



Ecological Debilitation in Thiruthangal Region and Sustainable Solutions

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Abstract

Tiruthangal is a corporation town located in Virudhunagar district in the Indian state of Tamil Nadu. The town is considered to be 3,000 years old. The economically advanced people of this region are lagging in their ability to protect nature. Because of the speed-up of industrialization in printing, match and firecracker industries, the place seems too hot and has a very tough climate in the summer season that looks like a desert. The water resources are also stagnant and the taste of the water has soared due to the dye industry. Much research is not being done in these areas. Due to the depletion of the environmental system, many problems like poverty, pollution, and health issues arise and make people suffer. Hence, this article aims at social, literary and ecology levels to explore and address the mechanisms by which nature can be regenerated for the goodwill of mankind and other beings.

Keywords: environment, mineral resources, water levels, *Silappathikaram*.

Introduction

The town Tiruthangal was formerly known as Thiruthankal. It is known as Thiruthankal because the goddess Lakshmi stayed on a golden hill in the town according to the legends. It is a cold windy area. It is situated 16 km west of Sattur railway station in Virudhunagar District. The town is popularly known as Vaishnava Tirupati. Emperuman Thangalappan has risen in the region. The area is considered to be named Thiruthankal due to the residing place of the Emperuman, the Supreme God. The word ‘tangal’ refers to the aquiferous land and shrubs that grow in this area. The name might have arisen due to its prosperity and is revealed in the book *Nomenclature and Specialties of Tamil Nadu Towns*, 2007. ^[1]

An ancient town inhabited by Sangam Poets

Sangam literature shows the evidence of many poets who had sung in this area. Poets who had sung songs in Sangam literature have added their names to this place. The town of Tiruthangal was known as Tangal during the Sangam period and can be understood by the names of the Sangam period poets. The name is found in three literary works such as *Kurunthokai*, *Nartrinai* and *Akananuru*. ^[2]

Environment

Environment refers to the living and inanimate objects around us. The environment is



the ecosystem in which natural resources such as land, water, air, and other species, such as plants, animals, and birds, interact with each other. 'Ecology' is about the relationship between living organisms and the environment in which they live. Ecology is the life cycle of plants and animals in a particular environment. Nature has been ravaged by selfish human beings, and the environment has not been harmed by the times when people lived in harmony with nature. Environmental education was created as the environment was degraded. Environmental education protects the environment from destruction, creates a protection ring for nature and provides solutions to environmental problems.^[3]

Ecology

Ecology is a science subject. The word 'ecology' was coined by the German biologist Ernest Haeckel. The word 'ecology' is derived from the Greek word 'Oikos'. Living in one place is what this means. Scientists who research the environment are called ecologists. The purpose of this article is to explore the water, forest, mountains, industry, etc. of the people of Tirutangal who live in one place through an ecological perspective with a connection to other humanities. World Earth Day is celebrated on April 22, 1970, on behalf of the United Nations.^[4] Today, environmental science is a subject taught to students in schools and colleges. It is the best way to give awareness to the younger generation. Natural pollution should be taught not only to students but also to adults. The general public must work together to protect nature. This is the way we can save ecology. There are many water sources found in the place but dried up. Once they were very bountiful and enriched the lands.

1. Arjuna River
2. Urunji Pool
3. Ala Urani
4. Chengulam Lake
5. Papanasam Theertham
6. Arumugam Theppem
7. Pappan Pond
8. Big Pool
9. Nineteenth Stream
10. Celliyaramman Temple Teppam
11. Kuttai Pond and other
12. Wells

Arjuna River

The Arjuna River flows near the town of Thiruthangal. The river flows from the Western Ghats through the place. Palaeolithic tools have been found to prove that people lived in these river plains many thousands of years ago. The river is also known as the Arjuna River as it was melted down by Arjuna, one of the five Pandavas according to a legend. The river today is affected by industrial effluents. People in the area do not care much about the



environment. The government must create environmental awareness among the environment-oriented victims through media and awareness programs.

