

MANONMANIAM SUNDARANAR UNIVERSITY
DIRECTORATE OF DISTANCE & CONTINUING EDUCATION
TIRUNELVELI -627012, TAMILNADU

BA - TAMIL

Tamil management thoughts



Manonmaniam Sundaranar University
Directorate of Distance Continuing Education
Tirunelveli - 627017
Tamil Nadu

Learning Objectives	
The Main Objectives of this Course are to :	
<ul style="list-style-type: none"> • Realizing that management is for everyone • To make known the management ideas of Tamil literature through their literature. • Comparison with contemporary management thinking 	

Unit-1 - Ancient Tamil Life and Multifaceted Personality

Tamils as pioneers of world civilization - Ancient Tamils' versatile knowledge - Ancient Tamils' industrial development - Tamils' land and time divided with a view to global commons - Management and family relations in literature - Visionary thoughts (food - clothing - shelter).

Unit - II - Ancient Tamil and Technology

Agricultural management and agricultural technology - Clothing management and weaving technology - Ancient Tamil architecture and management - Biological knowledge and ecological management - Metallurgical techniques and production tools - Textiles and production technology.

Unit-III - Ancient Tamil Medicine , Water Management and Arts

Ancient Tamil Medical Management - Medical Techniques and Health Management - Water Management Astronomy and Water Management - Maritime Knowledge and Shipbuilding - Traditional Arts

Unit-IV - Ancient Tamil Life , Governance , Warfare , Commerce

Ancient Tamil Political Management and Personality - Legal Approaches

Ancient Tamil Life - Governance - Military Management / Professions

Technology - Business and business skills.

Unit -V- Contemporary Tamil Society and Management

Management philosophies - Contemporary Tamil society and management - Contemporary ecology and life - Contemporary arts and development - Human relations management - Personality skills - Leadership qualities - Crisis management - Ecological impacts - Ancient Tamil techniques and the contemporary era.

UNIT -1

Ancient Tamil lifestyle and multifaceted personality

Tamils, pioneers of world civilization

Tamil people

The continent of Lemuria, which is said by researchers to have been the birthplace of the first living creature in the world, was called ' Kumarikandam ' . The man who lived there was a Tamilian. It is believed that the language he spoke was Tamil. In ancient times, primitive man made weapons from stones and hunted animals. He made fire by burning stones and ate the animals to satisfy his hunger.

that they wove tree bark into clothing when the human race was aboriginal and discovered cotton and spun yarn from it.

after cotton , jumped to silk, and discovered weaving by putting the knitted fabric on the loom. A full-length saree created by the hand of an ancient Tamil was so soft that it could fit in the palm of the hand. There is no doubt that the forerunner of today's thin fabric was the Tamils, the first race in the world.

Pioneer of technologies

The wheel is the basis of all world technologies. The technology of making pots and the use of the wheel were inventions of the ancient Tamils. They used clay to make household utensils, various types of horses to preserve grains, and objects like coffins to bury the dead.

He tamed and trained his animals , using them as obedient friends , and used them to produce agricultural products, the basis of his livelihood .

Pioneer of culture

The Tamil people developed a culture. They chose a king for themselves and followed his path with discipline. The people needed food to survive. They invented agriculture to produce that food. They cultivated the land and started producing their food needs. They invented tools to produce agricultural products. They guided the world in agricultural technology such as rotational agriculture , intercropping , rainfed farming , and natural farming techniques that fertilize the soil itself .

A large crowd ; a leader to lead the crowd ; agriculture to solve the hunger, he created an organization called family to give meaning to such an expanded life. Over time, the idea of working for the family emerged. He brought this family organization under control and paved the way for the development of civilization. That is the Tamil culture that is shining as an example to the world today.

Tamils are credited with telling time by looking at the stars without using any technology. Tamils are also credited with not only studying the nine planets that have an impact on human life on Earth, no matter how many planets there are in the sky, but also predicting whether rain will come on a particular day based on the arrangement of constellations.

The ancient Tamils used to worship nature. They worshipped the sun as it began to shine . They worshipped trees , plants , and vines . The Tamils systematically divided the five types of land, namely Kurinji , Mullai Marutham , Neithal , and Palai , the characteristics of those lands , and the lifestyle of the people living there, and gave them a code of conduct .

that not only performed extraordinary medical procedures without weapons , but also found relief from many incurable diseases that threatened humanity with ordinary herbs. The Tamils fully realized the usefulness of metals, whether it was a sword for standing in front of a foe , a spear for throwing a javelin , or a shield for blocking, and they used metals for cooking and protecting things .

Martial law

The Tamils, who laid down the rules of life , also regulated their habitat. After the ancient Tamils started living in separate groups, they devised a method of warfare to protect their group and defeat the enemy. In particular, they regulated the battlefield by adhering to justice and principles. The method of warfare with literary glory such as attracting spirits , inventing plots , and restoring the homeland belongs only to the Tamils. A king who ruled without violating justice practiced justice even in the war with the enemy. The moral method of warfare, excluding women , children , the elderly , the disabled , and spirits, was conveyed to this nation by the ancient Tamils. The inscriptions on the Kudavalai of that time bear witness to the political management of the Tamils and the basis for the constitutional laws of this time.

Pioneer of the arts

Tamils discovered sports that exercised the body, mind, and brain. They began to worship the soldiers who had died in heroic deeds and in an attempt to save many people. They planted a stone on the place where they were buried and performed worship. This is called the middle stone. In this way, the worship of minor deities increased and gradually temples were established to worship God.

The Kudamuzha, a five-faced instrument with a single pot , is a wonder that sounds different because each face is different in size. It is a treasure trove of art that is not found anywhere else, not just in Tamil Nadu . A man who combined hard work and discipline began to show interest in entertainment arts. In that endeavor, music and dance took shape.

dance as a form of art that stimulates the vibrations of the nerves and protects the body , and has the power to sway the nerves of the viewer. They made each movement of this dance element into a seal and created 108 dance karanas. They also created a god who was the master of dance , and they portrayed him as a dancer , making him realize that the movement of life is the movement of this god. They taught that no matter what was done, there was a power beyond human effort , and they wanted to keep everything a mystery .

Pioneer of architecture

and sculpture of Tamil Nadu still amazes the world with its sublime beauty. The Thanjavur Periya Kovil, with its ten-pan tower and a slight slope , stands as a painting painted by a brush, untouched for a thousand years. The engineering technology of this architecture is still admired by world architectural engineering experts as an unfathomable mystery.

Sculptures are chiseled. But Tamil sculpture gives the impression of being sculpted on the tip of a needle. These unique casts, cast on stone as if cast on paper, are proof that Tamils create magic at their fingertips.

carved from a single stone into pillars of different sizes , each designed to resonate with a different melody , are a beautiful testament to the musical and sculptural talents of the Tamil people.

Pioneer of water management

Ancient literature clearly explains the theory of water cycle, which is similar to today's scientific discourse. They accurately predicted the celestial positions , seasonal changes , and wind cycles , and ensured rainfall in advance. They built dams across rivers to prevent the running rainwater from going to waste. They built lakes and ponds to store water. They used the stored water for irrigation and drinking water using various technological techniques .

Agriculture is the heart of Tamil Nadu. With the aim of ensuring that the blood flows properly in that heart , the dam built by the great king Karikalan to store the Cauvery floodwaters is creating a crowning glory to the historical achievements of Tamils , with its murmuring waves.

Tamil civilization spread around the world

Civilization began to flourish all over the world. The Tamils wanted to spread their civilization to other continents with the riches they had discovered by digging up the earth. They built ships to sail the deep world. Saying , ' Search for wealth even when the oceans are full , ' they went to foreign lands in wooden boats with the desire to accumulate rare treasures in mother earth , sowed our civilization and culture there , traded the riches of our country , and obtained rare treasures from there.

, who transformed wooden vessels built for trade into warships and made those who preached virtue tremble in their ships, is admirable. The sweet Tamilian who celebrates love and courage to this day ; the noble Tamilian who loudly proclaims that showing kindness and being kind is our culture. No matter how many ages pass and how many tidal waves come, the Tamilian will maintain his pride and fame.

Versatile knowledge

, it starts its thinking and search in new fields . First , a society is forced to use various technologies for the fulfillment of basic needs and for time management. As a result , new fields like metallurgy are introduced , and other fields related to it emerge and develop . A society that has a passion for new fields and versatile knowledge as its property. It can be seen that it is taking the lead in the world arena in achieving its goal of ' self-sufficiency ' at all levels. In this way , literature shows that the ancient Tamil society excelled in versatile knowledge. Moreover , they realized that knowledge about versatile fields comes with it. Therefore , they predicted the social pros and cons in advance and prepared themselves for it. Therefore , they gained the strength to face social problems caused by natural disasters and droughts.

"Tamils have excelled in many fields in the past, including literature , art , music , dance , sculpture , architecture , philosophy , religion , medicine , agriculture , engineering , and foreign trade. " Charles Fabry says that they were powerful and that they failed to show their high civilization to the world. In this , it can be seen that it is more appropriate to say that a society in the present time has failed to show its knowledge to the world, rather than that the descendants of that society have failed to preserve and develop the discoveries of their ancestors, the search for knowledge, and to take it to the world stage . In this way , this section shows the multidisciplinary knowledge centered on the social development of the ancient Tamils , and the industrial development associated with economic development. Multidisciplinary knowledge is a stepwise development of social development. Multidisciplinary knowledge refers to the fields that the ancient Tamils tried to understand and the fields that they knew . The expression of the knowledge of the ancient Tamils, which tried to measure the immeasurable, is evident in these . It is multidisciplinary knowledge that conveys the knowledge quest of a society , the development of civilization , their beliefs and discoveries to the world. In this way , it is possible to know through literary evidence that the ancient Tamils focused their attention on the five elements , astronomy , geography , science , history , metallurgy , agriculture , commerce , medicine , architecture , engineering , science - music - drama , and fine arts. **I. Aimphuthangal (FIVE ELEMENTS)**

The ancient Tamils were well aware of the five elements, namely, earth , water , fire , air , and space . They saw that the world was a mixture of these five elements, including earth . They identified the nature of each of these elements separately and realized that they were the basis of everything . Therefore , they adopted the tradition of taking these elements as metaphors for other immeasurable things.

Earth, fire, water, air, dust, and all five

The world of mixed delusion

(1589)

Tolkappiyar explains that the world is a mixture of the five elements: earth , fire , water , air , and space .

that the earth is composed of many atoms , that the sky rises and spreads over that land , that the wind comes and touches that air , that fire is born from the wind , and that fire is transformed into water. The fact that these elements are formed from one another is a fact that was discovered through the scientific research of the ancient Tamils . This ,

The earthy ground

The wind carrying Nilan

The divine light shines.

Wind-blown fire

They say that water is incompatible with fire.

The nature of the five great beings (Page 6-2:1)

It can be seen in. Similarly, ' If you measure the five elements, earth, water, fire, air and matter, and find their end , you will be able to measure them with knowledge and find their limit . ' The ancient Tamil king is greeted ,

The five of the water-lily fire

Even if you know the measure, you will not measure the measure (Rev. 24:15-16)

The steps show that. In this , it is evident that an attempt was made to measure the characteristics of the five elements.

ASTRONOMY

The ancient Tamils , just as they studied and understood the land areas , studied and understood the sky and the movements of the sun, moon , stars, etc. in it. Scientific books on astronomy also existed at that time . They studied the path of the sun , its directions, the movement of the wind , the planets that received natural light, the fish that received light from the sun , the space where there was no wind , and the sky that stood on its own without any support.

: the movement of the sun and its nature , the circle of the earth , the direction and nature of the wind , and the sky, which stands on its own without a base .

Sunday spending

Agnosticism

The land surrounded by the forest

Wind direction

The wound is dry and painful.

As if he knew) 30:1-5)

The verses of the Purananutru hymn show that.

Planetary position and natural phenomenon

' Scholars like Slater have praised the Tamils' astronomical knowledge as being very special .' With this astronomical knowledge , they studied the positions of the planets, which showed the changes in nature. They predicted the good and bad things that would happen in the country by using the structure and nature of the planets and

stars and the activities of the rocks. They knew that according to the unnatural changes taking place in the sky, the natural system of the country would also change .

positions that are conducive to rain were well understood . The eleventh Paripadala (1-15) mentions the kar period that comes after the mudhuveni period and the planetary combinations that are conducive to rain . In this , the days of Karthigai, Thiruvadhira and Pharani, which are combined with the bright moon spreading in the wide sky, are the first to be mentioned , and are distinguished by their names as Itapavithi , Mithunavithi and Medavithi. Of these three types of roads , there are three types of zodiac signs, each of which has nine days . Among them, the planet Venus joins the Idaparasi , the planet Mars joins the Medarasi , and the planet Gemini, which is called the planet that investigates and knows things, stands in the sign of Gemini , the day of Karthigai, when the darkness is at its peak, the dawn breaks , the planet Jupiter joins the sign of Pisces, which is above the twin houses of Saturn, Capricorn and Aquarius, the planet Saturn, which has Iyaman as its brother , stands in the sign of Capricorn , which is behind Sagittarius, on the day when Rahu and Madhi disappear, the fish called Agasthya crosses its place and joins the sign of Gemini. In the Karkalam, which comes after the Mudhuvenil season, due to the rain, it rises and rises to the Saiyamalai. The rain that fell on the river increased. Nallanthuvanar records the astronomical knowledge that the water in the Vaiyaya river rose and overflowed the banks.

if Venus, the planet of the sun, descends in the north, it will rain , and if it descends in the south, it will not rain (Pati.24.23-28 , Puram. 3.6-8, 1171-31). It is also known that if the burning star, the Visumbu meteor, falls, the green crops will be destroyed (Kuru.189 . 2-4). This burning star was also considered a symbol of the evil that would happen later (Puram. 229).

Furthermore , it was also pointed out that if Mars and Venus are together in the sky , it will not rain. Based on this, the literature says that it rained because Mars and Venus were separate (Vedas 13:25-26). Similarly, the planet Venus, which is beneficial to the world, went with the other planets that cause rain , and the sky was filled with rain clouds and good rain fell .

Stand up, silver-colored, in fear.

Visumbumei Agalap Peyalpurau opposite (Ver . 69.14.15)

The steps show. The shining ray spreads across the sky , the northern eye slightly tilts, the beautiful silver planet appears. The useful fish stand on their own day with the stringed fish , the water-dripping raindrops fall in the side sky, and the remaining living beings rise up and roar. The dark crowd filled with water drops carried by the downwind ,

The rays of the field spread and the sky glowed.

The dried-up, wrinkled, silver-colored silk

When you wake up, stand up straight.

Worship with a hand-held instrument

The human soul is a living being, and the spirit is a living being.

Kondal ... (Pati: 24.23-28)

The steps show that if Venus stands in its proper place and the other planets stand in their proper places, It is a Tamil meteorological knowledge that it is inevitable that rain will fall. It is also pointed out in this that the northwest monsoon brings more rainfall to Tamil Nadu. Similarly, when the stars and planets stand in their proper places, it is inevitable that rain will fall ,

"The sky is open to the fish's belly " (Pati .90.1) also confirms this.

Astronomy and people's lives

People studied the positions of the planets and acted accordingly. But those involved in the field of agriculture did not take the planets into account .

Disappearing and becoming a moral person day by day

The old man does not have the virtue of renunciation (Tol . 1081)

Tholkappiyar mentions that . The ancient Tamils, knowing the auspicious day when there would be no evil in the planetary position, performed the marriage on that day (Agam.86 :6-7)

They classified the stars in the sky, knew their changes , predicted the changes in natural phenomena due to the variations of the stars , and regulated their daily activities. The people were worried that the change in the stars in the sky would bring harm to the country, and the historical account of the death of the king is recorded in the Kudalur Kizhar .

On the day of Karthigai, which is the day of the Medarasi , in the dark half of the night , in the first quarter of the month of Panguni , in the shape of a pond The fire, which was like a beacon to the land surrounded by the sea , was stirred by the wind. A fish fell from the sky . Seeing that, many night owls, both Yam and others, felt pity and fear, saying, "It would be good if the king of the good mountain country, whose waterfall sounds like the sound of a drum, were free from illness ."

The seventh day came as we feared . Today, the fierce elephant's arm was laid on the ground and the place where the strong drum was beaten was torn and rolled . The white umbrella that guards the world ran and rolled , and the horses with a mind as swift as the wind lay without a trace, says Cheraman Vanavar (Puram 229.1-23) . In this , the various characteristics , names , and locations of the stars and the changes and harms that occur in world events due to the variation in their nature are pointed out. But even though there is foreknowledge here , methods to prevent evil are not used . This may be due to his opinion that nature and corruption are beyond human power.

Dayfish, planetfish

Ancient Tamil literature mentions the day fish and the planet fish. The day fish were found to have natural light and the planet fish received light from the sun . Furthermore , the day fish is known to be related to the life stage of humans. The fish

that stands next to Monday on a person's birthday is his day fish (star) (' Tamil Civilization and Culture. p. 47) Apart from these, they studied and recorded the structures and characteristics of the silver fish, the Saturn fish/the moon fish , the red fish , the red fish , and the northern fish .

The silverfish appears at dawn . If it rises in the north, it will rain; if it rises in the south, it will not rain. Burning and falling , and the appearance of the silverfish in different directions were considered signs of evil.

Airless space

They knew that there was no air above a certain height in the universe . Markandeyanar calls that place ' valyidai pradrama vakaru neetam ' (page 365.3) . In this , he refers to the sky, a place where no air can circulate, which is rare for any living being to go . He also says that they controlled the air and used it as their support ,

is known by the phrase "**Uravon Maruka**" (page 66.2).

Geography

The ancient Tamils were not limited to the country they lived in. Literature records that they were aware of the structure of other countries, the structure of the world , and the news. They saw the world , which was spread out in a vast area and surrounded by the sea , through their sea voyages. Many large mountains in it were also within their knowledge (Puram 18.1-2, 213:3, 382:17). This ,

Long screen display

Sound level limit

Honey sleeping high school

The mountain-smelling bull's memory

(Madurai. 1-4)

The song " .

Geography: World

The ancient Tamils, through their sea voyages , came to know the truth that the entire world is surrounded by water. This is shown by the evidences ' **Ponguneer Uduttam Malarthalai Ulagathu** ' (page 2132), ' **Mulangu Munneer Murumuru Varaei** ', and **Imizhkadal Varaiya Eendgal Kitakai** ' .

Similarly, they exerted their dominance in many fields such as oceanography , astronomy , geology , and climatology, and they tried to measure the nature of each .

Two-thirds of a glass of water

The width of the circle

Wind direction

They also said that it was a minor injury.

Even if they are measured and known

The steps are pointed out. Furthermore , this world surrounded by water is called ' **Kadalsuzh Mandilam** (Kuru 137:7), ' **Irulnira Munneer Valaiya Ulagattu** ' (Tirumurugu. 293) , ' **Pulavuuk Kadal Uduitta Malaratalai Ulagam** (Perumpan 409-

410), ' Virikadal Veli Viyalagam (Sirupan 114), Viritirai Perungatal Valaiya Ulagam (Kuru 41:1), Irungatal Uduitta Evvayakattu Puram 201.17) ,

Bend your knees all the way to the water.

Broader Degree (Page 181-2)

Literature also shows.

Geography: Country

were defined as the northern boundary, the Kanyakumari River as the southern boundary, and the seas to the east and west . The hills and forests from Thenkumari to the Himalayas and the seas to the east and west indicate that the ancient Tamils had a geographical knowledge of the country .

Thenkumari North

Gunakudakada Lavella

Hilly and mountainous forest country

To unite and lead

The footsteps of the Kurunkozhiyur Kizhar show that . Furthermore , it is known that the great Himayavaramban Neduncheralathan , the great Himaya and the southern-eyed Kumari, defeated the arrogant kings in the country between them without cheating them , and that the southern-eyed Kumari and the northern-eyed Himaya, the east, the west and the sea, all those living in between, worshipped Neduncheralathan and asked for his advice.

Tamil Nadu

In the Vaiyaga Garippil Tamil Nadu ' (Puram 168:18). ' Thandamizh Velith Tamilnatakam '(Pari 811)', Tamil Agam Pattu Imizh Isai Murasin ' Agam 2271) Literature mentions the places given by Tamil. When referring to the boundaries of the Tamil king's rule, the eastern and western seas are pointed out as the boundaries of the rule of Perunjottu Udhiyan Cheralathan ,

You are born on a Sunday, and you are born on a Sunday.

The white-headed Punar bathes in the ocean of water (Puram . 2:9.10)

The poet says. That is, Sunday appears in the eastern sea under his rule and disappears in the western sea under his rule . Panambaranar, who wrote the poem for Tolkappiyam , also says ,

Vadavengadam Thenkumari

Tamil proverb about the good world

(Thol Sikhi Paiyaram)

That would define the land that Tamil offers.

Department of History (HISTORY)

of recording the present society and spreading the history of the past among the people . The central stone structure is seen as a key feature of historical recording. The stones often bear the history of individuals. The herd of cows with the bulls of the warrior who did not give up the fight is restored. They died fighting against the white-worked Vetchi Maravara, who stood firm on the battlefield . In order to establish the

good reputation of such a warrior , they would water the wide space of the long stones and make many shapes . They would apply fragrant turmeric on their black parts . They would make the trap made with the red karandha flower made with the thread of the arrow peeled by the arrow make the beetles ring . (Agam 269) Madurai Marudhanila Naganar explains the method of setting the nadukal as follows . On such nadukals , the name of the deceased warrior and his bravery etc. would be written by the arrow as historical records (Agam. 297.5-10). In this way, the nadukals that bear history ,

Those who have fallen into the abyss of forgetfulness

The shadow of the stone of the writing dwells (Ex. 53:10,11)

Write down the name and the name of the person and the other person.

Peeled late-stage middle stone

The other end of the plank will be cut off (Psalm 131:10-12)

Literary references such as these show. Like the individual history mentioned in the middle stone, the poets. In their songs, they recorded the history of the country , the history of the state , social events , hardships caused by injustice , great wars, etc. and tried to impart historical knowledge to the people. Such historical records were mostly taken as parables by the poets. Paranan excels in recording history . Nakkhirar recorded the friendship between Pari and Kapila (Agam . 78), Mamoolar recorded the war of Venniparanthal (Agam. 55), and Paranan recorded the history of Attanathi Adhimanthi (Agam . 76) are some of the evidences of this. People traveled beyond the Ganges and the Himalayas and spread the news of their past in Tamil Nadu . The people had to cross a narrow pass (or chasm) in the Himalayas . This pass was used by the Moryas to drive their chariots. It is said that the mountain was reduced for this purpose (Agam). The shepherdesses, singing the hymns, congratulate the king's rule on his victory over the Himalayas .

Department of Biology (BIOLOGY)

The ancient Tamils had biological knowledge related to botany and zoology . The knowledge-based classification of living things was analyzed by the scholars of those fields ,

To know one thing is to know it well.

Two things are knowledge and the tongue.

The three things are knowledge, and the nose is with them.

The four senses are the eyes.

Five things are knowledge, and hearing is also knowledge.

The mind is the knowledge of the six.

Those who have realized righteousness, they have guided (Tol . 1526)

Tolkappiyar will explain . He will also classify plant species such as grass and trees as having one intelligence (Tol 1527), marine creatures such as snails and oysters as having two intelligences (Tol 1528) , beetles and beetles as having three

intelligences (Tol 1529), and animals and those who are animalistic among humans as having five intelligences (Tol 1531). In this way, he will subdue the human who has the power of reasoning among those who have six intelligences (Tol 1532).

There were books explaining the characteristics of animals, especially the horse, which was involved in conservation. It is known that there were grammar books for animals . This is described in the literature as ' Nulu Ari Valava ' (Agam 148), ' Nulu Neri Nunangiya Kal Navil Puravi ' (Agam 314:8), ' Nulu Ama Pirappin ' (Agam 400:4-7) and ' Nululor Pulaantha Maksiya Malkadal Valakaan Danna Valulaip Puravi ' (Perumbaan 486-487) . Similarly, elephants were trained and used in war. Trainers were appointed to provide training for this. They were called 'Virauv Mozhi Payytum Pagar ' (Malaipadu 327). In this way, dogs, which were a good companion in hunting and guarding the house, were also trained. This can be seen in ' Nai Pasal Kuri Nilayala Kotte Kode ' (Agam. 318:15) . Trained dogs were used for hunting (Agam.182.1-6 , Perumbaan 111-116, Malaipadu. 177). Not only animals like horses , dogs and elephants were trained. Birds were also trained. During the time when Pari was confined within the fort , a flock of palace sparrows went out in the morning and brought back red rice stalks with curved sides (Agam. 303:10-14), and when Einan fell in the battle with Mingili , birds gathered in the sky and stood guard over him to prevent the sun from shining on him (Agam. 208) . Similarly , it is known that parrots were taught the Vedas (Pattinap. 261-268).

They learned about the health of animals by their actions. They observed that if a ferocious elephant slept with its hand on the ground, its health deteriorated. This is shown by the words ' Mainthudai yanai kai vaithu urankum ' (Puram .229.18) . Similarly, they learned about the health of animals by the changes in their body parts . They understood whether animals were hungry or sick by the changes in their eyes. In ' Pasittha yanai palakan anna ' (Agam .321.1), Gayamanar indicates that an elephant is suffering from hunger by the lack of water in its eyes .

Study the lifestyle of each organism. They revealed their functions as references . They declared that the mother of a crab dies during childbirth and that a crocodile eats its own young (Ainguru). Similarly, they found that the male turtle protects the egg laid by a pregnant female turtle until the chick hatches (Agam. 160.3-7) and that the baby turtle grows up looking at its mother (Ainguru 44) . Furthermore, as a demonstration of the level of research in the field of botany, Kapila lists the names of 99 types of flowers (Kurinji 61-97).

MEDICAL SCIENCE

It is essential for a society that seeks human resources to have medical knowledge . The ancient Tamils excelled in the field of medicine . The book ' Urum Ayalum Cheriyorum , Noy Marungu Arinnarum ' (Tol 1447) indicates that there were doctors during the time of the Tolkappiyars . Although Siddhamaruthuva belongs to the Tamils , surgery, a technical aspect of the medical field, has also been used . Valluvar,

the grammarian of medicine, said that first the disease should be investigated, the cause of the disease should be known , the way to alleviate it should be found, and that way should be carried out in a way that suits the patient's body. This

The first pulse of the disease will relieve it.

The act of the mouthpiece (Kural .948)

It can be seen in . Furthermore, the medical practitioner should act by examining the age of the patient , the extent of the disease , and the duration of the disease .

The size of the penis, the size of the penis, and the time

Action for the sake of learning (Kural.949)

He will mention that. In this, it is clear that the word "learned" refers to someone who has studied and graduated in medicine . Pharmacists and nurses play an important role in this field of medicine . Medical When evaluating a system, one must keep in mind the patient , the doctor treating the patient , the medicine , and the nurse administering the medicine from a distance .

The wise will judge the medicine, the laborer will prosper.

