that short-sighted interventions can destroy the fragile ecosystem. Activists ask why does the municipality want to set up a centralised STP, spending Rs 20 crore and violating the Municipality Act? Why does it not make the establishments in the municipality abide by the laws?

"Government has not yet ready to hear the scream of the people who are destined to live in this raw human waste," reporter. "This river like any other river was a pure and sacred one, the people surrounding it lived depending on it," George.

"Fishes all died," "It was a place where people practiced agriculture now no recourse, no recourse for anything," a public worker. "They lost their right to live," George.

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