Urunji Pool

The Urunji pool is the largest one located in the place. The people here have used this water for drinking, bathing, rinsing and drinking for livestock in the past. People have taken a bath by rubbing the dirt on their scalp in front of the Urunji pool. In the absence of shampoo and soap, people, and water was all healthy. There is also a lot of agricultural land around this place. Today, agriculture is not seen in this place which is rich in products like paddy and other grains. Now the flats have been put up and sold. People are building houses and the Urunji pool is now unusable for anyone to even wash their clothes. Because all the wastewater in the city goes into this pool. Ashes fly high in the Anna Colony of Thiruthangal as the waste from the fire office is burned in front of the Urunji pool. The waste was burned to the ground and the environment was much affected. Today, the farmlands have become a children's cricket ground.

Ala Urani

In the past, it was said that Ala Urani was a shallow and deep pool. People used it for bathing and fishing. Many have died because of the non-availability of renovation work. Once in Ala Urani, the people of this area celebrated the festival by placing the idol of Pandi on the bank fifty years ago. Now this place has become dirt and useless due to garbage and poly waste. Now no one uses this stagnant water.

Chengulam Lake

Chengulam Lake is a pond studied by many archaeologists and anthropologists. Iron Age pottery has been found in the pool. Nearly 300 artefacts have been found in the area that belongs to 300 BC. Black and red pottery tiles, bowls, brick with the lady symbol, a castle engraved with fish on one side and fish on the other. The pots have fish codes. Items have been found similar to those found in the early period of history. Women wore earrings in the early days of the castle with holes in the castle just like they do today. Money for that has been found. Roman gold coins were found in an oyster bar near this place. Coins of the Pandya period, coins of the Chola and Nayakar periods have also been found at Chengulam Lake. Such a glorious pond is still stinking today. Those who cross the Chengulam Lake which is near to the Tiruthangal police station will go with their noses covered. Wastewater enters the yard as it pollutes both the air and the water and the health of the people.

Papanasam Theertham

Papanasam Theertham is the holy theertham of Thiruninra Narayana Perumal Temple. This theertham is considered to be the holy theertham of the Lord. None of the people are allowed to enter the holy tank. So, the place and water are good.

Arumugam Theppam

Arumugam Theppam is in Murugan temple that resides on the Thiruthankala hill. The embankment is set above the road. The trees around the temple are beautiful and scenic. The



water here is clean and unpolluted. None of the people ever got into this boat. Just like on a mountain, you can see the fire and the trees just by standing on the steps.

Pappan Pond

Pappan Pond was considered one of the theerthams in the past. The water in front of Pappangulam was used in the past to irrigate the agricultural lands. But now no one knows where this Pappan pool is. It has vanished by population and pollution. Only sewers without sanitation are entering into the Pappan pond. Air pollution is also very high.

Periyakulam Kanmai

Periyakulam is located in Tiruthangal and is a beautiful place to look at. There will be more water during the rainy season. If it does not rain at this time, water will be scarce at this lake. Periyakulam is not polluted due to the absence of people or factories. During the rainy season, the people of this place go for a walk and bathe with enthusiasm. They also catch fish in front of Periyakulam.

Nineteenth stream

The nineteenth stream goes into the Urunji pool and mixes with it. With the help of the nineteenth stream trees and plants such as banana tree, coconut tree, guava, sapodilla and papaya grow in a fertile manner. The nineteenth stream overflows with fountains during the rainy season. In the summer the water flows very little.

Celliyaramman Temple Teppam

Celliyaramman temple Teppam was seen as a major water body from ancient times. Currently, the temple lake is polluted due to the wastewater near the lake and also being dumped into the lake. Even during the rainy season, the swamp is found to be overgrown with moss and thorny plants with stinky smell. Diseases like cholera, malaria and other air-borne diseases spread by the dumped water. People suffer from different types of diseases due to this kind of ecological issues.