The medicine is the word of the beyond (Kural .950)

He says. Similarly , surgery was used in modern medicine. Literature also shows people examining the wounds of soldiers wounded in the battlefield with lamps in their hands and administering medicine . The doctor did not give the patient what he wanted , but he gave the best medicine suitable for the disease and protected the body from disease . This , ...Yakkaiyun Medical

The medicine becomes medicine (Kali .17.19-20)

In that

To the budding child , the hunted one is not given ,

Like a virtuous man who has studied medicine and given it (Nak. 136. 2-

3)

It can also be seen that the Sangam poet Dr. Damodaranar is a proof that doctors , along with their professional knowledge, had the ability to create literature . They knew the plants used in natural medicine through their research . In this way , the act of obtaining medicine from plants also had a moral purpose, says Natrinai, ' Maramcha Raogam Kollar ' .

Engineering

The ancient Tamils were proficient in mechanical engineering, a branch of mechanical engineering. This technology played an important role in the agricultural and defense sectors. It was used to increase production in the agricultural sector (sugarcane threshing machine , agricultural implements), and in the defense sector . Engineering techniques were also used for modernity (automatic machines , various modern weapons) . Furthermore , the ability to conceive a driverless aerial vehicle as the pinnacle of engineering techniques can be seen in the verse , ' Valavanaeva Vaana Urthi' (p. 27.7-6) .

Metallurgy (METAL)

to find and mine metal ores , to smelt and separate them , and to use the various metals they extracted to produce tools , accessories , machinery, household items , weapons, etc.

gold , silver , copper and iron , and the use of tools made of them, etc., are abundant . Separate streets were set up for the sale of metal products . The ' taste stone ' was used to check the quality of gold . Blacksmiths and goldsmiths were involved in the metal industry . By the end of the 3rd century BC , K.N. Brau says that iron was exported from India to Africa , Greece and the Eastern countries .

ARCHITECTURE

There are some ancient Tamil literatures about books related to architecture. It is known that there was a separate grammar book for dividing land , and that buildings were constructed by experts who were proficient in that book. The literature refers to experts who learned this book and became proficient in the field of architecture as ' Noolari Pulavar ' . The high-rise building built in the best manner by experts of Noolari excellence ,

The merit of the time-honored writers

In the room of the dead (Silambu .14:97-98)

The steps show that experts who have formally learned the grammar of construction have measured with a thread and rope , and have divided the land and laid out the scene .

The illiterate poet, with a fine thread,

.....
The great king's palace (Nedunal.76-78)

The footsteps are heard.

Fine Arts

of music , painting , sculpture, dance, etc. , and in the field of handicraft production.

Painting

The ancient Tamils painted wall paintings as an expression of the Murugiyal spirit as part of the architectural technique . In the ancient Tamil literature , painting is given as ' Ovu ' (Madurai. 365). ' Ovam ' , ' Oviyam ' (Nedunal 147) . The painters were called ' Kannul Vinignar ' (Madurai . 516:18). The ancient Tamil literature shows paintings of various types in many stages such as wall painting , sand painting , pillar painting , skin painting , cloth painting. One of the eight , Paripadal , is found in Thiruparankundram . It shows the painting gallery that existed . It shows that people went there and enjoyed seeing various kinds of paintings . (Par . 19:46-53) Similarly , the story also shows that a female elephant, upon seeing a tiger-faced elephant, feared it as a real tiger .

, paintings are shown on the ceiling , pillars and surrounding walls of the room (Nedunal.112-114). Nakkhirar calls the unpainted painting with lines ' Punaiya Oviyam ' (Nedunal.147) . The upper canopy with the painting is also shown in the Silappathikaram (Silambu 3:110). The white wall on which paintings of different occupations are written, like a male elephant collecting the dust raised by the running of chariots ,

Another verb or verb

White (Pattinab.49-50)

The steps show. ' In the story of Ovacha, one thinks of something (Agam 5.20) , the truth that appears on the face of the painting is shown to the viewer to be aware of its inner meaning. They also painted and decorated leather instruments like the cymbals. The writing of the kuree on the sevvari cymbal hanging from the boy's shoulder.

Small pile of rubble

Like the Quran written by Kannakathu

The parable-teller said,

Literature also shows that women drew pictures on the surface of the sand. It is known that the people cried because the river floods destroyed the pictures written on the sand , and that women wrote pictures on the river sand and decorated them with flowers .

In the long corridor , the bed of the queen is shown. It can be seen that the painting was done on the cloth spread in it. In it , there were many different images of flowers such as Arima hunting and the mulberry blooming in the vast forest. Similarly , another beautiful painting scene was placed next to the bed where the king was sitting. The painting was done on the newly made wax-covered top. In it, the horned Taurus and other zodiac signs were painted in the sky, and the painting of Monday, which is very different from Sunday, was standing next to the painting of Urogini . It is clear that different techniques must have been used to paint the paintings on the walls , pillars , leather instruments and fabrics . There is also a reference to the people enjoying the scenes in the writing hall located in Thiruparankundram and discussing the meaning of the paintings with each other around them . The Ovamas painted the paintings by dipping them in lacquer and other colors .

Music

A life in harmony with music can be seen among the Tamils . In any industry, music was involved in the process of that industry. Music occupies an important place in the industry and in warfare. They had learned to make musical instruments , use various musical instruments , and compose music. Dancing , singing , and playing music were the main events of entertainment . Musicians and musicians went from town to town and developed the art of music .

During the Sangam literary period, professional artists exhibited their artistic talents. Similarly, the common people were also involved in the arts. Sangam Literature has recorded 24 male artists and 6 female artists .

O virali! I will sing . You also play one side of the muza and sing . Stop the farm in Jaffna. Play the big drum like the hand of a male elephant with its eyes open. Play the ellari . Play the small drum . Play one side of the instrument called the padalai softly, says a panan (Puram .152). In this, the use of various musical instruments is built. The musicians were called ' Isaiyeruzhavar ' (Malaipadu .60). There was a book related to the art of music ,

Good music, good

Ancient music and the text of the Saal Panmagal (Agam.352.13,14)

The steps show that . Silappathikaram and Manimekalai show the world the pinnacle of music and dance in ancient Tamil . Madhavi is portrayed as a master in literature , music and dance . Ilanko .

Numerology

Both numbers and letters

To the living being called the eye (Kural .392)

Valluvar . The country was full of people who learned to count and write. The number names one (Perumpan. 175), ten (Kali . 136:6), one hundred (184.3), one thousand (Porunanar . 247) , one hundred thousand (Tol . 278), one hundred thousand (Puram. 184:6) , weaving , bowl , and sangam. The names lotus , vella, ambal, and oozhi also show the knowledge of ancient Tamil numbers. The names of quantities such as nazhi , kalam , ma , sera , tulam , kazhanji were also in use . Tolkappiyar has given the Punachchi rule for the names of numbers and the names of quantities.

Beauty Art

Both men and women took care of their hair in various ways . Oiling and applying hairspray to keep it cool were common . After bathing, women would comb their hair by hand, dry it, and apply a hairspray to it. They would not only grow their hair, but also cut it with scissors and decorate it in various ways . Men would tie their hair up so that it hung over their ears and grow beards . Children would tie their hair into a bun . They would apply perfumed ointments to their bodies , and there were those who were engaged in the business of making such ointments .

Things beyond human power

, who subjected everything to their research - land , sky , water , fire , wind , sea , and sun - pointed out some of these that were beyond the control of human beings.

No prison, no water, no food.

There is no shadow of life or death.

There is no pain in the stomach (Puram.51.1-3)

This is a study of the nature of the ancient Tamils . In it , if a flood rises, there is no wall to stop it. If fire is abundant, there is no shadow to shade the beings who have

settled in the world ; if wind is abundant, there is no pain to bear it, says Ayur Mudavanar. Even today , it can be seen that the three elements, water , fire and wind, are not subject to human power , and if they become angry, the evil consequences that result are many.

Industrial development

Any society or social leadership that does not engage in industrial development will be considered to have failed in its basic planning for social development. To fulfill its domestic needs and meet the needs of the people's consumption power , relying solely on foreign technology and industry is not conducive to the better economic development of a country. A society that does not have the industrial capacity to produce consumer goods on its own is in a position to rely on other countries for the fulfillment of its basic needs and to turn its country into an empty market . It easily falls into the clutches of countries that excel in industry. It makes itself vulnerable to repeated debt and to allowing direct intervention of other countries in the formulation of public welfare programs . For a society to free itself from such problems and achieve development , the industrial development of that society becomes essential. A society that learns to discover , produce , enjoy the benefits of a variety of goods , and use them to satisfy other needs , thus identifies itself on the world stage.

In this way, this section provides a perspective on the activities of the ancient Tamils in industrial development , which is a key factor in socio-economic development , through their literary records.

Ancient industrial sectors

' Anthana , king , avar , shepherd , salt merchant , Umanar , farmer , Aitriya , Kadambar , Kadachiyar , Kammiyar , Kalamar , Kinaigna , Kinaimagan , potter , Kurathiyar , Kuravar , Kurumbar , Kootha , blacksmith , Kosar , carpenter , Thudiyar , charioteer , Nulayar , Bharatavar , Paraiyar , Patini , Panar , Panichi , Pulayar , Poonsaiyar , Poovilaipendu , Porunar , Madiyar , Mazhavar , Marathiyar , Maravar , Moriyar , Yavanar , Jaffpulavar , elephant hunter , elephant hunter , Vadavadugar . Uve.Sami Nathayar shows the occupational categories of that time as 'Vannathi ' , 'Vanagar' , 'Valigna' , 'Vedar ' (Purananuru Uvesa p.65) . Among these , occupations related to social progress and economy take precedence here.

A society that has achieved self-sufficiency in basic needs naturally seeks to stabilize itself in many ways, including the economy , based on the development of its society . Social development is based on industrial development , multidisciplinary knowledge , and technologies . Industrial development is characterized by domestic natural resources and foreign raw materials. A country that is rich in natural resources , using those natural resources as its primary source, shows intensity in industry and introduces technologies , which help improve the economic prosperity of the country.

Furthermore, seeking to obtain foreign investment with technological resources further strengthens the growth rate of the country. On this basis, industrial development is emphasized as essential for the development and strength of a country.

In countries like India, which rely largely on rural and agricultural industries, people are struggling to eradicate poverty. In order to provide adequate food for all and strengthen the nation, rapid development should be achieved in the fields of crop and animal husbandry, fisheries, forestry and agro-based trade (Plan. May 2004, p. 23). Literature shows that the present-day industrial perspective of ancient Tamil Nadu had given thought to these fields and had developed them. It is also estimated that the initial impetus for economic development came from the agricultural sector and its continued development depended on industry (Plan. March 2006, p. 231). Therefore, the importance given by ancient Tamil Nadu to these two sectors is first considered here. Although many industries are found in ancient Tamil Nadu, agriculture, trade, weaving, animal husbandry, fishing, salting, construction, bracelet making, pottery, carpentry, hunting, metalworking, handicrafts, leather goods, pearling, etc. are the main industries. These industries can be divided into two categories: basic industries and economic industries. Agriculture, weaving and construction and those based on these are basic industries, while other industries such as trade, animal husbandry, metalworking, handicrafts, forestry, and maritime industries are economic industries. Some industries are covered under the term 'technology', except for those, economic industries are considered here.

Economic-related professions

Agricultural industry

one of the most important industries that provide employment to the people in rural areas. This industry not only produces food but also plays a major role in improving the social economy. There are many workers who help the farmer in his farming. Among them, the plowers, sowers, planters, waterers, weeders, rice harvesters, and those who heat the pan can be mentioned (Sangat Tamilar Yadaviyaal, p. 66). It is known that their family economy has also improved due to the agricultural sector. Furthermore, those working in sugarcane mills in agricultural industries are also included in this category.

Foodstuffs like pepper played a major role in the country's economy. Pepper was also a major export commodity. It was cultivated extensively in 'Karivalar Athukthu Iravin' (Kuru 90.2). 'Karivalar Athukthu Aangan' shows the literary references. It is known that pepper was valued as an alternative to gold in barter, and that foreign merchant ships arrived with gold and departed with curry (pepper).

Commerce

agriculture and trade are the most important industries of a country. For the development of a country, it is essential that these two industries flourish together. The foremost among the economic industries is the trade industry. Ancient Tamil trade can

be classified into ' domestic trade' and ' foreign trade ' . Domestic trade mostly involved land-based goods. The trade was based on trade and foreign trade was based on natural products and handicrafts , fabrics, etc. Maritime transport was suitable for foreign trade. The use of barter and money also formed the basis of trade .

It is essential for a country to have markets to sell its products, to distribute the available raw materials and secondary products and to make them accessible to all consumers . Furthermore, having good trading places (markets) to export domestic products and to obtain foreign goods reflects the development level of a country. In this way, town and city markets play an important role in the distribution of domestic goods and coastal trading places (pattinams) for foreign trade. In urban systems, separate streets were laid out for all goods , and each product was sold under distinctive flags .

Domestic trade

Inland trade is the practice of setting up markets in the respective cities and towns with the aim of distributing locally available products and meeting the consumption needs of the people . Such markets operated on a barter basis. Their role is essential in fulfilling the needs of the people. This trade system helped in the distribution of local goods . In order to reach the people of Kurinji beyond the sea, the products of salt , marutham , and mulberry. Similarly, the inland trade system was of great help in making the paddy of marutham available to the people of other localities. The meat brought by the hunters living in the forest, the mulberry land, the curd brought by the middle-caste women , the marutham land Barter for rice ,

The hunter of the life-long hunter

The greedy and deceitful daughter of the man who has been deceived

A lot of curdled milk

The resident of the air, Barry Larivier

Deep-fried vanilla bean

The name of the father-in-law and the son-in-law (Exodus 33:1-6)

It can be seen in the following. The kings protected the people who sold the various types of kula and those around them . This shows that there were special people for selling the products grown on the land . Not only the kula sellers, but there were different types of merchants for different types of products . Various types of products such as sea products , mountain products, and products from the Marutha land were also sold. The golden standard was flying flags of various colors.

The sea, the rock, the river, and others

Valambala Probability Nananthalai Nannattu

The thorny vines are the root of the tree.

The golden robe with the golden shade was ordained (Rev. 15:16-10)

words "seafood" can be understood as a generic term for salt , pearls, fish , and other goods obtained by sea from other countries.

Commercial streets

In domestic trade, there are both mobile and fixed trading stalls. Food items , flowers, etc. are sold from house to house , and wool , ivory , sorghum , salt , honey, etc. are sold on the streets at a fixed price. Apart from these , daily markets and stalls operated in a large-scale commercial system. The sound of these stalls was always heard.

The Silappadhikaram shows the streets where colored powders , sandalwood paste , incense and other smoking materials are sold, the streets where the Karukars, who weave cotton, silk and wool, live, and the streets where silk , coral , sandalwood , achil , masila pearls , other gems and gold are piled up in such a way that it is impossible to measure and know how much these things are . Along with these, there were also the pittu merchants , the bread bakers. The velachiyars who sold the kelp , the Bharathas who sold the fish , the Umanas who sold the betel leaves . It is also known that there were many places where the sellers of panchavasam , the sellers of various meats and the oil merchants lived nearby (Silambu 5:24-27). There is also a street lined with cloth shops , lined with hundreds of layers of woven fabrics , woven so intricately that it is impossible to tell where the thread has gone .

Similarly , the ' King's Market Street ' stands alone . Only the protective equipment and many other expensive items desired by the king were sold on those streets . Here , covered wagons , two-wheeled chariots , beautiful chariots , armor suitable for penetrating the body , and desirable jewels were sold . Axes , leather handles , curved sticks , very white leather , pig-faced images , images of ants , images of wild boars , daggers , made of copper, made of bronze , finished with rope , made into garlands , tools such as swords and other implements made of ivory , items for incense , items for hair paste , and garlands made of flowers were found everywhere (Silambu 14. 168-179).

The gold street, where merchants, with their balances, measuring instruments called drums , and measuring sticks, roamed everywhere, stood alone, with its many gold coins piled up along with large bundles of pepper . The gold merchant, who distinguished between the four qualities of gold, namely , plain gold , silver , and gold, and who, by raising a flag, announced, "Here it is!" to the buyers, who were filled with the joy of asking, " Where is it ? " (Silambu 14. 207-204), was also seen alone. The street selling various kinds of precious gems (Silambu 14. 180-200) was also seen with its flag .

that people who cut conch shells and make them into bangles, those who drill holes in beads , those who see the texture of gold , those who sell saris , those who buy and sell copper, those who finish kachas , those who carefully examine and sell flowers and sandalwood , those who paint and paint paintings , those who practice various crafts , and those who do weaving, all gathered together and stood side by side in four different streets .

Labor locations

Along with the streets where various goods were sold, there were separate dwellings for various tradesmen. Since the number of workers for each trade was large , separate dwellings were established for each trade to live together for the sake of their trade. The bronze and coppersmiths, the carpenters who cut wood, the blacksmiths with strong hands, the painters , the goldsmiths , the jewelers , the tailors , the leatherworkers , the weavers , the netters, the various tribes who made various shapes from cloth and net and showed off their beauty and made impeccable crafts lived in separate dwellings (Philambu 5:28-34).

where there are sellers of various kinds of fish , sellers of white salt , vendors selling fish , vendors selling bread , vendors selling meat, and the street where there are potters , copper potters , bronze potters , goldsmiths , carpenters cutting wood , sculptors , tailors , and garland makers , and the street where there are pearl collectors who cut white conch bracelets with a mallet. The Manimekalai shows that the city of Kachchi was located in a street where various types of grains were piled up in different areas , a street where weavers of colorful cloth, who were skilled in the craft of weaving fine threads that were rare to see with the eye , lived in prosperity , a street where the goldsmith had good houses , and a street full of sellers of various types of beads . Similarly, the large Panathru complex shows that separate residences were built according to the nature of the industry .

Commercial vehicle

Mules called ' Atri ' were brought from abroad for use as vehicles . The trade caravans were carried on the backs of the donkeys with their upper packages (Agam 343:12-15). The Umanas carried salt to other places by means of the Sakadam (salt cart) (Nat 4.7-10), and the Neital ground salt was carried not only in carts but also in bundles on donkeys to the western towns (Agam 207.1-6). The trade caravans carried bundles of pepper tied in small packages the size of jackfruits on the backs of the donkeys. Customs was paid at the toll booths in between (Perumpan. 77-82).

Foreign trade

The development of foreign trade plays an important role in boosting the domestic economy. Maritime transport was an excellent means of foreign trade . Literature indicates that the ancient Tamils excelled in maritime trade. The Tolkappiyam also mentions the sea voyages of the Tamils (980 BC). ' Along with land trade, the Tamils also engaged in maritime trade. There are two types of maritime trade, coastal trade and mid-sea trade ' (Pandaith Tamilar Vanigam p. 154). The person who worked as a boatman on the sea was called ' Meekamar ' . Those who worked as sailors were known as Bharathavar and Bharathar (Sanga Illakayam Silapaaragal , p. 161).

The Arabs went to places like Tamil Nadu and bought fine clothes , silk saris , glassware, perfumes , agarwood , rhinoceros horn , pearls, sandalwood, etc. and loaded them on their ships. When the monsoon winds blew, they bought pepper,

cardamom, cloves, ginger , sandalwood , acacia , teak , pearls , vitriol , fine clothes , silk fabrics , etc. with great pleasure and sold them in Alexandria , Basra , Mosul , Iraq , Baghdad , Asia Minor, etc. , making a good profit, says Marco Polo (Namnattu Kappal Kalai p. 200).

Tamil Nadu during the Sangam period had commercial and cultural relations with many overseas countries. The historian (History of the Tamils, PT. Srinivasa Iyengar. 38-39) states that there was a connection with the Sumerian country as early as 4000 BC . Goods brought from the western coast of India were taken to Egypt. Gold , silver , muslin clothes , precious stones , copper , cinnamon , and ebony were the trade goods. (Social Organizations in Sangam Literature , p. 287). PT. Srinivasa Iyengar (History of the Tamils, P.98-99) says that the Arabs kept the fact that cinnamon was an Indian product hidden from others . Ports played a prominent role in export and import . The ports of Kaveripoompattinam , Musiri , and Korkai were prominent during the Sangam period.

Those who engaged in sea trade were called Navikar. The great Naligar who engaged in sea trade was called ' Manavikar ' . This name was later changed to Manaikar (Sanga Literature, Some Views , p: 155). Those who excelled in sea trade were given the title ' Yetti ' (Silambu 15:163,164, Man. 22111-114) The ancient Tamils excelled in barter and maritime trade . Rice was exchanged for fish. For export , bundles of pepper were stacked along the shore. Imported goods such as The stories of the golden plates being brought from the fields to the shore in boats , and the abundance of goods grown in the mountains and the sea, are shown in the literature.

Supporting the economic progress of a country. It is the income generated by the country's exports. Although our country has made progress in various fields, the export target is high only in some sectors ' (Plan. February 2005, p. 31) If we compare the above evidence with the current situation, the development of foreign trade relations of the ancient Tamils will be evident. The drivers of Tamil wooden boats, ready to go to foreign countries, carrying sea pearls, bangles, various goods, spices, white salt and spices , and the horses carrying boats from the Yavana countries and many other things, can be seen adorning the coast.

when a ship carrying goods from abroad reached the shore , the goods were carried away by fishermen and salt workers , causing the goods to be scattered all over the way (Puram 30.11-15). It is also known that wine was imported from the Yavanas (Puram 56.18) .

The sea, with its sweet-sounding waves, a vast expanse of land, a storehouse of goods, where the good vessels of wealth that have come from the sea are stored , and a forest with the sweet scent of palm trees stands.

The melody of the song is beautiful.

The good-natured, hateful, and hateful Bandarak

The golden-leafed canal is wide open.

The sea is a beautiful place (V. 55.3-7)

The footprints show that goods were collected on the coastal trade route and then transported to various parts of the country. Similarly , large, noisy vessels that floated on the sea to bring rare goods from other countries

The water of Arungalandar Dhariyar will quench the thirst.

The great wind blows in the direction of the wind (Psalm 52:3-4)

The footsteps are shooting . Furthermore , the fearsome boat, which seems to be stirring up the whole world, is being split between the great ocean waters with its waves blowing in the air , and the wind, which does not stay in one place day or night, moves rapidly , and the sailor, who steers the boat, knows the location of the boat by the light on the deck, in the wide field where the shore is high . Maduraikanchi is also like Muthu , The ship that carried bracelets , pottery , salt , carob , and black pepper to foreign countries. It's burning .

The waterways connecting the port were well maintained . They repaired the river, which was the route to the clear sea, and built canals at every section (Puram 400.20-23). Lighthouses were also erected to guide ships sailing on the sea and to identify coastal towns. These were illuminated at night (Perumbaan 349-351).

The coastal towns became markets for the unloading of goods brought from abroad and for the sale of local goods to foreigners . The noise made in the town due to the arrival and departure of many goods in wooden boats and the noise made by the merchants who came from abroad negotiating the price of ornaments were like the sounds made by various kinds of birds, as Maduraikanchi (536-544) shows. The author says that the foreigners bought the ornaments and went to buy more , and that the merchant's eyes were turned away (Madurai 539) . The city surrounded by commercial vessels is called ' a river of calm water surrounded by ships ' by the Perumbanatrupadi . There are many references to the commercial relations with the Greeks in the literature .

Fine silks from the Tamil Nadu coast went to the Persian Gulf and Babylonia . The historian cites the views of Scaph, who speaks of the trade between Egypt and India. ' Thousands of years before the Greeks attained civilization Trade continued between Egypt and the ancient countries of India in the Persian Gulf . In this trade, Arabs and Phoenicians acted as intermediaries . As the civilization of India led to a rapid sea trade, trade with Africa and other countries flourished . The Arabs did not allow Tamil merchants to cross the Red Sea . The Arab merchants, who obtained precious stones and spices from the Tamil merchants, went to Egypt and made a lot of money. E. M. S. Namboothiripad says in his book Tamil Culture in Southeast Asian Countries (Sangha Literature, Social Organizations , p. 286).

Hunger

In the maritime area , the production of sea products such as salt , fishing , salting, and processing of fish, etc., are the occupations of the landowners. These industries were carried out continuously. In the towns, ships passing through the sea for

trade are seen in the seaports. Boats carrying goods are seen in the rivers next to the sea. To announce the port at night, lights are placed on the tops of high towers. Goods were loaded and unloaded from water to land and from land to water. It is known that the Chola tiger's attack was engraved on the bags of unloaded goods in the seaport of Kaveri. ' The Periplus mentions the ports of Tondi , Musiri , Thenkumari , and Korkai ' (Social Structures in Sangam Literature , p. 310).

In this city , gems and gold from the North Mountains , aram and akil from the Kudamalai , pearls grown in the South Sea , Gangetic goods , Cauvery goods, Eelam , Kalagam and other foreign goods from across the sea were all piled up. The places where Greeks like the Yavanas and Milesians came and stayed for the purpose of trade were also found in this coastal area. The settlements of the people who came and stayed for the purpose of trade were located along the coast. Waterborne trade was flourishing . People speaking many languages settled in this city .

The language has multiplied, and the blame has been laid on thee.

The sweet taste of the sweet potatoes mixed with the sweet potatoes

The Path of the Foolish (Path.216-218)

This can be seen in the following. Like the Kaveripoombattinam, the port cities of Korkai , Musiri and Thondi were also famous for foreign trade . The port of Korkai was famous for the export of pearls and the port of Musiri for the export of pepper. The ships of the Western countries used to come and go to these port cities . The ships of the Yavanas came with gold and carried pepper ,

The vessel of honor given by the Yavanas

Come with gold and be covered with curry leaves.

The wealth of the Musiri (Agam. 149.8-10)

It is recorded that. The ancient Tamils were the proud ones who gained wealth through trade with the Western and East Asian countries . They were very involved in maritime life. Thus , they had the opportunity to interact with people from different countries and to witness their lifestyles and customs firsthand . People from different countries lived in the cities and towns of Tamil Nadu, speaking many different languages .

Other ports

Many ships were gathered at the port of Maruvur Pakkam in Bukhara . The flags of their respective countries hoisted on the masts of the ships swayed in the wind , and the looms they had tied were swayed by the waves like elephants swaying incessantly. **Like the joy of shedding** this on the open air

Thimphukar Screen Front

Sleep, you are lying down.

The flag of the falcon (Pattinap.172-175)

Literature shows that . Poets praised the famous Poompuhar port in ancient times . Large ships entered the port at the mouth of the river without untying the mats

tied to the cones and easily unloaded the goods that were piled up like mountains on the shore . The poet Uraiyyur Mudukannan Sathanar, while praising the Chola Nalangilli, has described it as follows.

The beekeeper does not weed, nor does he dig up the weeds.

The great flood that entered the city

The middle path of the river (page 30.11-13)

Animal husbandry

Animal husbandry is a subsidiary industry of agriculture. The ancient Tamils were well aware of the benefits of livestock . The number of livestock was one of the factors determining the economic strength of the society . Although animal husbandry was entrusted to men, other activities ranging from milking to bartering of dairy products were also carried out by women . They used livestock as capital to improve the family and society. ' The dairy farming industry, which has developed well as a subsidiary industry in the agricultural industry, is identified as an important industry that earns a large amount of foreign exchange for our country . (Plan , July 2005, p. 28) It is worth mentioning here .

Before the invention of money, barter existed . At that time, the Anirais were very wealthy. They served as symbols . In ancient Tamil, the word ' cow ' refers to wealth . For the rehabilitation of the farmers, who are the backbone of the Indian country , and for the development of the rural economy, they advise farmers to protect their livelihood by promoting dairy farming, a subsidiary industry of agriculture .

, the Central Government has introduced several welfare schemes to encourage women to engage in the dairy industry, which provides self-employment . The government's approach, such as easy credit assistance and simple licensing policies for starting a dairy business, has led to a significant increase in private investment in the dairy industry (Plan , July 2005 p . 30) , according to today's statistics. But literature records that women were involved in animal husbandry for hundreds of years , enriching their economy with dairy products and improving the socio-economic situation . For the well-being of the people, food grains alone are not enough; nutritious foods such as milk , butter , ghee , eggs , and meat are also needed . Moreover , the agricultural industry does not provide permanent work or income to the workers every day. Therefore. To make the rest days useful and increase income , it is better to focus on agriculture rather than on crop farming , but on diversified agriculture that also includes cattle farming and poultry farming, according to today's agricultural scholars (Agricultural Structures, p. 20) . Therefore, in today's situation, agriculture is considered a subsidiary industry of the agricultural sector. The importance of animal husbandry is known.

The shepherds of the Aadhir were called ' Ayar ' , ' Kovalar ' , and Idayar ' . They used the sound of a flute and a whistle to regulate the herds . (Agam.74 :15-17, Puram. 54:10-12). They held a curved stick in their hand . They dug holes in the pastures with a

tool called Kundali for the drinking water of the herds . Their houses had enough space to keep the herds . (Perumban. 147-155), and during the rainy season they would release the herds on the uplands that were not muddy (Nedunal 3-4). They would not let the calves and calves graze with the herds but would tie them up in the stable. Near it, there would be a hanging basket with leaves (Perumban 243-44 Mullai 12-15).

Meat , milk , curd , butter, etc. were obtained from the cattle . The shepherd women were engaged in the sale of milk , curd , butter , ghee , buttermilk, etc. They would pour a small container of milk at night (Puram 276:4.5). In the morning , they would churn the curd and sell it . (Perumpan.229) With the wealth gained from selling buttermilk Instead of buying the gold they need , they will buy a good buffalo and a calf and enrich their business. They will increase their wealth . (Perumbaan 164,165)

Maritime industries

Apart from foreign trade carried out through sea transport, marine products such as fishing , salting , pearling , and production of fish are also economically profitable industries. Fishing and its sale are widely discussed in ancient Tamil literature. Salt trade occupies a prominent place in barter.

Fishing industry

The Bharatas went to the sea on wooden boats , wooden boats, etc. They lit a lamp on the wooden boat and hunted fish at night . The lamp shone like a moon . They went to the wooden boat with fishing tools such as rods and nets in their hands . They caught the fish by spreading the net and using a tool called a thrower (Agam 210.2). They collected the fish caught in this way and gave them to the poor and sold the rest at a price (Agam 30).

Different flags were flown to distinguish between a merchant ship and a fishing ship . Bharatavar , after selling the fish he caught, processed the rest and turned them into dried fish (unangumeen) . A woman named Thalaivi pointed out to the leader the place where the fish brought by her father was turned into unangumeen . There are also places where ' Thalaivi was called the daughter of Bharatavar by throwing fish ' .

Salt production and trade

The people of Neythal land live on the coast and in the coastal areas. They would create small ponds in the salt marshes and irrigate them with seawater and backwater to produce salt . They would also irrigate the small ponds with seawater and produce salt, making them prosperous small farmers who did not rely on rain . This

Straight rod water changer

Without the sky, there is no plowing.

Kanavan Sirukudi

(Nar.254.10-12)

It can be seen in this. Bharata, the unplowed farmer , would wait for the arrival of Uman, the salt merchant with a cart to buy the salt grown in the saline land, and would leave the heap of salt in the canal . The Umans would take this salt to other places by

means of a cart (salt cart) . They would sell the salt at a price equal to the price of the paddy, saying, "The **salt is like the salt of the rice** . " (**Agam.140.7**)

The salt cart also contained food for the monkeys , chickens , and oxen raised by the Umans . The Uman women drove the cart so that the Umans could safely move on both sides of the cart .

Kissing

Except for the north, all three directions of Tamil Nadu are surrounded by seas. The ancient Tamils made good use of this natural resource and engaged in maritime trade , fishing , salt extraction , and pearl mining. These industries have contributed to the economic development of the country . It can be seen that places like Kodumanam and Bandar excelled in pearl mining.

A cruel and long-winded speech

The steps of **the famous poet Perisai Mudur** (**Veda: 67.1-2**) ,

The cruel and cruel act of Arungalam

The verses " **Bandarp Bayanta Palarpukazh Mutham**" (**Pati:**

74.5-6) also refer to these two places .

Among the pearls of Tamil Nadu, the pearl of Pandi was special. The pearls grown in the Korkai Kudak sea are praised in the Sangam poems . These are referred to as ' Muthupaddu Parabpit Korkai Munrurai ' (Nat. 23-6), ' Perundururai Muthu (Agam . 27.9) . When pearl oysters and conch shells were taken by drowning, the news was announced by ringing a conch shell . (Madurai 134-138) When women worshipped the sea god in the Korkai sea, there is a custom of throwing pearls and Valampuri conch shells into the sea and worshipping them . (Agam 201.4-7)

The success of pearl-picking and its proliferation can be seen in scenes such as the one where a man rode a horse along the coast and pearls were knocked off his horse's hooves . When the salt merchant women came to the Korkai beach to buy salt , the monkeys they raised and their children put pearls inside their bells and jingled (Sirupan 55-62) . The pearls thus taken were made into pearl necklaces and made into fine threads . Literature shows the streets where pearl necklaces were sold .

Conch shell cutting

Just as pearls were produced in the Gorkha Sea, conch shells were also produced . When Bharata dived into the sea and retrieved the conch shells, the conch shell rang out and announced it to the village.

Bharata, the sword that plunged Valampuri (Agam . 350:12)

Conch shells were collected not only in the Gorkha Sea but also in many other places in the sea. They cut the conch shells (Valampuri conch shells , Idampuri conch shells) with a small sword and made beautiful bangles with a hammer.

Walloon

The Lord is the one who is worthy of praise (**Psalm 77:8-9**)

were decorated with designs like flags , flowers , lines, etc. Also , they used to write lacquer on the back of beautiful conch shells (NI. 251), and the craft of bangle cutting was practiced in some places. Those who cut conch shells into bangles were called ' Velaparmhal ' .

The sword of the one who sees the world is sharp.

The fat that was cut off from the folds (Agam.24 :1-2)

There was a separate road for the industry of making Sankaruthu into rings in Kaveripumpattinam. This is called ' **Anivali Pozhunar Akanperu Veediyam ' (Silambu. 5:47)** by Ilangovadigal . Similarly , **Manimegalai** mentions that this industry was carried out in Kachchimanagaram .

Forestry industries

In terms of sectoral industries , forest-based industries (including mountain and forest areas) were well-established . Apart from forest agriculture, hunting , honey extraction , and trade in mountain products were also known as economically profitable industries . The income from the mountains was also considered important as a source of income for the country. In the Sivapadhikaram, Elango also lists many mountain products (Silambu 25. 33-55)

Among these, two types of status can be seen: direct commercial products, such as plants and animals, and commercial products derived from these . In direct trade, sandalwood , vermilion , musk , agarwood , flax , lion cubs , elephant cubs , monkey cubs , bear cubs , goats playing in the fields , yearling deer , deer cubs , musk deer cubs , wild fowl , parrots , and other commercial items such as elephant tusks , deer hair , honey jars , courgette powder , coconut husks , sweet mangoes , jackfruit , banana bunches and other fruits , green garlands , sugarcane , and various types of bamboo shoots are also known .

Hunting

The literature describes the hunting profession extensively. Since weapons like bows were the main tools of their profession and natural changes like lack of rain did not immediately affect their living conditions, the literature refers to them as ' **Bil Air Jyoti Viluth Thodai Maravar ' (Agam 35:6)** , ' Vaanaam Venda Vil Air Uzhavaar' (Agam 193.2) and ' **Bil Air Uzhavaar ' (Nat . 3.5)** . They. The meat of the hunted animals was not only used as food but also took part in barter trade . Similarly, elephants Ivory also played a prominent role in barter . Hunters would hunt animals , put their skins in boxes , and take them to merchants to barter for things like rice (Ex. 33.1-6, Pati: 30:9-13).

they bought and drank alcohol (Agam 61.7-10). They carried out their business not only in the forests but also in the mountains (Agam .182.1-6). They used trained dogs to help them in their business .

Honey collection

The next most important of the forest products was the honey-gathering industry. Honey was obtained from the honeycombs built on the high trees and cliffs of the mountains. (Kuru 272.5,6. Agam 322:12) The honey collected by bees from the Kurinji flower was considered superior (Kuru. 33). They used a long bamboo ladder to collect honey. Using this ladder, they destroyed the honeycombs in places where even monkeys could not climb and collected the honey. At that time, they rejoiced (Malaipadu 315-318). ' Kal ' was prepared from the honey collected in this way . These were called ' **Them Pizhi Naravu** ' . In front of each of the Kuravas was a bowl of honey squeezed out of it (Agam 78.7).

Fruit seed extraction

The fruits were used for food and for the production of sorghum, a secondary product . The fruits for these purposes were obtained from the mountains and forests . The seeds were extracted from the remaining jackfruit, which was used for food and sorghum production . Tied vines were used in this industry . (Malaipadu.336-339)

Handicraft production

Handicrafts were also among the exports of the ancient Tamils, which increased their economic wealth . Garlands made of gold , pearls , and coral were exported to foreign countries. The places where these types of materials were obtained and the message of how they were assembled and made into garlands ,

Forgive gold, pearls, and pearls.

Kamaru Mani, who was afraid of Mamalai

The morning of the construction of the beautiful ship (Page 218.1-4)

The hymns show that . The pearls made with thread can be seen in ' **Noolaru muthil danshidhar uraippa** ' (Kuru 102.2) and ' **Noolaru muthu** ' (Kuru 51.2) . There were also those who removed the dirt from the pearls and beads , made them shiny , and made holes in them . Apart from these, women made bracelets made of thread . Steel furnace smiths and goldsmiths made various kinds of objects. The blacksmith's hand fan is shown in the picture. Similarly, there were those who made and sold clay dolls (Silambu .5.30), and leather painters who painted images of gods who gave boons (Mani .28:29-61) .

also carried out with great distinction. ' Dathil sida thanpanip paavai (Kuru 48:1) refers to the thanpanip paavai made of powders such as poonthadu. The literature also refers to these as ' Dathusei paavai ' (Agam 392.6) and ' Seyuru paavai (Kuru .195.6) . The veil of the heroine is mentioned in many places . (Kuru .114:1, 276.1, 278.3, 316.5, 401.3, Nath . 68.1, 143.3, Puram .176.1)

Carpentry

Carpentry was a craft of excellence in ancient Tamil Nadu . Salt carts , chariots , beds, etc. were made with great strength and artistic skill. The carpenter who made eight chariots in a day was praised by the poet Aavaiyar (Puram. 87.2,3).

The literature shows that there was a grammar book for the carpentry profession . Payanar shows a large chariot, which was arranged in a manner that was like the wind , and which was decorated with a number of spokes embedded in the ground , so that it could move like a roller with its speed (Agam 234:5-1). Along with the powerful chariots that stood and rotated on the battlefield (Kuru. 45.1), small chariots were also made for children to play with (Kuru. 61.1). Apart from wood , other materials such as ivory were also used in the carpentry profession due to the wealth. Nakkhirar describes the technique of making a bed with various materials such as ivory and other materials by a carpenter with various techniques (Nedunal . 115-123).

Like carpenters. The carpenters were also skilled in the carpentry trade. The children's chariot made by the carpenters ,

The carpenter's son-in-law invented the poison.

the sons of Ura Nattre (Perumban. 247 -248) rolled .

Pottery industry

Potters were highly respected. They were known as ' Kalamsei Ko ' and ' Vedko ' . The earthenware was also given as ' Kuzhi ' (Peer.99). Since household items and other household items such as the old people's pots were made of clay , the industry flourished . It had a high status in society. Kilns were set up to bake pottery. The large kilns were always in operation. This caused a lot of smoke to rise (Exodus 32:8).

Wheels were used in pottery . In the kiln , which had a rotating wheel (Malaipadu .247) , small earthen vessels as well as large pots were made, which were household items . Children also helped the adults in the pottery industry (Puram .32.8,9). The potter was considered responsible for announcing festivals to the people .

Killing industry

Blacksmithing was a prominent industry in ancient Tamil Nadu. Blacksmiths were highly respected in the society as they were involved in the manufacture of agricultural tools , weapons , and household implements . They made chariots , ploughshares , chisels (Sirupan .52) and household implements such as the Ulagkai (Perumban .97) , agricultural tools such as the ploughshare , yoke , ax , bar , roller , kuyam (scythe) and land-digging chisels , knives , todalai, etc. , as well as hoeing tools such as the Kavaimutkaruvi , the Mathina (sammati) and the Kathari Thotti (Thirumurugu .78) . Blacksmith furnaces were located in most places . Excavators have found furnaces in many parts of Tamil Nadu.

Along with them, goldsmiths (goldsmiths) also fulfilled the needs of the community through their profession .

Atl industry

The workers who did the cooking work called the madai nagari were also separate. Their place of work was called ' attil ' (Agam 168.6-7). The vessel used for cooking was called ' adugalam ' (Puram .399) . They used a knife to cut the meat etc. (Perumpan .471- 472). The kings' attils were always busy for hospitality (Agam 168.5-

7). There were madai workers who prepared food in large quantities in the arashalas. The rice porridge made from these arashalas looked like a river (Pattinap .44-46), and the people eating in the arashalas were very noisy . In this, ' oontuvai curry choru ' was also prepared (Puram .14:12-13). They were engaged in various types of cooking, such as grilling meat on sticks (Puram .105), cooking phulungul etc. , and making drinks etc. There are also references to the existence of books on the art of cooking. Sirupanatrupada states that the book on the art of cooking written by Viman was made into a book (238-241). Valla Madan was skilled in the art of cooking food and had a strong hand, armed with a sword.

The deep,

Vallon Atta Paloon Kolzhungurai (Perumban .471,472) .

Other professions

Apart from the above mentioned professions , there are also those engaged in the business of weaving (Puram 82:3), those engaged in the business of weaving mats (Perumban .50), those who make white lime by firing conch shells (Gotusudu Nuuttin), those engaged in the business of making rice cakes (Perumban .275-281 (, those who make perfumes (Puram .170.5,6: 276:1), laundresses (Nedunal. 134-135), stonemasons (Ammi , Kuzhav , Trivai) (Perumban 229), leather workers (Puram .229), Literature records workers , mattress and pillow makers , bead makers (Pattinap . 232), and cosmetic manufacturers (Madurai 400,401) .

Women's role in industry

Ancient Tamil literature does not contain any references to gender differences in the distribution of labor , the provision of family finances, and the pursuit of social welfare . We can find a goddess who worships a deity who wants the country to live without chieftaincy , to gain power , to increase gold and grain in the country , and to increase livestock, but we do not find a goddess who seeks only her own welfare . Women have performed their duties well in hospitality and giving gifts. They do not wait for men for these duties . While describing the wealth received by the Vendar in the Patitruppa, we can see the poet praising the goddess who is with him . Furthermore , literature shows that the husband is praised by pointing out the pride of his wife, saying, ' Odungirothik Kodunguzhai Ganava ' (Patiya 14) , ' Andor Ganava ' (Patiya 55), ' Pavaiyanna Nallol Sothi' (Patiya 61), ' Puraiyol Karva ' (Patiya 70), ' Mangaiyar Ganava ' (Thirumurugu. 264), ' Malarpon Malishkan Mangaiyar Karva' (Malaipadu 58) .

Women played a prominent role in earning the family income and improving the social economy . Like the Kuravas who went hunting, the Kuravas went to sell fortune-telling and herbal medicines . The fishermen brought the fish , the fisherwomen carried the fish and sold it , and brought other goods in exchange. The surplus fish They processed the unangal (fruit) into fish. While the men grazed the mullet, the women took milk , curd , butter, etc. to the places where they were needed and sold them. The

married women went with the salt cart and did business. It is noteworthy that the salt cart was driven by the women themselves (Perumban . 58).

In agriculture, women were involved in planting (Perumpan. 211-212). Crop care (Puram 344), reaping (Agam 116, Madurai 110), weeding (Vati 19), and processing grains (Pattinap. 22,23) . In addition , women are also found to be involved in raising birds such as chickens in their plots (Agam. 227) . The women of Marutha land were also involved in the business of selling flowers (Nt. 97.6-9) . They used to go and sell fresh flowers on the streets . They carried a wide basket with flowers like bhathiri , pitthigai , and kurukathi in their hands . (Nt . 97:6-9) They also wove garlands (Sirupan. 54, Madurai 511- 518)

Women were also involved in fishing. The daughter of a fisherman caught fish with a fishing rod with a rope ,

The fish-eating habits of the eel-eating snail

Ayur Mudavanar shows that the one who is

Obstacles (or) Problems in Industrial Development

Ancient Tamil Nadu also had some problems in the industry, which was the basis of social progress. These problems were both natural and artificial in nature. It can be seen from literary evidence that artificial problems could not be completely avoided even if powerful institutions like the government tried to solve them.

Natural barriers

Natural hazards in the industrial sector are centered around natural events . These natural hazards occur in the form of sea storms , floods , storms, and dangerous wild animals .

During sea voyages, merchant ships were faced with the natural hazards of storms . A merchant ship caught in a storm at sea ,

The area of the palm tree that provides food

.....

Literature says, "**Like a long-suffering ship**" (Madurai , 375-379) .

Similarly , a ship that has been wrecked at sea and caught in a strong wind , and those who repair it,

Murasu is a bitter drinker.

The tree that has swum across the ocean will bear the pain of the world.

Like a craftsman who made

The Patitruppattu shows that . The literature also shows a ship that was caught in a storm and hit a rock (Maduraik. 375-379), a ship that was sunk by a storm (Mani 16:13-15) and a ship that capsized (Mani 25.189-191) . We can see a merchant ship loaded with valuables that was stranded on the ground due to a strong wind and the people of the area carrying away the goods in it (Puram. 30.11-15).

Moreover, maritime trade was hampered by dangerous marine life . The sounding water channel of Perunduraipattinam, the wooden vessel carrying gold, was attacked by a school of fish that would break it ,

The giant hole in the surface of the water

The rich man will be destroyed by the attack.

The garbage of the little white death (Agam.152.6-8)

Paranā shows that. The work of Bharata was affected by cyclones and sea turbulence. The sea with its huge waves driven by the low wind broke the sand of the acre , so even though he had new nets , Bharata did not go hunting , but he himself came to the high sandy shore and caught the shark that was caught. (Agam . 10:9.11)

Artificial barriers

Artificial barriers are the scourge of thieves. Although there is evidence of government efforts to provide protection for commercial properties from thieves , it is not known that , except in a few places , the problems of thieves have been completely eradicated .

who rob people on the street ' Aralaik Kalvar ' . They are shown as giving people , who sell their goods to passersby and make a living by robbing them . Since these Aralaik Kalvars lack love, they harass passersby and get their money .

In the forest roads , they would attack the soldiers who were following them safely , cutting off their heads , and dividing the goods brought by the merchants by beating them with their fists (Agam. 89.10-16). They would hide on the way of the merchants with their weapons (Kuru .16:1-3). They would hide the body of the one killed by the bow in a pile of leaves . The robbers would not only plunder the goods of the merchants but also the cattle and divide them among themselves . They were fierce warriors who would kill and eat the fat cows of the villagers when they put their hands on their heads (Agam. 129:11-12). This also caused problems in animal husbandry.

Above all , it is clear that the Aralai thief was a cruel man who, even though he had nothing of value to the merchant sattva , took pleasure in killing them and seeing their bodies pulsate as they gave up their lives . (Kali. 41-6). Those thieves who did not kill in this way were punished by the leadership of the group (Agam.109 :11-12). They were uneducated . Due to their troubles , there are also reports of people migrating from their villages .

The land and time that Tamils have carved out for global commons

, civilized and intellectual gifts given to the world by the Tamil people, the oldest people in the world, are numerous. If the world still admires the excellence of living together in harmony with the Tamil culture and morals , then the basis for that is the way of life left by our ancestors. The way of life of the ancient Tamils, who adapted to the environment and lived in harmony with it, is still worthy of admiration. The world is amazed at the glory of the ancient Tamils, who formulated morals and a way of life according to the land and time. Since the places and circumstances in which the

ancient Tamils lived were not the same but different , their way of life also had different cultural elements.

The lifestyle of the people of that time was structured in five ways according to the natural structure of the land. The five types of lifestyle adopted by the ancient Tamil people are the five-tiered lifestyle . The ancient Tamils, who had superior knowledge , understanding and love for nature , structured the Tamil land area into five types : Kurinji, Mullai , Marutham , Neythal and Palai. Each land area has its own uniqueness. They established a strong culture , lifestyle , professions , and even a code of conduct for life, including a god.

The world of Mayon Meya

The world is like a shepherd's house in Zion.

The world of the Vendan Meya Theepunal

The world of sand under the rule of Varun

Mullai Kurinji Marutham Weaving

It is said in the same way as it was said (Tol. Agat . 5)

They divided the worldly objects related to the five elements into three categories: primary objects , secondary objects , and secondary objects. For each element, land and time were the primary objects.

The first is called the land of the two.

O you who have realized the nature of nature, who call it nature (Tol. Agat.

4)

Based on each region, fourteen themes were created: gods , people , birds , animals , villages , water bodies , flowers , trees , food , musical instruments , crops , and industries. The ' discipline ' performed by the people of each region, depending on the land and time, is the subject matter.

The goddess Una, the mango tree, the yam

News article with part number

That kind of thing is also called Karu (Tol. Ag. 18).

Kurinji ThinaI Biodiversity

Kurinji is one of the five Tamil lands known in ancient Tamil Nadu. Kurinji, consisting of hills and mountainous terrain , was rich in natural beauty and resources. In Kurinji, Murugan, also known as Seyon, was worshipped by the people of that land as a deity. The Tolkappiyam says about Kurinji land, ' Seyon meya maivara ulagamum ' . The people who lived here built very low small huts and lived on them with thatch leaves and rice straw as roofs. The villages where these people built huts and lived in groups were called ' Sirugudi ' .

Window Mamalai Silamban

(Kur. 362:6)

The hair that is left behind is good for the girls

(Ainguru.

285:1)

That is the tiger

(Agam.52 :6)

were called Kuravan , Kurathi , Poruppan , Verpan , Silamban , and Kanavar. These people who lived in the mountains used natural resources and also hunted the animals of the land. It was their custom to hunt wild boars. They used bows and arrows as hunting tools . The practice of making hunting bows from ebony wood and using the resin of the venkai tree to glue the tip with iron thread is still seen among the Mullukkurumbar tribal people of the Nilgiri mountain range. They used a tool called Kundakam to hunt tigers.

Among the birds of Kurinji, the peacock and the parrot are worth mentioning. Animals such as tiger , elephant , leopard , bear , wild boar , hyena , monkeys, etc. were also found in this land. Waterfalls flowed downwards on the big mountains. The people of this land enjoyed bathing in waterfalls and springs. The mountain waterfalls and the water from the springs , which were always there, fulfilled their water needs.

Peppercorn Salt Rock (No. 187)

Mallal slaps the poor (Agam. 308)

The rocky eye sips the nectar of the swan (Agam. 178)

The music of the waterfall's icy water (Agam. 82)

, who were the first to discover agriculture in the plains and for food needs , cleared the trees in the mountains and foothills , destroyed the bushes and burned them , and cultivated the land. They did not plow the cultivated land with a plow, but with hand tools such as a spade , and cultivated rice varieties such as torai , aivanam, as well as aiyavi , millet , ginger , turmeric , pepper, etc.

The line of the

Short-eared toad, long-legged toad

I am a long-time fan of the Aivana Vennelodora.

Ginger, manjat, and other spices (Maduraik. 286-290)

The Kanavas would set up shelters on large tree branches so that neither elephants nor tigers could attack them , and would chase away parrots , bears , elephants , wild boars, etc. that came to eat the crops from those shelters by throwing slingstones , beating drums , and showing burning coals . Similarly, tools like ' Kurla ' and ' Tattai ' were also used for this purpose. The Kanavas would use these to drive away birds and other animals.

A telegram that breaks through rust and plate

Telling yourself similar lies (Kur. 223)

The sun, the moon, the cold, and the other

Kilikadi traditional bribery) 43-44)

The Kurinji landowners also guarded the crops so that birds such as parrots would not eat them. They used to chase away the parrots by throwing small stones and slingshots . The houses of the Kanavas were filled with hunting equipment as well as musical instruments.

The sound of the holy water, which has taken the bath, is loud.

Compare the good planet with the small wheat and the bad grass.

You sent me to Elbadah Varthiyar (Mark 37-39)

The Mullukurambar tribe currently lives in the Cherankodu region of the Nilgiris. In their homes, various types of hunting tools used by children and adults can still be seen. As mentioned in the Sangam literary records, the meat of the hunted animal is shared equally by all the people of this village. They do not change the tradition of sharing even a piece of meat per household.

On the large hills and slopes of Kurinji land, peppermint trees grew around the trees. Potatoes were also grown in abundance. Jackfruit was found in abundance on the jackfruit trees that flourished on the slopes. Moreover, mountain honey was found on the rocks on the mountain tops. They took the honey from the tops of the trees and on the large rocks and mixed it with millet and used it as food. These scenes and activities can still be seen today.

The people of Kurinji knew the technique of making a type of wine called 'Theral' by pouring honey into bamboo tubes and processing it. They also knew how to make wine from millet. Forest products such as fruits, honey, and tubers, along with animal foods and grains such as millet and sorghum that they cultivated, fulfilled their food needs.

vengai, thimisu, teak, sandalwood, akil, kadambu, karungali and ashoka trees were found in the mountains. Nowadays, it is very rare to see these types of trees. Among the flowering plants, kurinji plants and kanthan plants, which bloom once every twelve years, are also notable. Kapila mentions 99 types of flowers as Kurinji land flowers in his Kurinji Patil.

One day, the moon will shine.

The Dhankaya Kuvala Kurinji Vetchi (Kurinji 62-63)

The black-eyed pea flower

Friendship with the country that makes me rich (Short 3)

The slopes of Kurinji are covered with many trees. Bamboo bushes were found here. They made musical instruments from those bamboos. It would be an exaggeration to say that the people of Kurinji were the first to introduce music to the world. It is their custom to enjoy the music of the Yama by playing the Thondakapparai, playing the Jaffna Meethi, and singing the Kurinji Pan.

The presence of various types of musical instruments can still be seen in some of the houses of the tribal villages of the Nilgiri Hills 'Kozhithora'. The god of Kurinji is Murugan, Murugan also has names like Neduvel and Seyi. The mountain is the place where the Murugans reside. There is a tradition of fortune telling among the hill people. The fortune teller was called 'Katuvichi'. There was also a method of worshipping by mixing red sandalwood with water. This is called Velan Veriyattu.