Kuttai Pond

Kuttai Pond is a beautiful pond located on the side of the well near the Narayana Perumal Temple Nandavanam. Fifty years ago, the pool was used for drinking. The fountain in the pond is high during the rainy season. At present, the pond is covered with sand so that no one knows where it is. People destroyed the pond to such an extent that they did not even know it existed and turned it into a sidewalk. The closer man gets to nature, the more danger he has to the destruction of the pond for his selfishness. All the ponds and pools that were protected by the people fifty years ago are now becoming sewers by the modern educated people. The situation has changed to such an extent that for some time the pigs have been dwelling in the disappeared pond. Every human being must guard the water and land in a good manner. It will be significant that in the future days if it goes like this one has to give dirt and chaos ^[5] to the future generation.

Wells



Wells are more common in Thiruthangal. Nowadays, before the advent of deep wells, people used well water extensively. During the rainy season, water is easily pumped from the well. In hot weather, people sit in rows one by one to get water. The use of such wells did not gain much traction in use after the advent of bore wells. They use well water for irrigation. The temple wells are found with good maintenance. During the Pongal of the Mariamman Temple, people flocked to the well to get holy sanctions. The wells are mostly used during the Mariamman temple festival. People do not dump garbage in the well as they believe the deity Muniyasamy is frozen in the well. Otherwise, many wells with debris are frequently found. When the wells were found to be heavily littered, the Tamil Nadu government cleared them by the rural department.

Water is an essential one and a primary need for all living beings in this world. In the past, people considered such water to be more than life and gained rainwater in rivers, lakes, ponds, canals, and rafts and used it properly for agriculture. But nowadays agriculture is more vulnerable than other industries. In the centenary song, it was said that it was the chief duty of a country citizen to set up suitable water levels to store rainwater. The Sangam poet Pulaviyanar Pandian has sung looking at Nedunchezhiyan about the importance of wells to safeguard people and agriculture. ^[6] This means that the kings who built the shores where the water levels will be wherever the land is in the abyss will be immortalized in this world forever. Rainwater harvesting systems have been in place in Europe for many years. The Indian government has also ordered to collection of water when it rains by certain methods in every house to gain an underwater level. Nowadays, it is mandatory to store rainwater in people's homes and factories. Thus, the groundwater will rise without declining.

Theft of underground mineral resources

The arable land where fertile land existed has now been converted into quarry. They have piled up waste like a mountain after taking the resources. Mineral resources have been heavily exploited here. Thus, the inhabitants have been displaced to other places by the local sand and quarry mafias. Explosives are used before digging the granite stones. Air and water pollution occur during tunnelling of the place to swindle mineral resources. When tunnels are dug in the earth's surface and mineral resources are extracted, many changes take place in the landscape. People face various consequences such as landslides, deforestation, loss of agricultural land and sedimentation. The land is becoming unusable due to the mining of mineral resources. It is necessary to turn such useless lands back into useful ones. Lands can be reclaimed by filling in the gaps created by excavations and spreading fertile sand. Land reclamation can also be completed by growing plants on the land. The State Government can provide necessary financial assistance for such initiatives through various schemes such as the Jawahar Rojkar Yojana. ^[4] Laws have been enacted in countries such as the United Kingdom, the United States, Canada, and Germany to prioritize environmental protection in the area where the mines are located. In Germany in particular, 40 per cent of such reclaimed land is eligible for re-cultivation.

The labour and economy of the people



The trees such as banana, coconut, sapodilla, papaya and seedlings are produced in the area. But people would rather go to companies like Cracker Industries, match factories, Calendar Companies, the printing office, pipe spinning, and chuck sticking, to earn more than work for the farmers. Once, the minority people living in the Tiruthangal area were the makers of handicrafts such as palm leaf straws, sorghum baskets, pancharak baskets, bamboo baskets and palm straw boxes. Today, minorities are seen only as cleaners. Instead of these items, people are using things like plastic bags and carry-on cardboard boxes.^[8] The use of palm leaves has greatly diminished with the advent of plastic during this period. The earth is also warming. Business is going well here but spoiling the land.^[3] The number of educated people is on the rise nowadays. Fifty years ago the number of educated people here was found to be low. Boys and girls wish to go to the match factories. They do not take education seriously. Nowadays everyone wants to go to college and study but has no awareness of the environment and ecology.