The world is like a shepherd's house in Zion (Gen. 5)

The work of the mouth, which is made by the strong, is done (Kur. 362)

Daughter of Agave! Sing, sing!

Sing more, my song! He

O song sung by the mountain of Nannedum! (verse 23)

and the chieftain of Kurinji led a wonderful love life and lived chastely , the land became known as ' for the sake of marriage and for the sake of marriage ' . Kurinji is a place where a young man who goes hunting alone and a maiden who stands guard over a wedding can find each other and fall in love.

The voice of Punirudheer Perungural, who bought the Dhuithala

Compare the good and bad.

You have sent me to Elpada Varthiyar (Mark 37-3)

The main season of this land is the Koodirkaal: the short season is the Yamam. The standing of the araththodhu , the drawing of the draft , the night watch , the worship of the Kurinji , the listening to the omens , the guarding of the millet, etc. are events that add specialness to the Kurinji millet.

..... **Kurinji**

The poet Koodir Yamam is my name (Tol. Akath. 6)

Mullai Thinai Life

and beautiful due to the rivers flowing from the mountains. The Mullai lands play a major role in increasing the rainfall and producing fresh air.

The life of the people living here was a little different from that of those living in the mountains . The people living here adapted their lifestyle to the mountainous environment. They designed their homes as huts. They used thatch , thatch , and thatch as roofs. Their houses were taller and better than those of the Kurinji people. The houses were full of horses , trikai , and ural. Stables for cattle were built next to the houses. The areas where these people lived, built in this way, were called sheri , palli , and padi. The people who lived here had many names such as ayar , aychiyar , idayar , idachiyar , and aagovalar.

Pastor Vettuvar Goat Ut's nickname

The spirit of the soul is old and old (Tol. Agat . 21)

These people, who lived in the forests, had cattle herding as their primary occupation. They raised cows , goats , buffaloes, etc. The Kalitogaki shows that the owner of a herd of buffaloes was called ' Kotinathu Aiyar ' , the owner of a herd of cows was called ' Kovinathu Aiyar ' , and the owner of sheep was called ' Pullinathu Aiyar ' . They herded them in the forests and pastures.

Milkweed

Wet the toothbrush evenly.

The foot-mounted, stiletto heel

I will not deceive you by worshipping your little head.

The bird is a

bird (Nāṭṭhīnai . 142)

The benefits of cows such as milk , curd , butter and ghee were their main products. The herders sold buttermilk and curd and with the money they earned, they bought buffaloes and calves to fill their stables. For food, they cultivated grains such as sorghum , sorghum , sorghum , and beans and sorghum. They ate sorghum and sorghum as food. Milk , curd and ghee also played a major role in their diet.

The Mullainila forests were not densely wooded like the Kurinji forest but were a relatively sparse forest , so grasslands for grazing of goats and cattle , trees such as konrai , kaya , kurundam, and plants and vines such as jasmine , mullai , pidavam , and beerkkam flourished here. The main bird of this land was the wild chicken , and the main animals were the rabbit and deer. The erukotpara and mullai yazh are the musical instruments of this land.

The people of Mullai land worshipped the Thirumalai known as ' Mal ' as their god. Tholkappiyar refers to Thirumalai as ' Mayon ' . Sangam literatures mention that Thirumalai is like a blue pearl , like a black flower, like a cloud, like a dark cloud, like the sea. The women made a profession of selling milk , curd , buttermilk and ghee. They mostly did these as a barter. The custom of giving a daughter to the victorious warrior and the mind of the virgins who love and accept him are the special traditions of this land. Climbing was the main discipline of this land. The rising of a piece of cloth , the people who carried it, the chest fell , the people who were troubled, many were troubled (Kali. 102) The line of the sword is the mother of the enemy, the mother of the dead (5.103) The shepherds of Mullai land apply red soil in their houses on occasions such as marriages. They spread sand in front of the house. The Kalithakaya shows that there was a tradition of keeping a female buffalo horn in the house and worshipping it as a deity. Similarly , the Mullaipattu shows that the women of Mullai land had a habit of worshipping the deity and asking for blessings. They also have a custom of performing a ritual after the ritual.

The sand has fallen , the buffaloes have been fed , and The car and the garland are the mulberry (Thol. Agat. 6) The red-flowered mulberry with the fragrant flowers of the senna, the beetle, the car, the car, the car, the eye, the water (Aind. 7. 15) The life of the Marutha valley, the peacocks, the lotus, the explanation of the lotus, the bear , the cup , the eyes The life of the people living here was better than that of the people of other regions in many ways. The well-watered fertile lands were covered with paddy and sugarcane. The town of blooming sugarcane, the town of Kalani (Ainguru. 4) The Tamil civilization along the water bodies was seen by the people of Maruthanila. The residential areas of Maruthanila were called Perur. Mudur The people of Marutha built large buildings , mansions and palaces along with their field-based settlements and developed their civilization. It was in Marutha that the Tamil empires emerged. The fruit-bearing Mudur (N. 293) Adi Aru Man Mudur Anna (Kuru. 293) The people of Marutha

were called Uran , Magizhan , Kizhathi , Uzhava , Uzhatiyar. Kadayar. Kadayachiyar. Rivers , wells and ponds were water bodies. Since they depended on these water bodies, Marutha was a land rich in land and water resources. Here, red rice and fennel were cultivated in the fields with rich soil and were used as food. They had acquired the agricultural technique of ploughing the land with ploughs drawn by oxen and buffaloes , applying manure , sowing , irrigating and producing paddy. They cultivated vegetables and other food items, sugarcane and turmeric. They enjoyed dancing in rivers and ponds as their pastimes. They celebrated the new flood by holding punaladi festivals. The name of the farmer who sowed the paddy is Vidya Uzhavaar Nellodu Peerum (Ainguru. 3) Those who saw the new funnel dance are very fortunate (Ainguru. 64) Those who saw the funnel dance around the funnel dance (. 76) The god Indra was worshipped by the Maruts. Tolkappiyar refers to Indra as ' Vendhan ' . These people worshipped Indra for the rain that is the basis of ploughing. The Silappadhikaram clearly describes the Indra festival. The Marutha people, who used to worship Indra as a god, also had a tradition of celebrating festivals after the harvest. Furthermore , the Marutha Jaffna , with musical instruments such as the nellari kinai and the manasuzhavu, They played the Marutha pan and enjoyed themselves. Birds like the swan , waterfowl , stork , and otter , and animals like buffalo and otter were found abundant in these areas. Flowers like lotus , kuvala , and kaluneer, and trees like kanji , vanji , and marutham added beauty and fertility to the Marutha land. The city that blooms like a lotus at the foot of the maiden's feet (Ainguru. 68) The six seasons of Karkalam , winter , pre-frost , post-frost , spring, and autumn are the great seasons of the Marutha kingdom. Dawn is a short period. Therefore , they engaged in plowing throughout the year and lived in prosperity without any shortage of food. Since there were no life crises, arts and civilization flourished among them. The Tolkappiyam mentions the festival and the events related to the festival as the proper subject of the Marutha kingdom. Vaikarai Vidiyal Marutham (Thol. Agath. 8) If Vaikarai comes like a sword (Kuru. 157) Crafts, education, arts, trade, wealth, politics and peaceful life flourished and developed in the Marutha lands. All the oldest civilizations of the world are known as riverine civilizations. This is true. The Tamil civilization was also developed along the water bodies and on the banks of the rivers. The contribution of the Maruthi people to the development of Tamil civilization is immense. When the water rises , the rice rises. The growth of the agricultural land of Marutha was measured as the growth of the entire society, as the height of the rice fields increases , and the height of the village increases. The seas were the boundaries of the three directions except the north in Tamil Nadu. Therefore , the sea was an inseparable relationship of the Tamils. The sea and the maritime area were called the Neythal Thinai. The places where the people of this land lived were designated as Pakkam and Pattinam. The people living in this area were called Duraivan. Jadhun , Bharathavar , Bharathiyar , Nulaiyar , Nulaichi by many names. Idumanal Ekar Agankanal Jadhun Kaduman Maniaravam - Kodunguzhai Pularavam

asked for the small inner aravam called Nanuvar (Aind. 7. 59) The brackish water reservoir and the sand reservoir were the sources of drinking water for the people of Neythal. Since Neythal is a sandy land, grains like paddy are not grown here , so the people of Neythal, which has sea and maritime areas, took up fishing as their primary occupation. The Bharatas went to the sea every day on katumaram , thimil etc. They lit a lamp in thimil and hunted fish at night. The Sangam literature states that that lamp shone like the moon. They went to thimil with fishing tools such as rods and nets in their hands. They hunted fish by spreading nets and using powerful tools such as firecrackers (□ , 320; 65; 240; 100; 60; 4.10). Every day, they went long distances in the sea on boats and in canoes, cast nets and fished , and made a living by trading it. They found fish such as sharks , shrimps , and crabs in the sea. They caught them and sold them to neighboring towns and other people in the area. They bartered and obtained other grains and flour. At present, there is no barter. It is sold for money. The fish drying on the beach sand is called re-unakkal. The Bharatas took up the business of fish drying for their own food and for barter. The Bharatas who ploughed the fertile sea , the new sand , the stone , the sand, the rice The sky does not need plowing. Kanalan Sirukudi (N. 254) The rice is directly covered with white salt. The price of salt is different from that of the rice (Agam. 140) The main occupation of the people of the Naital land was fishing in the sea , salting the fish , salt production and earning money from it. The life of the people of the Naital land was difficult. In areas along the east coast like Marakkanam and Puducherry, women can still be seen involved in the salt industry. Moreover , women are also involved in selling fish , producing fish for consumption, etc. The god of the Naital land people is Varuna. Varuna represents the sky. Varuna is the water god associated with water bodies such as clouds , rain , rivers and seas. Bharatavar He was skilled in diving into the sea without fear of sharks and extracting Valampuri conch shells and pearls. The pearls found by the ancient Tamils by holding his breath occupied an important place in the export goods. The pearls found by Bharata adorned many countries of the world. The people of Neytal, who sank Valampuri after removing the sharks from the shores of Lanka (Akam. 350), offered pearls and Valampuri conch shells as offerings and worshipped their sea god. Sangam literature shows that these people had a cultural tradition of planting the horn of the shark and worshipping it. Val, who planted the line of the shark and added the land, embraced (Pattina. 86-87) Madhavi in the Silappadhikaram. There is also a reference to her worshipping the sea god Varuna to forgive her for singing that she was in love with someone other than Kovalan . The people of Neythal, who had Varuna as their deity, sang songs of wealth and happiness by playing the flute and the fish kotpara. The coastal areas of Neythal were full of trees like Punnai , Kandal , Njazhal, and flowers like Neythal , Thalai , Mundakam. Birds like the seagull , swan , and anna sit on these. Animals like the shark and the humpback whale also added more charm to this land. The shores of the great sea are like the small white crow (Ainguru. 170) like the

Marutha. The six seasons were great for Neythal. The time when the sun sets is called Ettapada. The arrangement of Neythal seems to be fulfilled (Tol. Agat. 36)

Since fishing and going out to sea to fish was mostly the work of men, when they did not return home at the appointed time, the chief would light a lamp in her house and wait with compassion for the chief's return until the one who had gone out returned home. Due to this nature, the property of this land was called ' Irangal '. The fertile sea was ploughed by the great king of Peruvalai Bharata (Nat- 63) There were ports in some places along the coast. As merchant ships arrived at the ports and imported and exported goods, trade and wealth increased in the port towns. Therefore, the port towns gained civilization and wealth. The city of the foolish (Pattina. 218) The city of the foolish (Pattina. 218) The milk-thinning life system, the There is no separate land called Palai in Tamil Nadu. In some cases, the areas where Mullai and Kurinji land meet, they become barren and dry due to lack of rain. The ancient Tamils called such lands Palai. Palai is a land without any irrigation effect. The water resources are very limited. Moreover, it has a very hot and harsh climate. Therefore, it was not suitable for people to do suitable work and live. Therefore, the Tolkappiyam points out that the dream industry belongs to this land. The areas where these people lived were called Kurumbu, and the Hindi people called them by the names Ainirs, Aitriyars, Maravars, and Marathiyars. There are waterless pits and wells here. The Palai people found the things they had stolen from other places and the things they had stolen from other places as their means of food. The Khan did not want to worry about the sky or the air, and the farmer did not want to grow a branch in the field, and the blood that had been shed (Agam. 193) Trees like Uzhighnai, Palai. Trees like Vathai and flowers like Padiri, Mara and Kura were found in this land. Birds like pigeon, eagle and hawk, animals like red dog, weakened elephant and tiger are also the creatures of this land. The deity of this land is Kotravai. It is their custom to worship their deity Kotravai before going to war and before going hunting and plundering. They are accustomed to worshipping the kattadi with fervor. They are offered the palm tree called Thudi, musical instruments like Kotravai, tuvari, sesame seeds. Meat etc. are offered to them. For this land, the spring and summer are the main seasons. The summer is the midday. Therefore, the places where the sun has always scorched the land became the milking parlor. The forest where water is not available is a source of sorrow and tears (Kali. 6). Since the leader had to go to another village to find wealth, the separation and the great sorrow that arises due to separation became the proper subject of milking. The middle stage is the midday sun, and the end stage is the path of the Marung (Thol. Aghat. 9). Thus, the ancient Tamils who lived in places with different natural conditions established different types of lifestyles. The way of life they laid down was the way of nature, and they understood nature and did not travel against it, but traveled in harmony with it. The ancient Tamils, who had observed nature closely, had learned to rule the mountains, the land, and the sea. They built many ships and engaged in sea trade. They developed culture and civilization in

accordance with the land and the environment. Especially , the civilization of the Tamils at that time developed well in the land of Marutha and the port cities. Yes , in the cities and towns, the civilization, culture, and arts of the Tamils of that time were distinguished. It is not an exaggeration to say that the basis for the development and rare discoveries of today's modern world is the way of life of the ancient Tamils and their traditional knowledge. Their above-mentioned way of life in accordance with the land and the environment , food preparation , and industries are proof of this. Today's society, which has failed to understand this, is facing many hardships and life crises. It travels in the opposite direction , failing to predict the land, the environment and the time. Due to this, the natural balance is disturbed , the monsoon rains fail: the basis of life is destroyed. Therefore , let us know the lifestyle of the Sangam Tamils and follow them , and protect the Kurinji hills , the Mullai forests , the Marutha fields , and the Neythal seas with their nature , thereby preserving the natural balance. Let us avoid global warming and create a world for all living things in the way of the ancient Tamils.

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t.vz ;	le;J kjpg;ngz; tpdh LOCF Mapping			
1	goe;jkpohpd; gy;JiwmwpTFwpj;Jtspf;Ff.	K2	CO 2	PO4
2	goq;fhynjhopy; gphpTfs; tiffis \$Wf.	K 3	CO3	PO5
3	goe;jkpohpd; thzpfj; njhlh;GFwpj;JvOJf.	K 4	CO4	PO1
4	kl;ghz;lj;njhopy; Fwpj;Jtspf;Ff.	K 5	CO5	PO2
5	njhopy; El;gKd;Ndhbjkpopdk; tpsf; Ff.	K 1	CO4	PO3

t.vz ;	vl;L kjpngz; tpdh LOCF Mapping			
1	cyfehfhpfj;jpd; Kd;Ndhbgoe;jkpoh; fl;Liutiuf.	K2	CO 1	PO4
2	jkpoh; tFj;jepyKk; nghOJk; Fwpj;JvLj;Jiuf;f.	K 1	CO 2	PO 6
3	,yf;fpaq;fspy; Nkyhz;ikr; rpe;jidfs; Fwpj;JnjhFj;Jiuf;f.	K4	CO 2	PO5
4	goe;jkpoh; ciwAs;-cil-czTFwpj;Jtphpf;f.	K3	CO 4	PO 6
5	goe;jkpohpd; njhiyNehf;Fr; rpe;jidfisvLj;Jiuf;f.	K5	CO1	PO 3

UNIT -2

Ancient Tamils and Technology

Tamil Agricultural Management and Agricultural Technology

Researchers estimate that humans may have appeared on this earth hundreds of thousands of years ago. Since their emergence, human life, like other animals, has been very difficult. They roamed as nomads , hunting animals and gathering plant foods. Humans discovered a great technique that changed this life of struggle and allowed them to live together peacefully and multiply. That is ' agriculture '. The sustainable life of the wandering human society begins with the acquisition of agricultural techniques. Humans have lived separately on various continents of the world. Researchers say that humans began to practice agriculture in 11 places in the world about 10,000 years ago. Tamils are one of them.

The Tamils pioneered agriculture in a very sophisticated manner, inventing various techniques, and became pioneers in the world. Biologists who have studied the genetic makeup of cultivated crops and their wild relatives in Tamil Nadu have confirmed that ' small grains such as sorghum , millet , sorghum , sorghum , millet ,

sorghum and legumes such as sorghum , urad , lentil and chickpea were first cultivated and introduced to the world in Tamil Nadu . ' Similarly , they also confirm that rice was first cultivated here. The Tamil word ' arisi ' is the word for the grain ' nel ' in most languages of the world , which is translated as 'rice' and 'raisin'. In archaeological excavations carried out in Tamil Nadu, a drawing of rice was found on the ancient pottery excavated at ' Adichanallur ' on the banks of the ' Thamirabarani ' river . In addition, husks of rice and small grains were found here . The same Similarly , about two kilograms of rice grains were found in the mudumakal soil excavated in the village of ' Pakkal ' , southwest of Palani . This rice was examined by ' Aecelator Mass Spectrometry ' (Kankaali (Beta Analytic Laboratory, Miami, USA) . It was confirmed that it belongs to the period between about four and three centuries before the birth of Christ. This is the oldest archaeological evidence of rice found in the world to date. This proves that the ancient Tamils lived together in a community and were engaged in agriculture efficiently.

Tamil agricultural management techniques

We find echoes in the Sangam Tamil epics as well. In the classical texts that show the ancient Tamil society, various subtle messages related to agriculture and traditional agricultural techniques can be found. They contain various agricultural management ideas from ploughing to harvesting. The ancient Tamils praised the expansion of arable land. In all the world's industries, the production of food necessary for life is the main industry. Valluvar said this , "The world of the spinning air is the main one, so ploughing is the main one" (1031) . To increase the production of food products , they destroyed bushes, reeds and forests , cultivated them as arable land , and led to the fulfillment of food needs. In this way, the smoke that arises when creating new rice fields is described as "The smoke of the rabbit is like the smoke of the shadow of the rabbit" (Agam. 140:11) . Similarly , in the book , " Killing the forest and making it a country and making it a lake and making it fertile" (Pattina. 283-288) , we can see that agriculture was praised by improving the forests and creating water bodies for cultivation. In the word " Uzhavukti", " vel " means soil ; " Agriculture " means help ; " Agriculture " means ruling the soil. The ancient Tamil society praised the farmer who did agriculture , fed the world , and helped by giving life. The kings who increased the water resources and settled the farmer there increased the wealth of the country. The farmers were skilled in their profession. They cultivated the land knowing the nature of the land and increased the wealth of the country . The best farmer who knows the nature of the land he cultivates is described by the "Akai Neer Pulathyaalpu Bukhan" (Nanmani. 71:3-4) as Nanmani Kadigai. The farmers owned the land as their own. The owner of the land was highly regarded. His agriculture. The one who owned the land was praised as agriculture itself (Iniyavai. 3:3) . Also , the owner of the ox is the farmer (Nanmani. 52:1) , and the ox was pointed out as a symbol of the plowman. Therefore , the oxen were raised by giving good food. The food given to the ox is not wasted , as the proverb says

in the Nanuur (38:4) . Therefore , the farmers valued and protected the oxen as a valuable companion. They were a rare commodity (. 69) to obtain the wealth of the farmers. They kept the oxen in their houses. They would lock the oxen under the yoke at the gate of the house. Then , they go to the land and plow deeply, completely covering the iguana-like face-like furrow at the tip of the plow, which is curved like the mouth of a female elephant. The population is large , the farmer 's way is big , the plough is closed It should be sown only after that. The ancients observed that when ploughing, the soil becomes fertile and the soil itself becomes manure. This is called Bhumi mayang palavuzhuthi vidhi (120:2) by Purananuru. Similarly , Aingurunur says that it is like a land that has been used for many years by ploughing (14) . Ploughing the soil Ploughing the soil deeply and turning the soil up and down several times , and not immediately cultivating the soil after ploughing , but ploughing the soil well , and leaving it like that will turn the soil into manure , Valluvar advises that the soil itself will become manure by touching the dust and the manure of the uncultivated land will be wasted unnecessarily (. 1037) . Ploughing the sodden land Ploughing shallowly in dry land will not be of any use. The soil needs moisture for deep ploughing and sowing. That is why , in wet land Naladiyar compares the plowing and sowing of the seed to listening to the words of the good. The word "Nalkurnthar " means "I will not go astray like the plowing of the field of wheat" (No. 115) . Therefore , in the morning when the good rains fell and the land was soaked, the farmers took the green leaves of the nochchi and washed their heads and washed their hands. The black voice washed the green leaves of the nochchi and washed their hands and washed their hands (Lam. 39: 2-3) . The single-toothed farmer who wanted to plow and cultivate the land before the moisture dried up , like a wet-swept hoe, who was plowing with a single-toothed plough) 131) . Leveling The farmers used a tool called " Dalambu " to remove the lumps in the cultivated land and to level the soil . While plowing the land, swordfish got stuck in it and were killed. The Purananuru shows that the sword of the Lord is like a sword of a sword) 61:3-4) . Sowing Quality seeds were selected from the harvested grains and preserved as seeds for the next season. The forty sweet verses advise that the collected seeds should not be used for anything else under any circumstances , for the seed is very precious (40:2) . Similarly, if the seeds are sown in beds , the beds will rot if the right seeds are not selected and planted. Sirupanchamoola says that even if the seeds are sown, they will not germinate , and even if they are buried, they will not smell (23:2-3). Therefore , great care was taken in selecting the seeds. Irrigation Water is to the crop like blood to the body. Irrigation in the required quantity for the crop and proper implementation of water management plans are the lifeblood of agriculture. The agricultural land will flourish due to irrigation , and the agricultural land will wither without water (86:1) says the Nanmani Kadigai. Furthermore , this literature suggests that the required water stimulates the germination of the seed , and that the health of the crop will be damaged if there is no water.

The seed's seedbed is watered with water (Isa. 64:2-3)

That is why , Valluvarum emphasizes that saying something learned in the assembly of scholars is like pouring water into a bed where a crop grows on its own. Saying something before the one who feels it, water flows into the bed where it grows (Kural. 718) Agriculture is the basis for the survival of this world. The basis of agriculture is water. Therefore , it was advised to make the banks high to increase the level of water in the cultivated land. ' If the banks of the fields are high, the water will remain ; thus, if the water increases and rises , the rice crop will grow and rise. The rice field will flourish to give good results. If the rice field is high, the king will also rise ', Sirupanchamoola emphasizes to this world that the development of this society lies in the conservation of water and the protection of the air.

Ancient Tamil lifestyle and multifaceted personality

The higher the limit, the higher the proof.

Drink the holy water of the rising rice.

May the glory of Arunjeer be exalted.

The World of Words (Part 46)

Weeding The expected yield can be obtained only by identifying and removing weeds from the crop. Therefore , weed control was emphasized in crop management. If the rice crops flourish and grow tall , the growth of weeds is prevented, just as the grass is withered when the rice is sown (53:3-4) says the proverb Nanuru. The work of the ancestors who have sown the suffering of agriculture for the coming generation through the proverb is worthy of praise. The Puranuru shows that small species with strong branches were used to organize the crop and remove weeds. The ploughshare, which has been ploughed by the plough, has been ploughed by the lizard, and the sound of the hoe is heard by the hoe (Puram. 120:2-3) . Similarly , the great poet says that the tool ' thular ' used for weeding weeds is called ' thular padu thudavai' (201) . In this, the garden is weeded by the weeds that have appeared in the cultivated land that has been ploughed and sown with the plough. Similarly, in the Malaipadukadam song ' toyadu vidhya thular padu thudavai' (122) , the hoe that draws a foot and digs a hole in the hard ground is mentioned. Valluvaro says that destroying weeds that appear in the cultivated land is like punishing a cruel person who commits murder. Killing the flagpole, killing the bengal, killing the weeds, killing the ants, killing the bengal, killing the ants Literary references such as ' Dhatu Eru Marukin ' (Natrinai , 345:3) ' Irumbinittu Erumai Perunjevik Khuzavi Paindathu Eruvin ' (Natrinai , 271:1-2) ' Dhathoru Maruk ' (Natrinai , 343:3) ' Dhatu Eru Marukin Muthur ' (Ak. 165:4) ' Dhatu Eru Marukta Kazhi Azhi Mandrathu ' (Pati. 13:17) ' Dhatu Eruth Thathainta ' (Malaipadu. 531) Idu Mulu Veli Eru Padu Garippin ' (Perumpan. 154) indicate the techniques of processing and preserving the manure and leaves of the animals for fertilizer and using them as fertilizer for crops. Crop protection is very essential in farming, says the Kural. That is why the owner of the land should visit the land every day and do what is necessary for it ; otherwise , the land

will become hostile and quarrelsome like a wife , and if there is a poor old man, the land will be destroyed by the owner (No. 1039) . Crops needed protection from birds and animals. Sangam literature records that buffaloes destroyed the cultivated land and parrots stole the grains such as millet that had been grown. The black-eyed buffalo , the black-eyed buffalo, the black-eyed man, the sugarcane , the sweet-smelling (.. 137 : 1-2) The voice that suits him , the black- eyed cow Literature shows that such intercropping and rotational agriculture were the agricultural techniques of that time. Literature records that bean vines were planted on the matured bean leaves in the millet field , and pepper vines were allowed to grow on mango trees , yielding double the yield. Similarly , sorghum was planted in rotation after rice and millet in the same way. The scene of harvesting the mature sorghum , drying it in the field , and beating it with a stick to separate the dal can be seen in the literature. This shows the technique of growing seasonal crops in rotation. The use of machinery , such as water-lifting machines and ploughing machines, is a great attraction for the back of the farmer (Kuru . 68:1-2) The use of machinery , such as ploughing machines and ploughing machines , is a great attraction for the back of the farmer (Kuru . 384: 1) The use of machinery , such as water -lifting The sound of the mills roaring like elephants in panic , with smoke from the distillation of sugarcane juice filling the entire area, is a major feature of the film. The ancient Tamils, thanks to their agricultural management techniques , had the ability and technique to produce a bountiful harvest in a small space where one female elephant could lie down, and the Purananuru praises this as a country where seven male elephants can enjoy themselves in a small space (40) . Similarly. "Some seeds have grown in a wide field, and many have grown (Nt. 209:3) Some seeds have grown in many fields, and many have grown (Nt. 328:2-3) Velyi yayir vilyuttaka (Porunanar. 246:7)" are the verses of Sangam literature that record the concept of yield in various ways. These verses are a testament to the agricultural management techniques of the ancient Tamils. It can be seen from the above literary records that the ancient Tamils were unique in agricultural management, such as expanding the agricultural land , creating water bodies , maintaining soil fertility , selecting seeds , planting , irrigating the beds , protecting the crops , harvesting and storing the grains at the right time , and using machinery in agriculture.

Ancient Tamil literature shows that the Tamils , who were pioneers in the world in natural agriculture, discovered and cultivated various types of grains such as Aivanam , Red Rice , Brown Rice , Varagu , Kezhvaragu , Millet , Samai , Kollu, Aya , Tuvari , Sesame , and Ulundhu. Later literatures such as Mukudpallu, along with describing the life of the farmer , list various types of rice. We, who do not understand our traditional agricultural technologies , are losing our lives and the source of life by relying on fertilizers that make the soil sterile and pesticides that turn the crops black. Above all , the society of that time praised the Uzhugudi. The king also realized that if the Uzhugudi rises, the state will rise. Yes! Protecting the Uzhugudi is protecting our lives. In this

context , Mr. Nammalwar, a natural agricultural scientist who worked throughout his life to restore our traditional agriculture and spread awareness about the superiority of non-toxic food , deserves to be remembered here. His successor, Mr. Nel Seyaraman, is credited with restoring hundreds of our traditional rice varieties through his tireless work. Let us also realize that the Tamil people should realize and gain awareness of their agricultural tradition because they lived and worked tirelessly throughout their lives. Let us make our agricultural tradition and excellence known to the world.

Interview: 1 Dr. K. Ganeshamoorthy Professor (M) Chairman , Neldhurai Tamil Nadu Agricultural University, Coimbatore. If we take the types of pulses, today many crops like lentil , green gram , sorghum , snow gram and so on are native to Tamil Nadu. That is , it is said that among the types of pulses, flat gram originated in Africa. Important varieties like lentil and green gram must have been first cultivated in Tamil Nadu. In a scientific-based multi-variate genetic test, all the primary genes of these are found in South India, especially in Tamil Nadu today. Similarly , an important legume of Tamil Nadu is sorghum. It must have originated in India years ago. It is called tomillet for years. We must have heard a lot about it. It is still stored in Gopuram kalasams. Tamils at that time placed such importance on grain storage and seed storage.

Interview: 2 Dr. K. Rajan Professor , Department of History, Pondicherry Central University , Pondicherry The use or cultivation of rice in India dates back to 7,000 BC . This rice was first found as an archaeological artifact in Southeast Asian countries in the ' Pattapel ' excavations. Through this, it is clear to us that they were practicing a very good agriculture in Tamil Nadu during that period. Next to this, there is abundant evidence of the existence of rice in places like Adichanallur. Its time goes back to about the 7th century BC. Therefore , we can clearly know that the Tamils had a very good agricultural technology at least seven thousand years ago.

Interview: 3 Dr. N. Thavaprakash, Associate Professor , Department of Horticulture , Tamil Nadu Agricultural University , Coimbatore. In Tamil Nadu , the most important crop cultivated since the Sangam period is rice. Many varieties of this rice crop were cultivated in ancient times. Those varieties are divided into two types. The first is the varieties belonging to the Kar season. Kudakar , Kullakkar , Mattakkar. Varieties like Arupadankuruvai have a very short duration. Then the second season is the season called the Samba season. This is the crop cultivated in the months of Aippasi and Karthigai. All varieties like Mappillai Samba , Khichadi Samba were cultivated in this crop. The specialty of these crop varieties is that their medicinal properties have not diminished even today. Hundreds of varieties of those ancient varieties are still cultivated in Tamil Nadu. Our farmers are maintaining it. Most of the new rice varieties with medicinal properties are now being developed using those ancient varieties. This is a very rare feature. One special feature that is not found in any other part of India is that there are hundreds of such traditional varieties in Tamil Nadu. Therefore , it is our duty to maintain these traditional varieties.

Interview: 4 Dr. P. Murali Arthanari, Associate Professor , Department of Horticulture, Tamil Nadu Agricultural University, Coimbatore. In ancient times, tools like thulra and kodu were used to control weeds. The women who held these tools were called 'vetthakayal' . Generally, women were used to control weeds. In the Thirukkural, composed two thousand years ago, it is said that just as those who commit a murder should be uprooted from a community, similarly, unwanted plants growing in a cultivated land should be removed from it . This is considered an excellent weed. As a management

Interview: 5 Dr. K. Selvarasu Professor , Tamil Department, Tamil Nadu Agricultural University, Coimbatore. Apart from Sangam literature, Kambar's book ' Ear Eyupathu ' talks completely about ploughing and ploughing related implements . That is , Ear , plough , yoke. Bhutan rope , achani etc. It mentions all the news related to ploughing. There are many reports in literature that there was a book called ' Kalappai Nool' like Ear Eyupathu. But that plough book has not been found in our hands till now. There could have been countless books like the plough book related to agriculture. If all of them had been found, we would have been able to know how much better agricultural technology we had improved three thousand years ago.

Ancient Tamil Clothing Management and Weaving Technology

Many of the human groups that are considered to be the most highly civilized in the world today , learned to weave silk fabrics while they were still wandering in the forest as aborigines ; discovered the art of extracting thread from cotton and the loom with complex mathematical operations , and exported the technology of weaving along with fabrics to many parts of the world ; discovered the technique of mixing colors to add color to fabrics , and the beauty of making various types of handwork on fabrics: literature praises the many types of fabrics he created, like a snake's shirt , like a palatai , like a waterfall's saral , like a cloud in the sky , and like the inner skin of a bamboo ; yes , it is the Tamils who gifted the world with clothing production and weaving technology. Ancient Tamil literature records the fabrics created by Tamils in various techniques and with various characteristics under 36 different names. The arauri anna chaya (Porunanar. 82) The anger of the one who is in pain (Thirumurugu. 15) The pain of the action of the one who is in pain (Agam. 293) The snake that has taken the flower of the sky, the Kalingamodi (Puram. 397)

Tamil Clothing Civilization Food and shelter are basic needs for all living beings in the world. But , the human race emphasized clothing as a basic need. It distinguishes man from other animals . That is why clothing is considered a symbol of human civilization. From ancient literary references on clothing, we can learn about **the clothing management and** weaving technology of the ancient Tamils. Tamil proverbs like ' Aadiyalla Manithan Ara Manithan ' , ' Kandhaiyalnumalum kasakki chutu ' show the importance they gave to clothing. Since food and clothing are essential for anyone in any situation , whether it is a king who rules this world under an umbrella , a man who

does not sleep at night or during the day , a hunter who hunts and eats animals , or an uneducated hunter , it was emphasized that ' a single meal to eat and two pieces of clothing to wear are common to everyone ' . The South Sea complex is a single entity that has a white umbrella without any commonality. The stone that looks at the middle of the day, the night, and the day, is the only thing that one eats, the only thing that one wears is the one that one wears (Puram. 189:1-5) . In a place where the importance of clothes is mentioned , Valluvar makes a metaphor as ' He who has lost his clothes is like his hand ' (Kural. 788) . The proverb Nanurum suggests that the clothes one wears are a measure of one's social status. The eyes of the great destroyer within and the eyes of the blind who want to shine from the outside, the eyes of the blind who want to wear the clothes will eat and ask the one who wears them (Proverbs 329) In the early days, man , to alleviate the suffering caused by the natural forces of rain, sun and snow , started using the skins of the animals he hunted for food as his clothes. Where leather was not available, he fashioned clothes from tree bark , wood fibers and leaves. As a step forward , he elevated himself to the technological development of producing woven and silk clothes. By wearing tree leaves, he was able to keep the body cool in hot weather. Sangam literary records show that this custom of wearing leaves was prevalent among the Tamils and that the chieftain gifted leaves and tar to the heroine. This type of leaf dress was adorned with flowers related to the field such as ' weaving ' . (Ex. 61:1; Ex. 20:9.10; - 293:5-7; 5.96:7-9; / 15; 5.80:5; Akra. 70:11,12; 15:1,2; 5.102:4-8;125:12- -125:3; 159) Management in clothing production The ancient Tamils implemented various visionary plans to achieve perfection in clothing production, which brings honor to mankind. Since the need for clothing is common to all sections of people , they made weaving a profession for the common people. They made it a small business and produced cloth in every household. Women were also involved in the industry. They used technologies in clothing production to make labor easier. With high production and excellent workmanship, they made clothing an export item and increased trade. In addition , they provided clothing to the poor and the needy on a cultural basis . They provided clothing to everyone by giving them affordable clothes. The ancient Tamils realized that for the unhindered development of an industry , it is essential to produce the raw materials required for that industry within the country. They cultivated cotton, which is the raw material for production, widely. Cotton was cultivated in abundance and cotton was dried in abundance around the village. Sangam literature also shows that the clothes were made like a fence. Cotton fence (299:1 پانچی (فرب)) Puram. 166:5) The women of ancient Tamils had learned the technology of clothing production.

Women engaged in the weaving industry were called ' cotton weavers ' . They would bring the cotton grown in the cotton crop , and even at night, they would remove the dust and husks from it by lamplight , dry it , then remove the husks and spin it into yarn. Moreover , women who did not have a male companion used to do this weaving

as a small business , at home. Cotton weavers (Puram. 125:1) The cotton weavers who had dried the bolls and the skeins were lighted with a small fire (Puram. 326:4-5) The man made a fine thread like a fine thread (3.353:1-2) They produced the raw materials required for the production of clothes, such as cotton and silk cocoons , and from them they also produced secondary materials such as yarn and silk thread. From there, the stage of weaving the tertiary product, cloth , and creating it in many shapes , colors , and handiwork according to its use is known as the highest stage of technology. This type of hierarchical weaving is widely recorded in ancient Tamil literature. The Silappathikaram describes the production of ' Palaviyanna Nuladai ' , a cloth that could fit in the palm of the hand , and its export to Rome. Sangam literature , epics, and other epics mention various types of clothing worn by kings and people. Types of Clothing Adiyarkku Nallar lists the 36 types of names given to clothing as follows. 1. Kosikam 2. Peethakam 3. Pachilai 4. Aratham 5. Nuundukil 6. Chunnam 7. Vadagam 8. Panchu 9. Iratta 10. Padakam 11. Gongalar 12. Kopam 13. Chithirakkammi 14. Kuruti 15. Kariyal 16. Pedakam 17. Pariyattakkasu 18. Vedangam 19. Pungarkazhakam 20. Silligai 21. Dooriyam 22. Pangam 23. Tatthiyam 24. Vannadai 25. Suvattumadi 26. Nool Yappu 27. Thirukku 28. Devangu 29. Ponnehuthu 30. Kuchari 31. Devagiri 32. Katthulam 33. Iranji 34. Venpothi 35. Sempothi 36. The ancient Tamils not only produced clothes with various characteristics , but also used various techniques such as applying colors to them and making floral designs on the clothes. The blue cloth that has been woven together (Kali. 72:1) The sun -kissed leaf that has become dull , the sun has become bright, the face that is beautiful, the eyes that are The fact that it still shines today is a fitting proof of this. Pioneering technologies in clothing production Sir. Saint-Marcel , the Chief Archaeologist of the Government of India , and Ira, a scholar of Indian history, have shown with appropriate evidence that five thousand people, who had crossed the Dravidian line, lived as a people who had built Mohenjo-daro buildings , seals , golden ages, weapons, ornaments , vessels, and reached the pinnacle of a unique civilization . In ancient times, not only the colors of the clothes ; their body , edges, and hem were decorated with various flags , flowers, and other things , and many names were given to them. According to the nature of the clothes, they were called Tugil , Poontugil , Puttakam , and Udukkai. Kopat Tanna Thoyaap Poondukil (Thirumurugu. 15) Tugil Aani Alkul Thulangu Iyal Mhalaka (Sirupan. 262) Puttakam Huppuva Punaigu Vorum (Par. 12:17) Masun Udukkai Madivai Idayan (Puram. 54) They expressed their artistic works in various types of paintings in floral designs on woven clothes. They decorated the woven flowers in various colors. This reflected the technical knowledge of that community as well as its aesthetic sense. Tugil is considered to be the softest of the types of clothes. Its color is said to be very white. It is made of cotton. The warrior with the white hair of the flower, the one who surrounds the white hair of the flower (Par. 10 : 79-80) The kneeling screen of the kozhiyya , the one who is like a tree Atram kavacha suvadaip poontugil (Man. 3:139) Kopat tanna thoyaap poontugil (Thirumurugu. 15)

Furthermore , the clothes were made with beautiful floral designs , woven with fine thread that could not be seen with the naked eye , and were as soft, smooth and shiny as a snake's skin. The ancient Tamils excelled in the technique of making silk , which was superior to cotton clothes in quality , softness , fineness , beauty , and price. The wealthy wore silk clothes. Women wore many embroidered dresses made of silk and cotton. The kings , when they came to visit the poor and the poor , removed their old , tattered clothes and gifted them with expensive , shining silk clothes. The silk cloth , which is made of a small amount of moss and a small amount of sidhar, is made of pure coconut (Porunanar. 153-155) The narrow seat of the women who are made of anikalar sandhi (Agam. 236:11-12) Similarly , the Silappadhikaram shows that there were separate streets for trading various types of cloth made from raw materials such as cotton , hair and silk. The type of yarn and hair used in the weaving of the cloth is not known, but the type of the cloth is not known, and the cloth is woven with a hundred folds (Silambu. 14:20:5-7) Similarly , the clothes of that time were designed in such a way that they were hung long so that the back was covered with the ground. Moreover , there was a technique of producing high-quality clothes made of thick threads , where the cut of the threads was not visible on both sides . The black thread was woven for a long time, and the width of the cloth was not visible (Maduraik. 519-520) Irukottu cheayar vandu vain tridhara (Weaving. 35) Pudai veezh am tukhil idavayin thazhie nedunal. 181) Iruniland thoyum virinul cheayar (Pat. 34:3) Munuvinika katcha dayakkara katti (Kurinji. 125) Blankets were one of the types of clothing of the Tamils. In addition to creating clothes to cover the body. For the cold. At night, they produced blankets woven thicker than clothes , for covering and spreading . The long-sleeved robe shows a soft, spreading blanket, sewn with colored fur, engraved with images of a deer hunting, and engraved with images of many types of flowers such as the jasmine that bloom in the vast forest. The long-sleeved robe shows a soft , spreading blanket. The hair is woven with hair, the deer is woven with the deer's tail, and the flowers are spread out in a soft, spreading blanket (Ps . 128-131)

Similarly , the ancient Tamils have also developed a technique for making carpets that are different in design and nature from clothes and blankets . Manimekalai says that a needle made of gold easily disappears from a green carpet , and the needle of gold touches the green coconut tree, and the sea swells (Man. 29:15-16) . Tamil clothes in countries around the world In Egypt , the bodies of kings who died thousands of years ago were preserved in tombs by various means , preserved incorruptible . It has been found that those bodies were wrapped in Indian muslin. Similarly , silk fabrics woven in the Pandya kingdom in ancient times with lotus flowers have adorned the palaces of kings of various countries such as Rome , Greece , Egypt , Arabia, Sri Lanka , Kadaram , Chavakam , Sambhagam , Portugal , etc. ' Vaiver Saint-Marcel ' says that cotton weaving was first done in India and spread to the West from there . Ancient historians have always mentioned that cloth was one of the items imported from India

by the West. Archaeological evidence It is noteworthy that in the Adichanallur excavation, which was the first in India, a hoe , a cob , rice husks , and a spinning wheel were found along with a spinning wheel. Similarly , in the Keezhadi excavation that is currently being carried out, weaving tools used by the ancient Tamils have been found. These are irrefutable evidence that the ancient Tamils excelled in weaving technology. The weaving industry of our Tamils also has the honor of improving the dignity and culture of the people of the world. Not only that , like every culture , our ancient Tamil clothing culture has its own uniqueness and antiquity. Our clothing culture is so unique that foreigners are amazed by it. Not only that , the clothes we offer are still made only from the handloom fabrics of our ancient Tamils. Not only that, the elegant beauty , the eye-catching colors , and the artistic craftsmanship that amaze the beholder are the special elements of our ancient Tamil woven clothes. It is very sad that the weaving industry and its techniques, which are such a special and great heritage that the ancient Tamils have given us, are being destroyed today due to the attacks of large Western weaving companies. The reason for this is not that our ancient Tamil weaving does not have the power to cope with the large-scale production of modern factories: the root cause is the Tamils who have forgotten our pride and the dignity of their cloth , falling victim to the diversions of attractive advertisements. Kings of the Sangam period , ancient Greek and Roman kings , court ladies , the rich and the poor wore the cloth woven by our ancient Tamil weavers. Through weaving, our weavers pass on our ancient Tamil tradition and technology to us. They bring the pride and excellence of ancient Tamils through the thread of the cloth. Just as sculpture , dance and music are primary to Tamil culture, similarly, weaving, which is a traditional Tamil technology, is also primary and special. In our great effort to restore the pride of the Tamils , let us also restore the weaving technology of the Tamils, which has been a long-standing Tamil pride! Let us protect the thread of tradition without breaking.

Ancient Tamil Architectural Management

If the history of mankind begins with the use of stone tools , then the history of his civilization begins with the production of clothing and the search for shelter. When man, who had confined himself to wooden huts and stone caves , tried to build a place for himself, his civilization began to rise. Man needed a place to live together , to protect himself, to develop the race and to protect his possessions . Building a place is not just a modern need , it is a way of life ; a natural science discovered by man. The traditional knowledge of man , which studied everything from site selection , ecological management , and resources , and established permanent settlements , was the development of this traditional knowledge that later developed into architectural techniques. Places where Tamils lived in ancient Tamil songs. ' Agam , Il , Illam , Urayul , Urayvidam , Kallalai , Kudil , Kurambai , Kurumbu , Nedunagar , Pukkil , Manai , Madam ' are variously referred to. Architecture is one of the sixty-four arts developed by

the Tamils. The Madurai Tamil Encyclopedia explains ' sculpture ' as one of the sixty-four arts of art and describes it as ' the art of building houses , temples, etc. ' . It is also called carving , stone carving , stone sculpture. One of the names used to refer to those who practice this art is ' Kannul Vinignar ' . The architectural techniques of the Tamils, which began with the use of natural materials, were not limited to the basic needs of the dwellings , but also included beautiful palaces , high mansions , elevated terraces, long streets , well-designed towns , planned metropolises , prosperous cities , strong forts , convenient ramparts , useful water bodies , sky-high lighthouses , halls that fostered the arts , and temples that fostered spirituality. The dwellings of the Kurinji people were originally the refuge of man, when the mountains were the refuge , caves and tree houses provided him with protection. Man , who learned to adapt to the environment and live in harmony with it , began to establish a permanent home for himself in the mountains. He started living in groups in a place created from natural materials (mountainous objects) and developed a unique lifestyle according to the land he lived in. The Tamils called the mountain lifestyle Kurinji. The characteristics of his residences were formed according to the living environment , climate, and occupation. Also according to the geographical objects. Kurinji land dwellings were called huts.

tpdhf;fs;

t.vz ;	le;J kjpg;ngz; tpdh	LOCF Mapping		
1	jkpohpd; Ntshz;ikcj;jpfisvOJf.	K2	CO 2	PO4
2	goe;jkpohpd; tho;tpaYk; gd;KfMSikAk; Fwpj;JvOJf.	K 4	CO3	PO5
3	cilNkyhz;ikgw;wpafUj;Jfistpsf;Ff.	K 1	CO4	PO1
4	nerTj; njhopy;El;gk; Fwpj;Jtpsf;Ff.	K 5	CO5	PO2
5	goe;jkpoh; fl;llf;fiyFwpj;Jtpsf;Ff.	K 3	CO4	PO3

t.vz	vl;L kjpngz; tpdh	LOCF Mapping		
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1	goe;jkpohpd; Ntshz; Nkyhz;ikAk; Ntshz; njhopy;El;gKk; Fwpj;Jtphpf;f.	K3	CO 4	PO4
2	goe;jkpohpd; fl;llf;fiygw;wpanra;jpfisfl;Liuf;f.	K 4	CO 2	PO 6
3	Goq;FngHUs;fSk; cw;gj;jpj; njhopy;El;gKk; Fwpj;Jfl;Liutiuf.	K1	CO 1	PO5
4	mwpTk; #oypay; Nkyhz;ikAk; Fwpj;JnhFj;Jiuf;f.	K5	CO 5	PO 6
5	goe;jkpohpd; cNyhftpay; njhopy;El;gk; Fwpj;JvLj;Jiuf;f.	K6	CO3	PO 3

UNIT -III

Ancient Tamil medicine, water management and arts

Medical techniques and health management

It is noteworthy that among the eighteen books, the Trikadukam Sirupanchamoolam and the Elathi are named after the names of medicines. In addition, many of the eighteen books contain comments on health, as well as information about diseases, medicine and doctors. It is also advised that physical cleanliness, environmental cleanliness, eating habits and sleeping habits are the basis for a disease-free life.

Doctor

Sangam literature has referred to medical methods, medicinal substances, and the nature of the doctor. However, in the Thirukkural, which is a continuation and extension of the Sangam literature, we can see that medicine, the nature of the doctor, disease, methods of diagnosing the disease, methods of approaching the patient by the doctor, those who support the patient, disease-free life, and dietary habits, we can see that the medical field and health are discussed in great detail.

In those days, a doctor was called 'Aravon' (Nat.136). 'Marutha' and 'Maruthuvan' (Kali. 17:20,21; 137:24,25; Puram.173:11). Tolkappiyar calls a doctor 'one who knows

how to cure diseases' (Tol.Aka.192). Valluvar refers to him as 'Katran' (Kural.949) and 'Thirappan' (Kural.950). Katran means one who has studied medical books and Thirappan means one who has the medical knowledge to cure diseases.

Medicine

In the medical field, the following eighteen steps are mentioned: diagnosing the disease, knowing the patient's physical condition, knowing the severity of the disease, knowing the appropriate medicine for the disease, regulating the time for taking the medicine, and carrying out the treatment.

The first pulse of the disease will relieve it.

Oral cavity (5.948)

In the verse, Valluvar formulates the grammar of medicine by first knowing what the disease is, investigating the cause of the disease, finding ways to alleviate it, and implementing those ways in a way that suits the patient's body. He also states that the doctor should act by examining the age, severity and duration of the disease of the patient.

The size of the penis, the size of the penis, and the time

Learning-oriented action (5.949)

He mentions that.

The pharmacist and nurse play an important role in the medical field. The quality of recovery depends on the patient, the doctor who treats the disease, the medicine, and the nurse who administers the medicine regularly and regularly.

The wise will judge the wise, and the wise will go to the wise.

The medicine is the word of the afterlife

(5.950)

The verse shows.

Similarly, the way a patient approaches a doctor is also outlined. It is common practice today to not hide the truth from a doctor or a lawyer. The patient should tell the doctor the full details of his illness only when asked. Only then can the cause and nature of the disease be known and treatment can be initiated to cure it quickly. This,

The pain will be as the doctor says (Isa. 77:2-3)

Says I am the clock.

Medicine

The following also contains detailed information on drugs used in the medical field and the procedures that patients should follow when taking the medication.

Upper deck

.....

This form is like sandalwood paste for the soul.

.....

The fragrance of the incense (2.2.24:1-4)

The words, "I used to be as sweet as sandalwood to touch. Now my shoulders are as warm as a caustic ointment applied to ulcers," refer to the heroine's statement. This refers to a type of caustic ointment applied to ulcers. The message about caustic ointment is,

He approached the clan as a "Karam" (6.10.127:3).

The words are also used. In this, the heroine states that the hero is very fond of prostitutes, considering that having fun together is like applying salt to a wound, and the nature of the medicine, which is spicy, is emphasized.

The code of conduct laid down by our ancestors for well-being

Although many medical-related matters such as doctors, medical methods, and medicines are mentioned in ancient Tamil texts, virtue, balanced diet, and a lifestyle in harmony with nature are the life principles that the ancient Tamils laid down for a prosperous life. The Tamils have seen the truth that food is medicine. These are greatly emphasized in the following texts including Thirukkural. In particular, the way of eating, the nature of food, the way of sleeping - place - direction, etc. are mentioned as being related to health.

Food intake

The following account states that not only the food you eat, but also the way you eat is related to health.

Neither lying nor standing.

He eats even on Friday.

The best is on the bed.

The eater stood to eat the dead body (Asa.23)

It is emphasized that one should not eat while lying down, standing, or in the open; one should not eat excessively, and one should not eat while sitting on the bed.

Food quantity

The quantity of food eaten is emphasized in many places. Sirupanchamoola says that one who guards his tongue and eats only the required amount of food does not get diseases.

The disease of the watchman (Sir.8:4)

Thiruvalluvar explains the method of eating food very clearly. He says that if you eat food properly, there is no need to take medicine.

I drank it for a yak that I didn't want as medicine.

Praise the non-existent (Kural.942)

He advises. Similarly,

Eat in moderation, if you are hungry, you will get sick.

The father is a river that flows (Kural.943)

In it, it is said that if you digest the food you eat and then eat what you need, your life will be prolonged.

Similarly, it is important to remember that you should eat properly only after you have digested the food well and are feeling full.

Know what is not, practice it, and do not change.

I am thirsty for water

(Kural. 944)

And that if you eat food in moderation that does not harm the body, you will not get sick,

I refuse to eat without variation.

There is no harm to life

(Kural.945)

He also emphasizes that.

The food one eats should be in accordance with the nature of the body. Otherwise, if one eats too much or too little, as stated in medical books, the three diseases mentioned above, and the resulting suffering, will occur.

Writers who cause illness in excess or in short supply

The three that the wind counted

(Kural.941)

Parimelazhaga explains this by saying, 'If food and activities are not in proportion to one's portion, whether it is excessive or deficient, then the three diseases mentioned above, starting with the disease, will afflict him.' It is known from the 'Nulor Valimudala' mentioned in this that there was a book on medicine at that time.

Childbirth and parenting methods

The eighteen books contain many messages about health, as well as messages about family well-being, childbearing, and the need to raise children in a good manner. These books speak in many ways about the importance of child wealth, which is fundamental to family well-being. In particular, the eighteen books also outline the method of childbearing.

He will not look at the day before the day of the touch.

Take care of yourself for six days after swimming.

That is the courage of the great sage

(Asa.42)

In it, it is prescribed that a man who wants to have a child should not have intercourse with his wife for three days if she is menstruating. After three days, he should not separate from her for twelve days after bathing. Similarly,

The blood is red and the makeup is red.

Boiling red water with diligence - a prostitute

Even if you say it in your mind, you will not speak.

That will make you fall to the ground

(6.0.144)

In it, the news of the heroine's puberty and the time for the hero to join her and improve his clan by giving birth is shown by dressing her in red, decorating her with red sandalwood, and sending her a red vase of flowers to catch the hero's eye. In this, the time for the hero to bear a child and not to leave the heroine is indicated through symbols and signs.

Child rearing

It was emphasized that children, who were the wealth of the family and the future of society, should be raised in a good manner. In addition, adopting and raising orphans and protecting widows were also proclaimed as social virtues.