Birds, trees, animals

Pigeons were abundant here some time ago. The Narayana Perumal Temple at Thiruthankal is lined with hollows that allow pigeons to live in. The pigeons are having fun with their pairs. There are also innumerable monkeys around the Perumal Temple and live inside the Shiva Temple. Currently, there are only a couple of monkeys. The number of rabbits has also decreased due to the high ecological crisis. The number of sparrows has also decreased. Cranes are found only in the Urunji pond. Crows, Parrots and quills are now declining in numbers. Twenty years ago, there were more parrots and quills. Donkeys were more prevalent among the colourists. But currently, donkey breeds are very rare in the area. The dairy industry had a large number of cows, bulls and buffaloes. Now buffaloes are no longer a breeding ground. They had been sent to Kerala and slaughtered for flesh. Only cows are used for milking. If cows give birth to a calf, they sell it within a few days. Chicken, roosters, fighting roosters, goats, etc. are raised by the people for food and sale. Creatures such as bats and butterflies are very rare to see in this place.^[4]

Soil

The red soil is found throughout the place of Tiruthangal. At this place, Neem tree, royal tree, flag tree, guava, pomegranate, punna and drumstick trees are found in large numbers. When people see Vembu and Arasamaram together, they think of Swami as a tree and worship him.^[7] On the eighteenth day of the month, the people of Tiruthangal worship the palm tree as there is Pandi Muniyasamy resides in the tree. Previously oak trees were abundant. Currently, the number of houses has increased and the oak trees have been destroyed for furniture. It has also created an ecological imbalance. Plants such as tulip, azalea, juniper, cactus, eyelid, freezing leaf and almond trees are also found.

Findings

Tiruthangal is now seen as a twisted area of Kurinji (Hill) and Mullai (Woods). This is because the people and the government have mixed the sewer with water and left it untouched. Only if water is collected then the trees will grow there. Only if there are trees,



the birds will come and reside. Only when the birds arrive, fresh plants will bloom. The early people lived in harmony with agriculture and nature. Nowadays, people rely on the fire office and the matchbox office as their complete source making pollution to the environment around Thiruthangal. Pollution of the lake, pond, well and puddle did not seem to matter to them as there was a deep well. Wild animals, deer, rabbits, dragonflies and squirrels can thrive in the Western Ghats only if they are well maintained here and leave the Western Ghats free from occupation. Otherwise, there will be a great shift of livelihood and confusion may happen. Elephant manure is used as manure for trees in the forest. Trees regenerate with the natural manure. It rains only when the trees grow in the forest. Trees absorb rainwater like fungus at its roots. The mountain will prosper only if it has a proper life cycle. So, trees, rain, the mountain, animals, birds and all interact with each other to save the earth. But man is stealing away the earth's mineral resources, leaving industrial effluent in the river and burning poly waste, enlarging the ozone layer, global warming and polluting it with carbon gases. The moderns have failed to keep up the ambience of the ecological balance like the people of the past. Hence, awareness programs and self-awareness can help the place to escape environmental crisis in future.

Conclusion

The ground was found to be unsuitable for cooling with water levels due to garbage and other ways of pollution. This town was special during the Sangam period, the Kappiya period and the Bhakti literature period. In the age of industrialization, the place is highly eradicated and dilapidated. It will harm not only humans but all living beings. So, parameters should be perfect to control poly wastes, dye and fire industry waste. Water levels are found to be polluted. The government has to take stringent steps to protect the place from pollution, water scarcity and erosion in the coming years. The town has a large garbage dump. Government cleaners separate natural waste and plastic waste and send it for recycling. To foster organic measures, natural fertilizers can be given to farmers instead of chemicals. The government should advise the general public often should to conserve water and water reservoirs. Frequent awareness programs and advertisements should be made about environmental education for the people of Thiruthangal.

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