The act of taking birth, the act of removing the veil, the act of removing the veil, the act of removing the virgin, the act of leaving the veil intact, the act of removing the veil

In it, it is pointed out that the five great virtues that a mother should cherish and raise her child, should preserve her own child, should find and raise a child who has no one to raise, and should cherish and cherish a virgin who has been bereaved and a very bereaved woman in her own home were all declared by ancient sages to be great virtues in the past.

The phrase 'Aara Modhinar Mudhu Nular' also reveals the moral scriptures that preceded the eighteen following. The emphasis on adopting and raising helpless children and protecting widowed women and the weak also shows the high values of a civilized society.

It is very painful for children to get sick, so it was emphasized to protect them from getting sick.

This is the disease of the ants (2.35:3)

In it, the suffering of children's illnesses is highlighted. Similarly, it is said that it is good for children to live without illness,

It is pleasant to live without heart disease (2.12:1)

The steps show. Also,

The preservation of purity is black.

If it is destroyed, Sri Lanka will be devastated.

Erythromycin

The pride of the country is in its integrity.

Native animal (4.74)

In this, protecting the fetus in the womb from destruction, in case of miscarriage, carrying it away secretly without revealing it to others with great virtue, protecting the child, and giving it medicine for the sick,

Innumerable ideas have been put forward for environmental cleanliness, social welfare and individual welfare. They are mostly unadulterated and directly reflect reality. The need to protect nature is emphasized, saying that the five elements of nature, earth, water, fire, air and sky, must be maintained, otherwise the five elements in the body will also leave us.

Planting trees, building roads, and establishing drinking water facilities are also mentioned as good deeds that bring about social welfare (C. Mu.63). Digging a pond, planting trees around it, repairing roads, making barren land arable, and digging and walling a fertile well are also mentioned (C. Mu.66). Environmental cleanliness is very

essential for a disease-free life. Therefore, it was emphasized to keep the surroundings clean.

Furthermore, it was advised that one should not contaminate water bodies by standing in them, rinsing one's mouth, etc., and that one should not rinse one's mouth in stagnant, contaminated water bodies, and that one should rinse one's mouth with water in a container. This,

Walkway standing water

The path of the Buddha is covered with water.

The painter did not draw with his mind.

If the paint is not smooth (Shubha.35)

Similarly, places where spitting and defilement are not allowed are also marked.

The remedy of grass, fenugreek, and acacia.

The divine family, the shadow of the soul, the white sacrifice

That's what I'm saying, with tears in my eyes.

Both are wise and have sense (Isa.32)

It states that a wise person should not spit, defecate, or urinate in ten places: grass, cultivated land, cow dung, cremation ground, footpaths, holy water bodies, temples, shady places, cowsheds, and ashes.

Furthermore, the need to protect water bodies for public use from pollution is emphasized. It was advised to avoid swimming, playing, and spitting in such water bodies.

Drowned in a swimming pool

My mother swam for a long time.

Thilaiyar played with it and it dried up.

However, he played with his head down.

The learned man (Asa. 14)

In it, it is said that a person who lives by following good morals will not swim in ponds etc. during bathing season. He will not spit in the water. He will not dip himself in the water. He will not play in the water. Even if his head is dry without oil, he will not bathe up to his neck (the idea is that he will bathe with his head submerged).

The above evidence reveals the importance that the ancient Tamils gave to physical health, the medical methods that were adopted in case of illness, the lifestyle practices that were followed to improve them, realizing that 'habits and dietary habits form the basis of health', and the importance they gave to physical cleanliness and environmental cleanliness. Through this, it is evident that the ancient Tamils excelled in medicine and health management.

Astronomy and water management

Management means 'superiority', 'superiority' (Kriya.p.870). Furthermore, the term management is defined as: Managing something effectively; Maximizing the

benefit that can be obtained from something through a planned series of activities; Increasing the benefit by reducing physical labor and time loss; Complete knowledge and use of a thing (Nee.Me., A.K., p.1).

In this way, water management can be defined as the human control over water. This includes many steps such as understanding the relationship between the astronomical environment and rainfall, enriching the natural environments necessary for rainfall, creating water bodies to store and protect rainwater, and regulating and distributing water for use in agriculture, drinking water, etc. On this basis, this section presents the eighteen types of astronomical knowledge and water management techniques found below.

The geological fact that 97.5 percent of the world's water resources are seawater; 1.9 percent are glaciers; and 0.6 percent are freshwater, and the results of natural resource studies that water resources for drinking water are decreasing significantly due to natural changes and human activities, emphasize the need for this type of heritage search. The importance of rainwater

The use of something measures its need. The use of water, which is the source of life on earth, made the need for rain known. Therefore, ancient Tamil poets advised the world about the need for rain water. They warned that without rain water, there is nothing in this world.

If the world cannot exist without water, who will?

Morality does not fall from the sky (5.20)

Says Valluvar. Similarly,

Without rain, the people of the state will not have it (Isa. 46:1-2)

And always,

The world that lives towards the sky (Isa. 26:2-3)

That is what the clock suggests. Similarly,

It is because the world is given from heaven.

The path known as Amishtham (Kural.11)

In it, it is said that since the world is established by the constant rain, that rain has the quality of being felt as the essence of the world,

Do not be attached to evil people, even those who cause harm.

Everything that is taken is rain (Kural.15)

In it, it is said that rain is all about destroying the living beings on earth and supporting the wicked.

If the sky is not afraid of life, it will fall.

The gift given by the devotee (Kural.1192)

In it, Valluvar emphasizes the importance of rainwater, saying that it is like a headscarf that a husband who should not have left a woman who cannot leave her comes to her without a reason, and that the rain that comes without a reason lives for itself.

While discussing the need and indispensability of rainwater, they have pointed out the suffering that would occur to the living beings of this world if that rainwater were not there, and have emphasized the need to appreciate and protect rainwater. They have also emphasized that if the rainfall fails, the world will suffer.

Inna to the city of Mari Valam Poippin (Inna.20.3)

What happens to the neighbor when the ezhili is removed? (2.35.1)

Innaforty insists that. Similarly,

The only thing that can stop a drop of faith is the falling of a drop of faith.

Green grass with a headscarf (5.16)

In it, it is said that if a drop of cloud did not fall, even grass would rarely grow on the earth,

The long sea and the thick, self-sufficient hillock

Thannalka Tagi Vidin (Verse 17)

In the world, it is also pointed out that if the clouds do not rain, the boundless ocean will also diminish in its nature.

Use of rain in agriculture

Next to drinking water, the agricultural sector is dependent on rainwater. If the sky fails, agriculture, the basis of life on earth, will fail. If agriculture fails, all human life will fail. Therefore,

Rifle

Gunpowder rain (. 12)

It is said that rain produces good food for the eaters and also serves as food for the eaters.

Literary records show cloud formation, cloud circulation, the conditions for precipitation, and the events preceding the onset of rain.

The colorful yellow flower

The sky is filled with carnations.

Seeing (2.2.2:1-3)

In it, the beautifully colored peacocks, having sensed in advance that the rain clouds that were holding the rain were about to pour, begin to flutter as a sign of the approaching rain.

Rainfall

Rainfall scenes have been recorded in various ways in Sangam literature and the Eighteenth Century. In Sangam literature, rain is not only a natural phenomenon. It is also approached with a psychological perspective. It is used as a metaphor and symbol for fertility, usefulness, prosperity, wealth, etc. The following books also show records of rainfall in various ways.

The dark sea is a dark sea.

The black flag of the millet tree is ringing.

The great price (Proverbs 26:1-3)

It shows the beautiful clouds that have swallowed the great ocean, the beautiful thorny plants with black branches and buds, and the rain that has fallen. It also shows the sight of the rain that has come out with the watery vessel, and the black rain that has gathered with the wind and poured from the sky,

The pregnant woman carried the rain with her feet (Proverbs 25:1)

It can be seen in.

The clouds drank in the ocean water, amplified the sound with a drum-like thunder, tormented the snakes that heard the thunder, and poured rain on the rocky mountains, adding to the darkness.

The sand and gravel of the forest are scattered all over the place.

The thunder and lightning of the heavens (Numbers 3:2-3)

The sky grew dark and cold (Numbers 17:1-3)

The lyrics show the same. Similarly, the sun's rays soften the car's wealth, the long forest is covered with lush foliage, and the rising clouds shimmer in the sky.

The dark rays of the sun are the source of the karselva.

The forest is a wilderness (Cor. 2:1-2)

It can be seen in. Furthermore, literature has also recorded news of hailstorms.

The kiss of the teardrop is like a bitter dove.

The storm of Dhanduli Alipurduar is raging.

The sky is not even in the sky (4.23:1-2)

In it, pearl-like drops of water and hailstones are seen falling everywhere in the forest, and raindrops and clouds cover the entire sky.

Creating water bodies

Water management is based on rainwater harvesting strategies. Although the country has adequate rainfall, the amount of water absorbed by the land and the amount of water stored is low, and the amount of water wasted in the sea is high. Therefore, storing and conserving the rainwater that flows during rainfall is useful for land development and agriculture, and also helps in increasing groundwater resources. Where the nature of rainfall is mentioned,

The removal of the bridge is a relief.

All the milk that is received is given to the mother (Naladi.103:1-2)

Says Naladiyar. In this, the truth is pointed out that when the rain fails, it will not rain; when the rain falls heavily, it will not be stopped. Therefore, it is emphasized that the rainwater should not be wasted during the rain, but should be stored so that it can be used in the future.

Furthermore, the nature of water is to stagnate in hollow places. That is why the Purananutru poet Kudapulaviyanar emphasizes that wherever there are hollow places, water should be made to stagnate (Puram.18).

In a place that points to the nature of the water that accumulates in the valley,

The water standing in the pit (5.31:1)

It is shown that the water is mixed with the land,

The land of the Buddha, the land of the Buddha,

The water is poured into the body (5.1323)

Says the Kural. In this, he says that there is no world of Buddha that brings us pleasure like the land of a lover who is united with water, like the land of a cow. Water tower The system that releases water from a lake, pond, etc. for irrigation is called a water tower or bubble tower. This tower system has captured all the water filled in the water bodies. This is the best technology of the ancient Tamils.

The blood that flows through the unclothed murassa under the elephants lying on the ground on the battlefield, the waterspouts beneath the banks of the Red River resemble the waterspouts after the rains of the Karkala period,

Residual memory in memory

Idimuras in the elephant's armor

The Holy Communion

Under the red line after the rain

Like a water vapor bubble

The funnel of Arthamar is a great battle (Kalavali 2:3-4)

The steps show that the scene of the first water (white water) being released through the bubble dome after the monsoon rains is likened to a battlefield scene.

Channels

The system that carries water from water bodies for irrigation purposes is called a canal. Canals have always been found along the currents. The scene of water discharged from the river flowing through the canals is shown in the verse "Kanchinal Uran with the water flowing through it" (Kaind.46:1).

Door

The structure used to divert the water flowing through the canals is called a 'maid'. Since the water keeps diverting in these maids, the water stagnates around it. In these maids, flowers such as marigolds are seen blooming and thriving. Long marigold flowers dry up when the water in the maids where the water flows dries up. Therefore, the message that water should not be dried up is conveyed,

The long weaving of the water-bed will wither (Isa. 41:2-3)

The steps show.

Water bodies for drinking water needs

Among the water bodies for drinking water, wells, cisterns and cisterns are mentioned below. In this, cisterns are known as public water bodies in a village, wells as water bodies for private or specific use, and cisterns as water bodies constructed on dry land.

Well

The most commonly used water source for drinking water is the well. Although it is close to the sea, since seawater is not suitable for drinking, people often seek out the source of the small well and drink from it.

Even though the ocean of water has reached

He who eats by the well of fresh water (4.275:1-2)

The steps show.

Shout

It is advised that a person who digs a lot of water, such as a standing crowd, will attain the fame of the Irava eagle.

Even though he cries out for food and water without any shortage

(1.16:2-3)

Uruni

A pond is a common water body for drinking water. Valluvar says that a pond full of water is the wealth of a person with great knowledge who is desired by all the people of the world. This,

The world is full of water.

Mr. Perari Valan

(5.215)

You can find out through the verse.

Water level maintenance

It is not enough to create water bodies, they must be maintained. The inflow and outflow channels of water bodies must be kept unobstructed. In particular, the channels leading to ponds and other water bodies must be made wide and capable of carrying more water. It was emphasized that ponds that are not maintained in this way will be plagued by poverty. This,

The mouth is filled with water.

He was joined by Nalkurau (5.84:1-4)

The song is playing.

tpdhf;fs;

t.vz ;	le;J kjpg;ngz; tpdh LOCF Mapping			
1	goe;jkpohpd; kUj;JtEl;gq;fs; Fwpj;JvOJf.	K2	CO 2	PO4
2	Foe;ijg;NgWkw;Wk; kUj;JtKiwfs; Fwpj;Jtspf;Ff.	K 4	CO3	PO5
3	goe;jkpohpd; thdpay; mwpTgw;wpaEl;gq;fis \$W.	K 1	CO4	PO1
4	kiogw;wpago;jkpoh; rpe;jidfistpsf;Ff.	K 5	CO5	PO2
5	ey;tho;tpw;FKd;Ndhh; tFj;jnewpFwpj;JvOJf.	K 3	CO4	PO3

t.vz ;	vl;L kjpngz; tpdh LOCF Mapping			
1	goe;jkpohpd; kUj;JtNtshz;ikEl;gq;fisvLj;Jiuf;f.	K1	CO 4	PO4
2	cly;eyNkyhz;ikFwpj;jfUj;JfisnjhFj;Jiuf;f.	K 4	CO 2	PO 6
3	goe;jkpohpd; fly; rhh; mwpTFwpj;jnra;jpfisfl;Liuf;f.	K3	CO 1	PO5
4	goe;jkpohpd; thdpay; mwptpidtphj;Jiuf;f.	K2	CO	PO 6

			5	
5	goe;jkpohpd; ePh; Nkyhz;ikgw;wpafUj;Jfisfl;Liutiuf.	K4	CO3	PO 3

UNIT -IV

Political management and personality traits

The country is prosperous.

The country is not a nation, but a country of prosperity (Kural

.739)

that a good country is one that has all the resources : a country that seeks help from others for its needs is not a country.

Furthermore , where the nature of a good country is mentioned ,

Hunger, thirst, and thirst

The country that does not join (Kural . 734)

He also defines a good country as one that is strong and prosperous , free from persistent hunger , incurable diseases , and enemies that invade and attack it .

As ornaments to the country ,

Illness, wealth, fruition, and delusion.

The team is placed in the country (5.738)

Valluvar mentions that. In this , freedom from disease , wealth , success , happiness , and security are all five attributes that are considered as adornments for the country.

For these characteristics of a good country, the natural resources of the country , the wealth of the people, the characteristics of the king , his efficiency , personality , assistants, defensive fortifications, etc. play an important role. This section covers all these and shows the thoughts of the ancient Tamils regarding the political field and the management of this field.

' Politics ' is defined as ' the process of governing the country' and ' the policies and practices of the parties involved in governing ' (Policies and Practices, now pp. 38-39).

Leadership Traits and Characteristics

"The way the king goes, the way the people go " is a Tamil tradition. " The world is the place where the paddy grows , the water goes , and the king lives. The world is the place that the Tamil society has given to its leadership. The ancient Tamil society defined the qualities that are desirable and undesirable for this type of distinguished social leadership. Political management is distinguished by virtues and activities. Therefore , in the political field, the characteristics , natures , and qualifications of leadership are looked at first.

Properties

Visual simplicity (m) Intelligibility

Political leadership or the leadership of the country. It should be visually simple so that people can see and point out their shortcomings. Similarly , the nature of a leader should be one of indifference , without harsh words. Valluvar says that the world will praise such leadership. This ,

If the simple man is not a harsh man,

The land of the king of Meegu

And ever , (5.386)

With the power of the word, with the power of the word,

Thank you for your patience . (387)

Valluvar is still shooting.

Mass

The meaning of the word is ' hidden ignorance of others ' . It also excels in individual traits. This trait is highly sought after for leadership.

The ability to protect one's desires and desires from the enemy's knowledge is a hallmark of leadership. This quality prevents one from falling victim to the enemy's intrigues. This ,

Love is the product of ignorance and love.

The book of Ethil Ethilar (Kural. 440)

Says the verse.

Similarly , political intelligence means not sharing political secrets with others through one's relationships and friendships .

The people around him went and planted a tree.

The wise man is wise through ignorance (Proverbs 67.1-2)

The proverb says four hundred.

Lack of a lap

Laziness is pointed out as the first quality that must be eliminated, whether it is an individual activity or an administrative activity. Laziness is especially a panacea for social leadership.

The king, without a king, was defeated.

All things are united (Kural. 610)

In it , it is emphasized that the Lord, who measured the entire world with his feet, will be able to reach the entire expanse of the universe at once , with a king without a lap.

Similarly , laziness is one of the four qualities that a person must get rid of if he wants to be successful in life .

The four of the long-watered oblivion

The water of the river is the source of lust (Kural. 605)

The verse illustrates that.

Lack of internal desire (self-will)

Having an internal interest, i.e. a desire for oneself, rather than the welfare of the people and the welfare of society, is not a characteristic suitable for leadership. Being free from internal interest is also a good quality. This is

..... **He who knows will rule.**

There is no food or sweetness

(Nanmani , 96:3-4)

It can be seen in.

Speech

Leadership requires the ability to listen to the words of wise people who rebuke and admonish , to examine the benefits in those words, and to listen. It is believed that this world will rest under the umbrella of kings who possess this quality .

A gentleman who is a good listener and eloquent speaker

The world under the influence of poetry

The verse shows.

Protecting the population

The sky-gazing world is the king of all.

A person who lives in a goal (5.542)

The verse says. That is , all living things live for the rain , but the citizens live for the king's scepter. This shows that it is the political duty of the king to protect the king and the citizens who live under his shadow.

Furthermore , a good government cannot be one that is distant from its citizens. Therefore , the leadership that embraces and protects its citizens and acts as a sovereign government was praised.

The king of the state of Kudapitniik Koloalum

The world where the foundation stands (0.544)

In it , it is understood that the world will stand firm under the feet of the great ruler who embraces the citizens and wields the scepter.

Similarly , a king who possesses the four qualities of giving what he wants to those who ask , speaking sweet words , wielding the scepter, and protecting his subjects is like a lamp to all kings .

The four of them are the scepter,

The light of the Lord is clothed (Kural. 390)

The saying goes. This is what the Trikadukam ,

The king of the great conquerors (13 :2)

It is said that a powerful king is one who protects the welfare of the people.

Similarly , it is the beauty of a king to take care of his subjects without causing them pain .

..... **The ruler of his own country (9 :3-4)**

If you say "Wattan is good", then you are a fool.

Sirupanchamoolam shows that.

Humility

one's own honor and the honor of one's subjects. If a king is offended, it is considered an insult to all the subjects of the country. Therefore, the king was required to have the virtue of forgetting that protects the heavens.

The law does not pull, but the law does not pull.

The government is honorable . (Kural.384)

In it , he was instructed to act without deviating from the virtues he was told , to eliminate non-virtue , and to possess the honor of courage that never fails.

Natures

Social leadership or government does not operate solely through political power. Leadership establishes its uniqueness through its own virtues , characteristics , and intelligence. The people accept such leadership and take pride in its shadow.

Fearlessness, kindness, knowledge, and enthusiasm are all these things.

The nature of the unyielding is (Kural.382)

fearlessness , generosity , intelligence, and motivation are essential for political leadership.

Similarly , these three qualities of being unhurried , educated, and courageous are mentioned in the following verse as qualities that should be indispensable for a king ruling the land.

Sleeplessness, education, courage, all three.

To the power of the mighty, the mighty

(

Kural.383)

Knowledge

Intelligence is a quality that is more required of a ruler than of an individual. Intelligence is the quality that leads to timely decision-making , swift action , and dominance.

The tool that protects ignorance will be used by the wise.

The inner stone is a fortress

(Kural .421)

In this , Valluvar says , knowledge is a king's army that protects him from the end. It is a fortress that the enemy cannot destroy.

Furthermore , through his wisdom, kings would know the way of governing and the ways of victory .

..... Appeal

Kings who conquer

(Isa . 91:1-2)

Says I am the clock.

Grace

A king is revered as equal to a god. Even if a god lies, a king's manners cannot. Lying will cause suffering to the people. Therefore , the king's grace is revered as equal to rain in this world.

The Lord is the one who is free from the fear of the lack of knowledge.

For the soul that lives without end

(

Kural.421)

If there is no rain to nourish life in the world, the sorrow is great. It is said that if a king is without grace, his subordinates will also suffer. **The middle position is not wrong**

One of the most essential qualities for social leadership is impartiality. One should look at the crime committed by someone , not at who committed the crime. Such a view can lead to impartiality.

..... **Golkodi Mararayam**

Before doing anything, now becoming a red boy

If you open it, it will be opened

(John 5:1-3)

It says that there are forty pleasant things. In this , it is very pleasant for a king to deviate from the middle position and not to do special things for his own sake. It is pointed out that it is very pleasant for him to be a person who pays the price.

a king who does not seek justice when his subordinates commit a crime , and a subject who obeys the king's orders and does not show any concern, are considered superior .

..... **Orundu system Koda government-imprisoned**

These three drink without a trace of alcohol.

He will be called the world

(Thiru

6.34)

That's what the Trikadugam points out.

Characteristics of the Prince

Tamil literature has prescribed not only the characteristics of the reigning kings , but also the morals and ethics of the princes who will rule next. A person cannot be fit for power with only the single naruti of Ilavarasar. The society of that time advised that he should possess the characteristics and leadership qualities required of a king.

Accordingly , the Trikadugama says that a prince should possess the qualities of caring for his ministers and other people , protecting them with due respect , and befriending good people.

By giving to the ancients

Embracing the playful side -Kelirait

The three are the three of the three.

The king has a younger son.

Red flag

The most essential function of political activity is the scepter system of rule, military power, and many other virtues. However, a person without the scepter is considered to be a failure.

The king is the king of the kingdom.

Mannavam Mannark Koli (Kural. 5560)

In the text , it is said that if the king does not have a red star, then the king will not have a light.

Charitable trust system

Political activity was a systematic process in ancient Tamil. There are references to the existence of 'political texts ' that set out political principles and the system of governance . The Kural clearly shows that Hindus were composed to provide better governance and to follow the system of governance of the king.

The beginning of the Brahman and the virtues

The king's staff stood

(Kural: 543)

In it , the system is shown to be superior to political texts and ethics written by scholars.

Furthermore , it was specifically instructed to lead the front line, which administers justice and protects the citizens according to political ethics. **The king who protects and protects the people,**

It is called the God (Kural .388)

Similarly , in the country of a king who wields the scepter by nature, there will be unending rain and unfailing abundance. The result is ,

The king who is the one who strikes the natural arrow (Kural .545)

The fruit and the fruit are the same . This is also the case with the

trikadugam

He will do good.

The rain that falls like a king (Thiru .96)

Forever ,

Joining the Venjin Vendan Method

.....

Monday is the day of the third seed (Tir.98 :2-4)

It is also said that in these , it is pointed out that where there is a king who avoids evil and does good to the citizens, rain will fall without fail, and that a king who shows cruelty and anger to his enemies and follows the path of proper governance will be the cause of the three rains that should fall every month.

Scepter slippage

The king's victory was considered to be the unerring rule of the scepter. The king, who proved that victory with an unerring scepter was greater than victory in battle ,
was the one who won on the day of the scepter.

that if the goal is not even a goal (Kural .546) .

Similarly , it was emphasized that the world protects the king in the same way that the king protects the world.

All the divine protection is upon him.

The chain of fools who keep order

(Kural. 547)

The harms of failing to be a good leader

The virtues that come to a ruling king are advised. The tyranny affects both the leadership and the subjects. The following texts show what is happening.

..... and suffering

He will shoot the army that has reached him

(Isa 52:3-4)

Similarly , Nanmanikatidi says that a king who does not abide by the boundaries of morality will be killed by his own troops.

The eighty-one-time queen

The self-destructive will destroy itself

(Kural .548)

In it , the king who protects the world by the simple act of the scepter is said to easily destroy it by divine action.

Furthermore , living under tyrannical kings brings great suffering to the people.

He stood there, seemingly lost.

He stood with a staff at night

(Kural . 552)

The Kural draws a parallel. In this , the cruel deeds of the tyrant King are compared to thieves who snatch from passersby in the middle of the forest with a stick.

Characteristics that are not suitable for leadership

The following texts list the qualities that a king, the leader of society, should have, as well as the qualities that he should not have. These include bad qualities such as doing things that make the citizens afraid , speaking harsh words , gambling , stealing , arrogance , anger , and lust. The following are considered bad qualities: It can also be seen that some of the characteristics mentioned differ conceptually from those in Sangam literature.

Not doing scary things

The king should not do things that make the citizens afraid. Such things isolate the leadership of the society from the citizens and lead to infighting . Therefore , the Kural says that a king who does things that make the citizens afraid will soon perish.

If you are a virtuous and virtuous person,

One person will destroy the whole world

(Kural .563)

Harsh words

is recommended that the king who is said to be harsh and who speaks harshly will have a shortened life span and a rapid loss of wealth.

What is the word "God-killer"?

The cold and the cold will destroy the body (Kural. 564)

Similarly , it was advised that if the king is harsh and short -sighted , his great wealth will perish without any lasting effect.

The fierce and the cunning are the wealth of the noble.

It will not last long and will perish somewhere (Kural . 566)

Characteristics such as taste

Having sex with women , destroying the things one has sought without protecting them , killing animals , drinking intoxicating liquor , gambling that brings misfortune , speaking harsh words , passing unjust judgments and punishments in a fit of emotion and great anger , and not being submissive to what should be submissive are qualities unfit for leadership.

It is advised that there is no enmity even for a king without virtues. Song- **making, materialistic pursuits, deer hunting, and the like are evil.**

Sadness is the only way to say it - Sadness

The punishment of the cruel punishment of intemperance

What is the government in Adumgadam (Enathi , 18)

Similarly , without killing a single living being , and without assisting others in killing ,

He who does not join untimely business gatherings , does not woo his neighbors , does not indulge in greed , keeps his family in good health and provides food to others , will rule the world , and will mount a deadly elephant and subdue kings to himself."

The killer will not agree, the killer will not know.

The one who is attracted to others is the one who is attracted to others.

He who settled the village, mounted the elephant.

The government of Mannandu will be defeated (Enathi , 42)

In this , it can be seen that some norms differ from the political norms of Sangam literature. As religion entered the direction of politics, it can be seen that morality took precedence over political norms. The social environment in which religions that prioritized moral principles guided politics is clear from this. Thus , it can be seen that the political environment of the Sangam era is somewhat different from the political environment of Sangam literature.

Government crimes

for not giving what he wants , for not respecting the good , and for being too happy.

This is a shame, and the honor of being born is not worth it.

All praise is due to God (Kural .432)

Similarly , pride , anger , meanness , and lust are considered crimes. The government It should be. The wealth of the kingdom without these crimes will improve ,

There is no anger or bitterness.

Increase dilutes pride (Kural .431)

It can be seen in.

Tyranny

The idea that citizens living under a tyrannical king who does not adhere to political ethics and does not consider the mood of the people will suffer greatly has been recorded in many of the following eighteen songs.

That living under the rule of a tyrannical and murderous king , and living under the rule of a king who rules without justice, is suffering ,

..... **Hang in there.**

The world is not protected

(Inna .2:3:4)

Living under a tyrannical king is Inna (Inna 3:1)

A government that rules without order

(Inna 5:3)

The steps show.

Furthermore , it is said that only a king who desires the suffering of his subjects will rule with such an unjust system.

The one who seeks deceit will be punished

(Proverbs 10:9)

Similarly , living in a country ruled by a king who has lost his scepter, there is no point in just criticizing the king.

In the past, the king was a traitor

(Gen. 3:6).

The song shows.

Similarly , it was advised that the beard of an unruly king is always poverty-stricken , and that worshipping an unworthy king is a misfortune.

In the manner of the king, when the country prospered

(Gen. 9:1)

Obedience to a king who is not obedient

(Inna

.13:3)

Irregular tax

One of the tyrannical practices is the collection of improper taxes by oppressing the citizens. Therefore , it was urged to avoid improper taxes , saying that the rains would be scarce in a country governed by a king who practiced such immoral acts .

The commodity is a commodity that is used to make goods.

The valley is a place for rain

(Dr. 50:1-4)

The words "□□□□□□□□□□□□□□" refer to a tyrannical king who collects taxes from his subjects to buy things for his own pleasure , or an evil planet that prevents rain from falling on a country.

Furthermore , the act of a king standing with a scepter of power asking for things from his subjects is like a thief standing alone on the road carrying a pole and asking for ' give ' , and is considered akin to robbery and is denigrated.

He stood with a staff at night

(Kural . 552)

Similarly , harsh words and excessive punishment for crimes are described as ' the sharpening of iron ' , a suitable means for the king to overcome his enemies . That is , just as the sharpening of iron is reduced by the sharpening of iron, ' they are the cause of internal enmity.'

Harsh language and harsh punishment are the punishment of

Vendan.

The radius of friction

(Kural .567)

a king who becomes such a tyrant and does everything without considering it will lose both wealth and people.

Golgotha, who loses both wealth and

people

The government that surrounds

(Kural

.554)

Therefore , the king who rules with a scepter in accordance with the principles of the kingdom is called a burden to the earth. He prospers ; the tyrannical king is despised as a burden to the earth.

There is a world of perspectives.

Patience to the true land

(Kural .572)

Performance

Effective management is management. In this, efficiency , planning , forecasting , and coordination play important roles. Effective management of politics has a number of stages. It is based on "political efficiency". Planned efficiency that promotes the development of society later developed into political theories.

As key functions in political administration ,

Compose, earn, protect, protect

The government also has the power to divide

(Kural .385)

The Kural points out these. In it , the four functions of composing , organizing , preserving , and distributing are prioritized in political management. Here , it is stated that a king is one who has the ability to create more ways for his resources to come to him , to collect the created resources in one place , to protect the collected resources from others , and to spend the protected resources in a proper manner.

Planning

Planning is essential to achieve the complete success of an action. Especially , planning occupies a very important place in the process of political management. Valluvar says that after considering the five elements of the object , the instrument , the time , the action , and the place of action , one should start taking action.

The five with the verb in the instrumental tense

The act of thinking in the dark

(Kural . 675)

Time plays a significant role in determining and ensuring the success of an action . This is why.

Time to get used to the idea of wisdom

The chain of thought

(Kural .484)

Says Valluvar.

Literature also shows the harmful consequences of actions taken without regard to time and reaction.

Writing without any boundaries is a form of hatred.

A river that is bathed

(Kural .465)

In the poem , the king is warned that going to war without fully considering the consequences would only serve to further entrench the enemy in the land where he is growing.

Political support

Supporting factors play a very important role in political governance. Even though a king may be a multifaceted personality with character , knowledge , and efficiency , political supporting factors are essential for the effective governance of the state.

When mentioning the assistants to the leadership.

The military police are friendly and helpful.

The king of Udayan ascends

(Kural .381)

The Kural says. In this, it is derived that a king who possesses the six elements, namely army , country , wealth , ministry , friendship , and fortress, is like a lion.

Political support is not just about sharing in the joy of government. It is up to Ryan to do the necessary good deeds , to provide the necessary comments on the necessary issues , and to speak out against the enmity.

Political auxiliaries are military participation , intellectual participation. Social participation , and the subjects in the loom stages of citizens. The four nobles can be identified as citizens. The Trikaduka says that a king with an army should not abandon these three: citizens who obey the political laws , ministers who embrace the citizens and can withstand the fall of a banyan tree , and the guard of a person who is like a flower near the fence.

The living and drinking Kudapittaya

The Minister is like a waterfall - Velin

The three are like a jeweler's jewel, and the three are like a jeweler's jewel.

The departure of the commander) 33)

The one chosen by the king

wealth , pleasure , fearlessness when faced with adversity , and great mercy when faced with the destruction of another life - will be chosen by a king with a sharp sword and appointed to various positions of responsibility.

Fear of material things passing away, fear of the loss of one's feet

May the grace of God always be with you, and may you always be free from darkness.

The so-called Gunathon Goor Velval Vendanal

The one who is perfect

(Sh. 59)

This applies not only to the social institution of politics , but also to all types of institutions, such as factories , movements , and companies. When building organizational management ,

He thought that this would end this.

He who casts it out of his sight

(Kural .517)

the need for support and the method of providing support.

Citizens

Rice is not life, water is not life.

The world is blooming with the life of the king

(Puram. 186 : 1-2)

Says Purananuru. This is the same ,

Everyone who lives in the goal (4: 29.1)

The old Tamil socio-political principle that there are no people without a state , and without a state and politics without a people, is derived from this.

The fasting practices of the righteous are not possible in a country without a king. That king also does not exist in a place without citizens.

..... **Penance**

The king is not without a way, the king is not without a way.

He who dwells in this way

(Isa . 49:2-4)

The steps show that. Furthermore , it was praised that it was a great honor for the country to be praised as a ' good king ' .

The national anthem is good

(Nanman. 20:3)

Harmony between the king and the people must exist not only in the country where the king rules , but also in the country he has conquered. Therefore , it was advised that if the citizens were disturbed in the world he had conquered , the king's rule would also be disturbed.

About

The king of earthquakes will be angry

(Isa. 21:2-3)

The welfare of the citizens , the respect of the king in that city , and the king's pride in the country he ruled were two sides of the same coin.

Rule with

The king who conquered the land

(Psalm 86:2-3)

Therefore , the first among the supporters of the king is the common people, the citizens. In this way , it is understood that the happiness of the people and the success of the king are ensured by political ethics.

Getting advice

A social leadership that lacks the necessary advice and support to guide people in the right direction ,

The king of Emara, who had no enemies,

He who destroys will destroy

(Kural .448)

This means that a king without the help of Periyar , who rebukes and advises, will destroy even if there is no enemy to destroy him.

To this end , without consulting the ministers who were knowledgeable in the law , Mavali solemnly promised that he could do everything ; as a result, the world he ruled had to give up everything and lose it, as the proverb Nuunuru shows.

Oh, it's easy for me, says the Lord of the world.

He who knows no helper is drowned in a flood

(Proverbs 7:1-2)

Minister

The minister is the primary assistant to the king who leads and governs society. He formulates plans for the king , advises on political principles , and organizes public welfare programs. The Tirukkural systematically provides the characteristics , qualifications , and activities of the minister. Similarly , the following other books also contain information about the minister.

Ministerial duty

Doubt and self-realization

To prevent the inevitable - Vaikalum

The changing king's status-all three

Prime Ministerial Order

(Thiri.61)

that prime ministers must be able to overcome obstacles , protect the king from harm , and be able to understand the enemy's situation.

Valluvar asks, " What are the most sophisticated maneuvers that a minister , endowed with natural intelligence and artificial knowledge, can come up with ?"

The cleverness of the thread is the most sophisticated for the clothier.

Before the Lord

(Kural .636)

Along with these , it is also said that a person who possesses the five qualities of fearlessness , self-control , control of the senses , knowledge of the scriptures , and effort is a minister.

With a sharp eye, learning, and behavior

The ministry died with five

(Kural .632)

Ministerial Qualifications

as protecting the citizens , determination , unwavering knowledge in bookish knowledge , the ability to keep deceit and laziness from reaching him , being loyal to the king. Not being caught up in fragrance. Food , music , and female attraction.

Possession of infinite power - immeasurable

Smell, taste, and good breeding

Ministry of Disaster Relief

Similarly , he who closely examines and acts on the condition of his own condition, the condition of the action he initiates , and the condition of the enemy who opposes him , the state of affairs, the state of the world, the state of war, etc., is a king who measures and knows. He is the one who is capable of distinguishing all these, says Sirupanchamuala. In this, the good of the king and the great virtue of the great minister who knows are expressed together.

He spat on himself and his inferior profession.

The state of being normal and the state of being normal - Thuni

Any government minister who acts with discretion

The Almighty, the One Who Knows

(Small .58)

The Kural points out the minister's duties related to administration, saying, "Is there such a ministry with such a system of doing things and such a pride in doing things?"

The tool, the time, and the action will do.

The one who has lost his soul

(Kural. 631)

Spy

' spy' is an important assistant in the functioning of the state . Their main task is to investigate the conditions and thoughts of the internal country , neighboring countries , enemy countries, etc. and report them to the king. Ancient Tamil literature has recorded in detail the character , actions and qualifications of the spies. They can also be clearly seen in the following books.

, through a single spy, learns of what is happening on all sides and arranges his actions accordingly, is sweet .

He who has already understood the meaning of the word

) 3.35.1)

It says forty are sweet.

Spy duty

The Vendatha is not everywhere. Every day, one person can work on the wall , so all the events happening in all directions are reported to the Vendatha. The important duty of collecting is known.

Everyone knows what happens to everyone.

The profession of a master is knowledge

(Kural .582)

Loneliness

That the qualities of a spy are to do his deeds in the eyes of the enemy's country without others knowing , to be able to understand the idea and not forget it , and to have the strength to convey that idea clearly to the king ,

The genetic material that is being extracted
The sharpness of hearing and forgetting, without a hitch
The three senses of meaning and emotion
The trait of a spy

(Thir. 85)

That explains the Trikadukam.

The use of spies

the qualifications and actions of a spies are clearly outlined, so are the rules for how a king should use spies. The rules for how to verify the authenticity of the news brought by spies are also outlined below.

Three brothers who rule indifference

The word "Solthoka" is pronounced

(Kural .589)

In this , Valluvar says that if three people tell the same story , they should agree with each other without knowing each other . One should not rely on the story told by just one person and come to a conclusion. The idea is that there may be errors in that. Politics It is noteworthy that this process is still applicable in management today. Furthermore ,

Both of these are the same.

Thettrenka Mannavankan

(Kural 581)

Since the king has two eyes , it is said that he must know them clearly.

Specializing

, without taking their eyes off others , closely monitor the affairs of the country and report to the kings every day. The problems that arise from the excellent performance of spies should be given special attention to the spies and their activities should be concentrated. At the same time , it is a political tactic that the special attention given to one person should not be known to the other. It can be seen that this idea is very appropriate in today's social environment.

The famous one-eyed Seyyen

The secret that is removed

(Kural .590)

In this , if you do something special for someone , do it without letting others know. If you do it to others, then you have abandoned the object you came for, says Valluvar.

Duthu

to establish good relations between countries , strengthen relations , and avoid future problems. The Purananutru songs of the poet clearly explain the purpose of the ambassador, the qualities and actions of the ambassador. The nature , qualities , and actions of the ambassador are explained below .

The grammar of the messenger

Being excellent in morality , having studied many books, and having acquired knowledge , and having a splendid appearance , he is a formidable opponent to the enemy. The grammar of the messenger is defined by Eladhi, who, after studying eighteen fields of knowledge and traditional techniques, and studying the time period, will give the messengers world-renowned fame . **The wise man who has studied the world is the most cruel .**

The knowledge of the Lord is the power of speech - the power of speech.

To the ambassador, considering the passage of time

The fame of knowledge

(Elathi , 26)

In the context of the grammar of the chief messenger, the best of messengers.

**Knowing the debt, considering the time, knowing the place
The head of the number speaker**

(Kural

.687)

The verse says. In this , the chief messenger is the one who knows the system in which things stand , thinks about the time and place, and is able to think and speak on his own. The intelligence of the chief messenger, who understands what decision his king will make in this situation according to the place and the environment , and acts on that decision himself , is here described as a grammar for the chief messenger.

Similarly , a person who possesses all three, namely, natural intelligence , a pleasing appearance , and a knowledge that has been studied by many people and for a long time , is considered worthy of going on an embassy to other countries .

The third is the knowledge of the learned.

For the verb "salka"

(Kural .684)

The verse shows.

Warriors (m) Force

Another important support for effective government is the military and the army. The army is very important to protect the land , expand the land , resolve internal conflicts , and provide security to the people. In today's modern world, the strength of a country is considered by considering its military strength. It is noteworthy that the military plays an important role in determining the political character, including the number of soldiers and the management of the news. There are also many considerations regarding the military strength needed by the country.

The commander (commander) of the army is the one who controls the chariot-elephant-horse-foot. The next level is the army. The fighting skills of the soldiers. The soldiers are formed. The battlefield events of various armies are also admired and admired by the ancients. The king made special mention of those who acted effectively on the battlefield. In literature, actions , various army positions , battlefield events , fortifications , war tactics, etc. are shown.

The nature of the force

onslaught of a powerful enemy without being scattered.

They will gather and confront the superiors with their claims.

The force of the power

(Kural .765)

Similarly , it is said that these four qualities, namely forgetfulness , honor , right path , and clarity, are the defenses of the army.

The forgotten path cost theorem

I am the one who deceives the army

(Kural .766)

Furthermore , when referring to the actions of the army on the battlefield ,

it is said that the Tartan is the leader.

Knowing the nature of war

(Kural .767)

Valluvar says. That is , he says that the army is the one who knows how to repel the enemy's attack , and prevents the enemy from spreading its dust on him.

Only brave kings can raise and manage a good army. Kings were brave , trained in war , and had a passion for fighting. **Many of the kings before me were brave.**

The one who stands in the forefront

(Kural

.771)

The verse , "O enemy! Many who have shown valor before my lord stand like stones (a central stone is placed for dead warriors)." In this , the king's fighting prowess is shown.

Moreover , it is also said that it is unfortunate for a king without courage to go to the battlefield.

The sandals of the immortal king are inna (Inna .38.2)

The crime of force

It is recommended that an ideal army should be free from the following faults: lack of military intelligence , unquenchable anger , and poverty . It is advised that if these faults are absent , the army will be able to defeat the enemy in any way.

Smallness, helplessness, and poverty

Otherwise, the victorious army (Kural .769)

Army Commander - Commander-in-Chief

The commander-in-chief is the one who leads and directs the army. All the forces operate under his control. He is required to possess military skill , bravery , efficiency , and coordination skills.

' A military leader is the leader of a chess team consisting of elephants , horses , chariots , tools , and foot (M.Nool, p. 24) ' explains Padumanar.

even those who went as army leaders .

A commander is one who does not separate from his troops , but rather unites with them and accompanies them.

..... **Army**

The commander is full of concentration (Isa. 56:3-4).

The steps show that if an army does not have soldiers on the battlefield, that army will not stand firm on the battlefield, and Valluvar emphasizes the importance of the army leader and the importance of the leader. Even **if the soldiers are defeated, he will not stand firm on the battlefield.**

The chieftains are on the road (Kural .770)

Players

The strength of an army is not determined by numbers alone, but also by the strength , training , character , and tradition of the warriors . Thus , the following books show the character of the soldiers, their fighting skills, and their actions on the battlefield.

The forgotten king appears before him (Isa . 37:1)

In it , it is said that the soldiers have the joy of heroism in front of the king. This means that the army wants to perform well under its leadership and to show its heroism to the leader. The excellence of a king is determined by the strength of his army. Therefore , it was advised that the wealth of the king would be destroyed if there was no army.

..... **Without force**

The king's health will wither (Isa. 44:3-4)

Similarly , in the place where the nature of the king's army is mentioned , **the one who survived the destruction and did not suffer defeat is mentioned.**

The army of the vanga naduve (Kural 764)

Training

..... German Emperor

Rain falling like an army (4.20:3-4)

In it , the clouds march like a warring army. Thunder is depicted crashing.

Heroic death

records the death of Vendanai Purananuru (para. 65) from the north as the wound of the ambinaï that appeared on the back of Sangam, receiving a wound on the battlefield. It proudly mentions the death of a warrior on the following battlefields.

The sack of the water-loving Sakhirpa, Purandharkan

The verse "**The two planets are broken**" (verse 780) , remembering the gratitude shown to him , broke the merit of the two forests if he died in battle , so that his eyes filled with tears . It is also revealed that there was a custom of treating soldiers who had died bravely.

Showing off

Being wounded in battle and running away behind the enemy were considered despicable acts. The Sangam literature (Puram. 278) shows a heroic mother who , upon hearing a false report that her daughter had been wounded, rushed to the battlefield with a sword, saying , " I will cut off my breast, which my son had suckled. " This Sangam tradition of being humiliated by being wounded can be seen continuing in the political context of the Eighteenth Century. It is said that it is a misfortune for a person who has gone against the enemy to run away behind the enemy.

in the battle **is called (Inna. 8:3)**. Similarly , it is said that soldiers should not be lazy in the battlefield , and that the weak should not take the sword in their hands. It has been advised that the sword will bring suffering to itself, and that the heroic deeds of those who do not dare to overcome their enemies will bring suffering.

The memory of the forgotten is a memorial prayer (6:2).

The powerless are the forces that are in power (Inna. 7:1)

What is the falsehood of the bold archers?) 2.13:2)

Elephant army

Among the four types of armies that a king needs, the elephant army is the most special and prominent. The merits of the elephant army of ancient kings are recorded in various ways in ancient Tamil literature. It is said that the elephant army is the special and beautiful army of an army ,

The army is like an elephant to him (7:1)

Sirupanchamoolam mentions that.

on a battlefield where garlanded kings are fighting . It is said that it is pleasant to see elephants like black mountains fighting in a battlefield.

King Tarpunai repented of his sins.

The elephant's story is told to the carpenter) 3.8:2-3)

The elephant's army is beautiful before him) 2.4:1)

Similarly , it is said that it is pleasant to hear the sound of elephants, the blaring of the elephants , the eyes of the valiant king , the great mountain.

An elephant like a mountain in the palace of the king of the dead

Hearing religious chants is pleasant (2.15:3-4)

Cavalry

The cavalry is a fast-moving and combat-ready unit. Among the military units of the ancient Tamil kings Cavalry gains prominence. Sangam cavalry battlefield weddings 16/1 Sangam literary texts , the decoration of horses , and their activities are discussed. These messages can be seen continuing below.

The nature of the horse

When referring to the nature of the horse ,

..... **The withered eye and the great horse (1.162:3-4)**

The world will become different.

It is shown that. In this , it is recorded that the horse, even if it is withered , will stand upright as soon as it is equipped with armor. It is known that due to this special characteristic of horses, they were used more specially on the battlefield.

Similarly , it is recorded that it is very pleasant for a warrior to ride a horse that is fit for battle and strong.

The city's Kalima is now in front of the city's urinal.

Fortresses

in political activities and in protecting the country. The forts found in ancient Tamil are classified as water forts , kattarans, and mountain forts. The Tolkappiyam says that a fort with all types of protective features is the ' complete fort ' (Tol. Purat. 10) . In war events , battles involving forts gain importance. Purattinai grammar classifies these events in various ways such as siege of a fort , defense of a fort , and destruction of a fort. The songs of Sangam literature tell stories about forts. The Silappadhikaram explains the fort and its protective features very clearly. In this way , stories about protective forts are found in various ways in the following books.

The nature of the fort

all kinds of things , a large space , and guards.!

You broke everything and left it there.

The one with the beautiful face

(Kural: 746)

The same idea ,

The grain is abundant and belongs to many.

True companionship is sweet.

The forty verses describe the nature of the fort. In this , it is shown as a good fort, having a wide variety of food items , accommodating many people , and being well-equipped with a bodyguard.

Furthermore , a fortress is one that is capable of being captured by the enemy under any circumstances.

It will be completely and utterly shocking.

The Lord's Prayer

(Kural 247)

The verse shows that: In this , a fortress is one that is capable of being captured by any means, whether by laying siege to it , fighting outside the fortress , or taking those within the fortress captive.

The fortress is a symbol of the greatness of war, so that the enemy can flee on the battlefield .

End face changer dye face

The verse "**Veereyethi Manda Tharan**" (0.749) shows this.

The organs of the king ,

The Pattimai Sangha and many others

No matter what, no

The three elements of a number are the same.

Earthworm (K) organ

The Trikadukam lists that. In this, the army, the fortress , and the great wealth, these three things are given to the Vendhar. They are pointed out as elements. A fortress that can protect without fear even if a large army comes is prayed for here .

The fortress of the country does not only refer to the fort of King Gomopitham. The Sirupanchamula also mentions other elements as fortresses. The Trikadugama says that a person who has these five as his fortresses - the moat that stretches around the city , the forest and muddy land border , the mountain that rises and touches the sky , and the people including the people - is considered a king.

The long-water forest is full of color and flourishes.

Including the Mandama mountain people - Mandama

The five elephants, who were all dressed in armor,

Vendhana Natal Vidhi (9) Also ,

What is the protection of the mouth of a man without a prison?

It is very difficult to be free from delusion.

What is a wall without a wall?

These verses advise that it is a hardship to guard the gate of an old town without walls ; it is a great hardship to live in an old town without guards ; and it is a hardship to live in an old town without a surrounding wall.

At the same time , even if all the said majesty is broken , the eye of action is not without majesty.

The eye of the goddess of peace

Vinamakshi illarkan illar dharan (Quran. 750) This ,

fourth watch says that if the strength is low, the enmity will spread widely.

Political strategy

Political management is a discipline that is applied in different contexts. The following books discuss the strategies to be adopted at various stages of political strategy development .

Knowing time

To overcome an enemy, timing and patience are required.

If you see a deer, you will die.

In the poem "**Kanin Kiyishakam Thalai**" (**Kural: 488**) , one should bear with the enemy when he sees him. Valluvar says that when the time comes for that enemy to die, his head will fall down. This is the same idea that one should conquer the enemy when the right time comes.

Time knows the difference (Psalm 89:2)

That's what the clock also emphasizes.

Context (a) Location

Like knowing the time, knowing the risk is also one of the strategies for success.

Prisoners are healthy and well-adjusted, but they are not.

It is rare to be close to the ground **(Kural .499)**

regard , even if one does not have the advantage of a fortress and other advantages , it is a rare act to go to the place where the enemy lives and attack him, says Valluvar. Just as a crocodile is strong in water, he is as strong as an enemy on land. Therefore , the idea is that inviting the enemy to one's country and fighting in a public place will increase the chances of victory.

The crocodile that wins the battle

If you leave, then leave it

(Kural .495)

Don't hate everyone.

a strong army and excellent defenses , all the surrounding countries We should not hate all countries together. It will lead to danger. This ,

Even the poor are like a poor man.

The enemy of Pallava

(Kural . 873)

The verse says. The one who is more ignorant than a fool , who is alone and is at enmity with many, says this verse. Therefore , a political strategy is required that does not become enmity with many and keeps the neighboring country at peace with itself.

Therefore , it is better to sever enmity with kings who do not understand one, even if it means giving them money. This ,

The one who cannot walk without a guide

The object of the object is the object itself - the object of the object.

Who will stand tall ? Velkudin

The sting of a nail hurts

(Proverbs 32)

The proverb explains that. In this , who is not seduced by the material ? No one ; It is special to explain political tactics by comparing it with the proverb, ' The stab of a nail in the foot is stronger than the stab of a sword or other weapon. '

The same idea ,

..... **Whatever**

The camel is tied to the front of the camel

(Ex. 17:2)

The song suggests that it is very sweet to befriend someone who is not your friend under any circumstances.

The above eighteen examples clearly show the political and social situation of Tamil Nadu during the period of the Sangam's demise . They emphasize the qualities and characteristics necessary for political leadership. They also highlight the qualities of leadership and the wrong political attitudes . They also point out and condemn the evils and emphasize the good relationship that should exist between social leadership and citizens.

also serves as a support for social leadership. It describes the minister , the spy , the army commander , the soldier , and their characteristics , skills , and specialties. It explains various factors such as elephants , horses, and various other armies , defense forts , and their nature , function , grammar , and qualifications. It is special that these are suitable for today's political science and are pioneering.

Legal approaches

The legal system is the support for political activities and regulation. The opinions of the wise , moral principles , social values, etc., eventually took the form of political laws. Virtues were first advised and then emphasized , and crimes and punishments were defined as laws.

Initially , violating social moral principles was considered a social crime and such people were socially ostracized. Furthermore , violating morality was also presented as a sin against God. After the crime and punishment were defined, punishment was given according to the political system. Sangam literature and subsequent literature have various views on crime and punishment and the news related to them.

The concept of "God is the one who says 'I am the one who does evil' to people who do evil , and " **I am the one who says 'I am the one who does evil' to those who do evil"** (Nanmani , 85:3)

The record shows.

Crime and Punishment

his subjects from being harmed by others and himself , and to eradicate their crimes with appropriate punishment . That is not a sin.

Criminal record of a domestic violence case

The business of the Vendhan on the scar

Similarly , it was emphasized that the king is the one who punishes according to the crime, so that someone who harms the poor , examines it and does not do it again , should be punished accordingly .

With the color of the heart, the head is not covered.

the government punishing some criminals with the death penalty is like weeding out weeds to protect the crop. That is , giving punishment according to the crime is not a sinful act ; it is a political practice.

The murder of Kodyar is a crime.

Straight from the weed

(Kural .550)

Moreover , the kings gained fame and maintained their fame through their justice and actions. The king's failure to act justly was considered a grave crime. **The king's right to rule was absolute .**

Light to the king, Mannavaam (Kural .556)

The verse shows that the king's fame is established through justice; if that justice is not there, that fame will not be established for him .

Neutrality in the administration of justice

The king, who was in a position to administer justice, was highly desired for a middle position. If a subordinate committed a crime, he would seek out that crime , show no mercy to anyone , and investigate the middle position with all the people and do so in a fair manner. It was systematically emphasized that justice would be achieved only **if no one would be a god without looking at one eye.**

The method of selection

(Kural .541)

Likewise ,

..... for the walk

The Koda language is the same as the forest language

(Small- 2-3)

In it , the word Vanappu is an unfailing symbol of morality and the king who rules with a scepter: the unfailing valor of a warrior is shown as Vanappu. Furthermore , it is said that a king who engages in the profession of wandering and acts unjustly is considered to be more cruel than one who engages in the profession of murder .

**The flag of the murderer is waving.
The one who does not do the right thing**

) 3.551)

It can be known that.

the king who does not err in virtue and does not violate the rules of justice will be protected by that system of justice. This ,

All the divine protection is upon him.

The chain of fools who keep order

(Kural. 547)

It can be seen in. In this , it is said that the king will save the whole world , and if he rules without corrupting the system of justice, the system itself will save the king.

Furthermore , it was pointed out that if he were to provide information without being impartial, that very crime would punish him. This ,

The king, who is eighty-one, is a regular

The only thing that will harm you is your own greed

) 548)

The Kural says. In this , it is advised that a king who is simple-minded and does not indulge in idleness, eats in a lowly position , without having enemies. He himself is the destroyer.

This is the same as the clock.

..... method

The divine kind will cease

) 39:3-4)

It's sesame.

A person , regardless of his surroundings, acts with moderation, regardless of age , social experience , and education, which make them worthy of being judged by the wise men of that time, and the youth of that time, who were able to do justice, became old and became an obstacle to the administration of justice."

The end of the speech is that the young man

Gray-mouthed people are turning gray.

The Chola man is a man of words

(Proverbs 21:1-3)

In this , the news is told that Chola Karikavalavan, with his gray hair like an old man, gave a correct judgment, much to the surprise and delight of the gray-haired elders who said , ' This man is a child , not old enough to examine the case and give a proper judgment. Therefore, it is also understood that knowledge that has been passed down from generation to generation can reach a person at a young age.

Prison Road

The existence of prisons in ancient times is recorded in ancient Tamil literature. Manimekalai talks about prisons in great detail. Furthermore , Manimekalai emphasizes that prisons should not be places of punishment but rather places of teaching virtue . In order to emphasize the cruelty of prisons , it is described as Alaikkalam (19 , 12:2)

Elathi mentions that. Similarly, it was said that ' it is good not to look at the prison that hurts others ' .

Punishment for crime should be aimed at reformation. It should not be aimed only at punishment. Therefore , even though there are strict laws, they should be handled gently so that criminals reform .

Throw the paper slowly, it will hit you hard.

The power that desires non-extinction

(Kural. 562)

The wise men advised.

Punishments were given according to the crime, with minor punishments for crimes such as theft. They were also given punishments such as tying up. It is known that punishment was also in the case.

..... **Flood**

The body of the iron-bound

) 10:2-3)

In it , the punishment for lowly people who commit crimes was to be bound by animals, while in the other , it is said that those who are bound and punished will not be freed from their criminal acts by taking away their good deeds .

Even if you explain it with affection, it will still be inferior.

It will show impurity

). 100:3-4)

Here , it is worth recalling the proverb that theft cannot be eradicated unless thieves are seen as thieves and punished.

The basic cause of crime is ignorance of social morals. Therefore , if a fool who is ignorant of morals undertakes an action , that action will not be completed and will be wrong. Moreover, it is said that he will become a criminal and will be hunted down (by animals).

A lie or a fabrication is a lie.

Killed on the basis of stupidity

) 5.836)

Women and social justice

Sangam literature is full of stories about the cruelty inflicted on women and the punishments meted out for it. The Akananuru (para. 26) records a story of a man being punished by being tied to a tree and having lime juice poured on his head for the crime of cheating on a woman by falling in love with her and not marrying her.

The following songs illustrate how women filed lawsuits, pleaded for justice, and received justice.

..... **Female**

The next year, they will be at war.

.....

The eye is rare to see

). 71:1-4)

The song says that women filing lawsuits and going to court is not worth watching. The reason is the social message that crimes against women should be eliminated.

The evidence of the eighteen listed above found in this region clearly indicates that the constitutional and social texts necessary for eliminating and regulating social crimes existed in ancient Tamil Nadu.

Similarly , they also state that there were different types of punishment , from minor punishment to death penalty, depending on the nature of the crime . They also show the legal protection that women had in society and the social instruction that they should not go to the religious courts to seek justice.

Ancient Tamil governance

Appearance

The Origin of Ancient Tamil Rulership The Tamil lands of the senior citizens were ruled by the three chieftains. In Tamil, the words Ko and Kon mean king. The king held a scepter in his hand as a symbol of his guard duty. Researchers say that the kingship may have emerged from the Mullai land by holding a scepter in his hand. A strong chieftain would have led his people to capture the cattle of another group . Due to the war that ensued, both the tribes would have chosen their own leaders. It is said that the one who won the war became the leader of the group , the ' Kon ' .

Similarly , hunters in the mountainous regions known as Kurinji would have chosen a leader for themselves in the same way. As a symbol of this, the Chera chieftain may have had the bow as their symbol. Thus, the ancient Tamils, who lived in small groups , developed a system of government from the group leadership they created for their own protection.

The land covered by hills and mountains was ruled by many small kingdoms. The Chera , Chola and Pandyas were notable emperors. They ruled with justice and morality.

The bridge is coming soon.

The great Thanaiyar also has a flower

(Tol. Pur. 63)

The Cheras can be considered ancient by presenting the symbolic flower of the Tolkappiyar Chera. There are references to Moovendhar and Adhiyaman in the Ashoka inscription. The Chera country is the area between the western sea and the Meda mountain range. The Chola country spread from North Pennai to Kanyakumari. The Tepel literature mentions 332 kings belonging to the Tipper Kuruti kings about Ur. Saif. The songs composed by 31 of these kings adorn the Sangam Ilathyas. The system of kingship came through succession. It was a tradition for the eldest son to assume the royal responsibility after his father.

The royal palace was called ' Maaaru Muthal Kattil ' . The life span of the kings was considered the reign period. The people celebrated the coronation of the king every year. This was called ' Mannu Mangalam ' . Birthday celebrations were celebrated as Naal Mangalam.

Leadership qualities

good birth, education , morality , honesty , purity , purity of the heart , selflessness , and a sense of fear for the suffering of the people to be the treasures of a king.

to forgive the mistakes of their people , to be ashamed of the poverty caused to others , to be free from cruelty that was not slandered by others , and to conduct the royal court in a manner that improved the situation. They respected poets, cultivated the

arts , and effectively organized administration to elevate their subjects, while steadfastly defending their country and people from the enemy and fighting for their independence.

Kings excelled in the sense of honor. Perunjerala, who was defeated by Karikala, escaped from the north by the northern sword (Puram. 65). When Kanaikal Irumporai was placed in the temple by Senganan , he died without wanting to eat the fire offered by the enemy (Puram. 74).

Royal symbols

The shield , the flag , the shield , the umbrella. The shield , the chariot , the garland were considered as the symbols of the kingdom. The brave kings had four types of armies: fierce , long-striped shields , swift shields , powerful chariots , and fearless and brave warriors . These armies protected the king and the people. The kings discussed the political situation in the court. The court consisted of the best ministers and advisory committees. This court met in the morning. Therefore, it was also called ' Nalavai ' . This court of the king was called Nalavai , the court , the hunting court , and the Naalmahikirikkai. The Silappadhikaram also says that this is ' Perunal Irukkai ' .

They are also personalities.

Poets , scholars and officials were present with the king in the court. The king also resided in the court with his wife. The ministers were given the title ' Enadhi ' and were distinguished. Officers , military leaders and merchants were given titles called ' Marayam ' . The Tolkappiyam says that ' **Marayam is a long language** ' (Tol. Poora. 65) .

The Silappadhikaram talks about the five-fold group of numbers.

The Five Great Groups and the Eight Kingdoms

The royal prince and the Bharata prince

The Covered Lords are the joyous ones (Fig. 1:5:157)

This committee **regulated** the king's power and rights and paved the way for better governance.

They were also known for their insatiable curiosity. Many spies who did not know each other worked for the king.

Town Council - Electoral System - Revenue

Ambalam , Avaya , Pothiyil , Mandram were the councils in the villages. The members of the village councils were elected by the Kudavolai system. This Kudavolai was called ' Kuzhi Olai ' . Maruthan Ilanaganar mentions that the Kudavolai system elections were held in the presence of officials called ' Avan Makkal'.

The rope is tied to the tree (Agam. 77:8)

These organizations took on the task of resolving people's cases and general administrative responsibilities. These led to the creation of excellent Panchayat councils. Ur also meant Chittur and Perur. The coastal city was Pattinam. Its area was called Pakkam.

Furthermore , there were regional divisions at that time. Below the regions were the divisions of ' country ' and ' state ' .

Land revenue , trade , goods captured in war , goods paid by enemies , and trade taxes were the main sources of revenue for the government. Goods paid by enemies were called 'tiri'. Goods brought during war were called ' kondi ' . Land tax was the most important tax. The people and petty kings paid taxes. There were separate officials to collect customs duties from traders.

Justice

Generally , the kings were the arbitrators of cases. There is a lot of evidence that the kings ruled without justice. Manu Neethi Chola , Porkai Pandiyan , and the Pandiyan Nedunchezhiyan, who fell from the throne and sacrificed his life after realizing that justice had been given to Kovalan . Literature shows the righteous kings who established that justice is better than life. The forum for dispensing justice was called ' Aranguru Avaiyam ' .

that anger and harshness are qualities that judges should avoid , and that it is their duty to remove fear and misery from the minds of the people. It is explained that their job is to weigh the evidence of both sides and administer justice without favoritism. They believed that the purpose of imposing severe punishment was to reduce crime.

Police

In the rainy night and in the flooded streets, the night guards kept watch without fear or fatigue. There were village guards who had learned the art of theft. They were known to have sleepless eyes , were as powerful as a tiger that follows and attacks prey , and were fearless. The forests were protected by warriors armed with bows and arrows. They were helpful to merchants and passersby passing through the forests. The guards guarded the shops in the city , the streets full of merchants , and the water bodies . The kings who had the sea as their fortress formed a navy and guarded it well. Generally, the chiefs and the small Kings were also known to be charitable. Charity was emphasized as a duty of kings.

Among the Chera kings, Mayaram Neduncheralathan conquered the Himalayas and established his kingdom. During his time, the Chola dynasty, which was praised by the Sangams, extended from Vadampannai to Kanyakumari. He was famous for his plowing fields that reached the pond. Pariyavan. Since he built a large dam across the Kaveri River in ancient times to maintain plowing, he was called Karikalan Peruvalathan. Karikalan was one of the Tamil kings who went as far as the Himalayas and conquered the Himalayas. The references in Valmiki Ramayana , Vyasa Bharata , Ashoka Inscriptions , and Mahavamsa speak of the glory of the Pandyas. Despite having four armies , wealth , and great strength , morality was emphasized as the first pillar of the state (Puram. 55) . The subjects under the rule of such a great king considered that king to be their own.

Rice is not life, water is not life.

The world is adorned with flowers by the life of the king

(Puram. 186:1-2)

Ancient Tamil War

With the sword, when the stone is not found, the earth is found.

The earliest known ancient city

(BCE)

The kings who fought with honor and valor praised the virtues of war and rejoiced. Even though they were forgetful, they praised virtue. The kings fought to protect their country from enemies , to protect their honor , to break the slanderous words spoken about them , and to protect their people , and they established their valor.

War virtue

**And the Brahmin monks
Take care of women and the sick.
Graciously tighten the living
The golden-haired son of Athirum
The arrow will pierce the fortress**

) 4.9:1-5)

They declared war only after the enemy had announced their invasion, spreading rumors in the enemy's country before invading.

the outcasts , the poor , or those who had lost their weapons. They avoided weapons and stood guard over their subjects. If kings died in battle, it was a tradition of the Tamil people to admit defeat and stop fighting , and to avoid fighting at night. They took. When the one who was afraid and hid was besieged, he did not come out and remained inside for a long time, causing the people to suffer. The wise men and poets considered it an unethical act. They sowed morality even in the war that would bring about oblivion. **The king's military excellence**

Kings and soldiers were deeply involved in war, with a strong sense of heroism that without war, the soldiers' morale would wither , and without an army, the king's morale would wither.

Among the essential symbols of kings were the army , the sword , the elephant, **and the horse, all of which were appropriate for war.**

The army, the flag, the umbrella, and the shield

The chariot of the Lord of the Steppe

The one who can do it, the

The scepter of choice belongs to the king (Ancient Greek: 71).

Kings were known for their noble forgetfulness. Many epic poems praise the forgetfulness of warriors, saying that the soldiers, who considered every day they did not suffer a wound as a wasted day , rejoiced and cheered when they heard of war .

Women's heroism

There is no evidence in Sangam literature that women entered the battlefield and fought. However, they were not afraid of losing their lives, and without any fear , they incited their children , husbands, and siblings to fight , defending their land and honor.

" It is a debt to the bull to break the chains " (Puram. 312:6) says the mother instills courage in her son. The wife, wishing that her husband would return victorious from the war, stood and worshipped the central stone.

after losing her husband and siblings in the war , sent her only son to seek refuge in the war and say , " Go to the front " (p. 279) . The mother was more happy to see her son lying dead on the battlefield with a stab wound to the chest than when she had given birth to him.

The body of the fallen king is found.

O wise and wise one, you have become great) 278)

The king and his brave warriors, hearing the battle cry, entered the battlefield, saying, "We will be victorious. Otherwise, we will fall down and die."

This is the life of this and that.

The deceit of the tongue of the wicked (Tol. Pur. 19)

Defenses

The fortress provides wealth , establishes stability , makes people live , creates , removes fear , and protects them with warmth. The forts were located as high as the

sky. The deep moats built around them were large enough to be crossed by boats. The place where the soldiers stood and fought was called ' Gnayil ' , and the place where the soldiers stood and shot arrows was called ' Eppuzha ' . The wall was a place of defense. The gates of the walls were covered with large trees. The pine tree was called ' Eghu ' . When they knew that the enemy was invading , they would immediately close the doors of the wall and raise the alarm.

Weapons of war

The sword , spear , and arrow were the best offensive weapons. The sword was used to attack those who were close, and the spear and arrow were used to attack those who were far away. Pattana. The soldiers forged their own swords and weapons. This was called ' Pakaizhi Maithal ' . The sword was praised as ' Valambadu Val ' . The Pugamaravars were also praised as ' Valer Uzhavaar ' (Puram. 368:13) and the Vajnaras of the sword (Puram. 24:29) .

, stained with blood from attacking the enemy . During times of peace, the zepelins were beautifully dressed , garlanded, and greased, and kept in guarded palaces.

Wearing this same veil and garland

The eyes are repaired with gauze ,

The one who is bitten by the thorn ; that's it.

The enemy's spear and spear were broken.

The sword of the sword

(Ps. 95:1-5)

' shield ' was designed as a defensive tool . It was called a shield , a plank , or a skin. The shield was made of strong leather and iron. Nails and spikes were hammered into it. There was an armor called ' Meimarai ' that covered the entire body of the warriors . This armor was made of small pieces of iron called ' Pori ' joined together. There was also armor that covered from the elbow to the hand.

The warriors wore armour on their legs. The arrows were placed in a tiger skin sheath. The quiver that held the arrows on the back of the warriors' skin was called an ' arrow quiver ' .

War traditions and strategies

To capture a stronghold is called vetchi ; to recover it is called karanthai ; to invade a country is called vanchi ; to oppose it is called kanchi ; to bend a wall is called uzhinai ; to protect it is called nochi ; to stand face to face and fight on the field is called tumbai ; to win is called vagai in Sangam literature and Tolkappiyam and the external object is called venpamalai. Wars are classified on the basis of action. The separate camps where soldiers were trained were called ' Rankalari ' . The ancient Tamil people fought with the characteristics of hiding , defending , surprising , sneaking , giving negative messages. Handling the system , hiding , and making it an instrument were known to the people of the ancient Tamils. Taking care of the elders and supporting them , seeking the good without joining the younger generation , analyzing the merits of actions and gaining merit , calculating the pain of action - one's own pain - the pain of one's stepfather - the pain of one's and stepfather's partners , knowing time and place , not hating everyone around at the same time , making the enemy's enemy a friend even if it is necessary , and gaining skill through action were classified as techniques of war.

Barracks

During the times of war, the kings stayed in the barracks. The barracks were like big towns. The barracks were situated on a high place surrounded by good security. The guard post here is called ' Barval ' .

The poet's gaze is fixed on the seat of the poet (Ex. 8:20).

There , women carrying swords lit the torches that turned the night into day. Guards with sickly yaks roamed around. There were those who were strong , those who had sharp eyesight , and those who could not speak (mute). The king, who was in the camp, saw the wounded soldiers at night and consoled them. Planning for the next day's battle was also held here.

Before going to war, kings would point their umbrellas and swords in the right direction. This was called ' Kudai Naal Kol ' and ' Svaal Naal Kol ' . It was a tradition to take a middle stone for someone who had died in battle and write his name on it. Before the war started, the king would send his messengers to gather the soldiers. If the hope of winning the battle diminished, the soldiers would throw down their weapons. There was also a tradition of sounding the peace bell while the war was going on. If the two armies had made peace, they would announce it by beating the trumpets. The flag was raised as a sign of victory. The victory was announced to the general public by sounding the trumpets.

Historical victories

Cheran Imayavaramban defeated the pirates in the Arabian Sea from Neduncheralathan Kadambar and the Arabian Sea from Goa Island to Kadambath Island , and that he conquered the Aryans by going as far as the Himalayas. Literature shows that Karikalan won victories in the Battle of Venni , the Battle of Vaigai , the invasion of the North , and the invasion of Sri Lanka , and that Cheruven, the Pandyan of Thalayalanganathu, won the Battle of Thalayalanganathu.

Kings who defeated their enemies were praised with garlands of glory. Kings honored the warriors who achieved victory by giving them gold , property , land , and royal rights. Chariots , elephants , gold coins , and gold ornaments were given to the poets who encouraged them in battle . The king , to encourage the warriors , would host a feast and sit with them to eat. This was called the ' Perunjottu Nila ' .

He will bring peace to the three warring chieftains , the kings of small lands , and the descendants of one clan. Poets joined in the effort. Before going to war, soldiers would shout slogans to the gods to win the war. Vendan , who fought furiously, would sing slogans to the gods after winning the war, reveling in the joy of victory.

The only thing that is not known is that love is the only virtue.

The same is true for forgetfulness (Kural. 76)

Valluvar says.

its fierce fighting spirit , swift horses , long flag-bearing chariots , and warriors with a heroic spirit and a desire for war , the ancient Tamil epics state that the king's constant victory was primarily due to his majestic morals.

Technology

For the prosperity and development of a country, it is essential for that country to possess technological knowledge and to adopt technological strategies in various sectors. It is rare for any organization, sector or country to become self-sufficient and

develop without using technological elements. Today, it is seen that the strength of the developed countries has made technology the mainstay of their development, and it is also seen that developing countries are also following the same path and are striving to develop their own.

It can be seen that technological power is the yardstick that determines the civilizational development of a country. In this context, Tamil literature is no exception. On this basis, this section aims to reveal the technological elements created and used by them through Tamil literature. Thus, this section of technology includes agricultural technology, weaving technology, construction technology, metal technology, mechanical technology, leather technology, shipbuilding technology, medical technology, and other technologies. It consists of major categories and many subdivisions within them . The previous sections, namely, Multidisciplinary Knowledge and Industrial Development, explained the various fields and various industries known to the ancient Tamils. This section analyzes and explains the technologies used in such industries and their derivatives.

that technological power is the yardstick that determines the civilizational development of a country. In this context, ancient Tamil literature is no exception . On this basis, this section aims to reveal the technological elements created and used by them through ancient Tamil literature. In this way, this section of technology consists of major categories such as agricultural technology, weaving technology, construction technology, metal technology, mechanical technology, leather technology, shipbuilding technology, medical technology and other technologies, and many subcategories within them . Furthermore, the previous sections, namely, Multi-disciplinary Knowledge and Industrial Development, explained the various disciplines and industries known to the ancient Tamils. This section analyzes and explains the technologies used in such industries and their derivatives .

Among the industries that are carried out based on the country's natural resources, agriculture is the most important. It is indispensable for alleviating social poverty and for satisfying the people's basic needs of food and clothing, which are the most important, and for eliminating hunger.

aware that agriculture is the basis of everything else. The basis of this type of agriculture is rainwater. The agricultural technological foresight of the ancient Tamils can be seen in various aspects such as creating reservoirs to store this rainwater , using the stored water systematically and leading to water management, using fallow lands, cultivating various crops in a rotational system, using the method of row cropping, and using various tools in agricultural activities starting from plowing the land to harvesting .

for a country's prosperity, for a good government , and for soldiers to achieve victory on the battlefield is the fruit of the ploughed paddy . Therefore , the Palan Tamils made the kings realize that it is the duty of a good state to protect the life of the one who guards the lake (page 35), and this is what Valluvar

The world behind the spinning air is therefore

The sound of ploughing

(Kural .1031)

He says .

the indispensability of this type of leadership and, taking advantage of this realization , they used many technologies in that industry and paved the way for the increase in agricultural production . They used many sowing tools and machines to cultivate wastelands , to plow the land deeply , to remove weeds , and to thresh grains .

A. Ploughing technology

First, they plow the land deeply and thoroughly several times , turning the soil over and under . After plowing , they do not immediately plant the crop , but leave the land to fallow (fallowing); so that the soil will turn into manure at that time . This ,

Touch the dust and the dust will fall.

Unwanted

(Kural.1037)

It can be seen from this . He says that the land that has been plowed should not be fertilized . That is , if the soil is plowed so that it becomes one-fourth of the soil , that soil itself becomes good fertilizer for the crop . This is the natural science of agriculture.

..... **Transformation**

The plow is too strong for the blade.

Bending like dust

(Agam.26 :23-25)

The words also refer to . That is , by plowing the fertile land many times , the land becomes soft and suitable for farming . Similarly , the land is plowed many times so that it becomes soft and suitable for farming .

The earth is full of wonders

(Ps . 120:2-3)

The phrase also refers to the fact that even if the land is wet , the soil is broken up by plowing it vigorously . The technique of cultivating such land without adding fertilizer is called ' **Bhumimayangapala Uzhuthu** ' . Similarly , in the phrase ' **Like a land that is**

used for many times ' (Ainguru.14) , the technique of improving the quality of the soil by plowing it repeatedly can be understood .

completely destroy weeds . Summer ploughing is an excellent method of tillage . When ploughing is done on such fertile land, these plants are removed . The Sangam literature itself shows us the news of ploughing in summer as evidence ' (Indian Science and Technology , p.34) say today's agricultural scholars .

B. Yield enhancement technique

in the crop enhancement program . They sow the season's crop in the plowed and dry land , and apply the necessary fertilizer . The fertilizer helps the crop grow well , and they remove weeds so that the nutrients of the fertilizer are not absorbed by the weeds that grow along with the crop . They irrigate the crop with the necessary water and prevent it from drying out . In addition to all these routine activities , it is essential to protect the harvested crops . This is done by

After the good rain,

Its protection is better than water (
Kural.1038)

Valluvar says .

Mixed and rotational farming

Mixed farming and rotational farming are being advocated today for the maintenance of soil fertility and the increase in agricultural productivity . It is understood that the ancient Tamils were familiar with the use of both of these . Generally, it is better to cultivate a single crop with an intercrop than to cultivate only one crop . Literature shows that this type of intercropping was in use at that time (Indian Science and Technology , p.34). They sowed white mustard and horse gram as intercrops in the upland crop of the hard field . Similarly , they cultivated paddy in the soft field as rotational farming by ploughing and sowing after the harvest of paddy . After the bamboo and rice have grown and reached the harvest stage , they will dig and regulate the timing of the white mustard plants that have been sown in the land without plowing .

Those who are burdened with sorrow

The unwavering support

In the Aiyavimananaravenkartseruvil (Malaipadu.121-123)

The lyrics show that after harvesting the ears of corn, they sow him in the field where there is only a single stalk . He is covered with a sheet of corn and ripens . This ,

Small millet-harvested yam

The parrot will bite him who has eaten (
Ainguru.286 :1-2)

The words "□□□□□□□□" are explained . Similarly ,
in rotation , followed by ploughing , and the use of a stick to separate the paddy grains by beating them .

The foot of the anna, the red foot of the ulunth

The back of the head is covered with a cloth (**Qur'an**
68:1-2)

Also .

The thorny, thorny , and thorny tree (**Kuru .384:1)**

Literature also mentions it . Furthermore , since ' **the hairy leaves are ploughed in the winter season** ' (Nar.899 :5) , it is known that the forest matures in the winter season before ploughing . Through this , the agricultural technique of cultivating seasonal crops in rotation is obtained .

E. Agricultural implements

) i) Ploughing implements

of the agricultural implements was called ' Kalappai ' . This is the tool used by the farmer to cultivate the land . It is explained by Abhidhana Chintamani (p . 365) as a tool for mixing the solid soil in the land . The ancient Tamils had learned to make and use this type of tool. In ancient Tamil literature , this tool is called ' **Eer** ' and ' **Nanjil** ' (Agam.26 :23) . Similarly , the part of the plough, ' Kozhu ' (Agam.26 :24), is found in literature .

) ii) Tumor removal tool

times before the moisture from the rains that fell during the dry season dried up . While ploughing , they would use a tool called ' **thalambu** ' to break up the clods of the land . This ,

The bed is thick with moss.

Palanavalai (**Puram.61 :3-4)**

From the reference to the swordfish being cut into pieces , it is clear that the ' **plate** ' is an agricultural tool made of iron in the form of plates .

) iii) Weeding tools

They cultivated the land by ploughing it , using a multi-pronged plough to harrow the sown crops and remove weeds . This ,

Earthly magic, the most powerful force

Lizard-like, multi-branched, and scaly.

The sound of the sedges and the sedges

(Ps . 120:2-

3)

The footsteps are ringing .

D. Water Management

' **The world is not made of water** ' (Kural .20) says Valluvar . The economic wealth of the country lies in the proper conservation and use of this type of water , which is harmful in excess or in deficiency . ' 97.5 percent of the world's water resources are seawater . Only the remaining 2.5 percent is fresh water . Although 1.9 percent of the surface water is widespread in the world , the water in the glaciers is not useful to us (Punjab , March 2005, p.94) . It is worth noting that groundwater, which constitutes 0.6 percent of the total water resources , has become very important in human life .

When referring to water management , he said, ' We do not have the habit of managing water resources , so water resources are being wasted . On the one hand, the country faces drought and on the other hand, floods every year . The Central Government has to allocate a large amount of the country's total revenue for drought and flood relief works . This is also one of the reasons for the economic backwardness of our country . We use only 1880 cubic kilometers of water in our country . The remaining 1190 cubic kilometers of water is wasted and enters the sea because no projects are taken up to utilize it . It is worth mentioning here that in the current situation, it is very important to use water resources without wasting them (Plan , December 2005, p.27) .

) i) Emphasizing the needs of water bodies

that soil along with water is essential for the stability of this world . Just as food is essential for living beings , they realized that water is an important source for the prosperity of this land . This ,

You are everything to me today.

Those who feed, those who give life.

The mouthful of food

Food is earth and water (Ex . 18:18-21)

The verses declare that He who unites this special water and the land by creating water bodies here and there , will be honored as the creator of body and life in this world .

The water and the moon are the same.

O God, who created the body and life (Ex . 18:22,23)

The footsteps are ringing .

E (ii) Waterproofing / Rainwater harvesting

(1,150 mm per year) is the second country in the world in terms of rainfall after Brazil . Of the approximately 4,000 cubic meters of rainfall , we use only 690 cubic meters . The rest of the water flows into the sea without any storage (Plan , March 2005, p . 94) , says a study on rainwater . If the water is stopped and used properly , the demand for water will also be met . Therefore , other needs besides food will be met . It is clear that industries will also flourish .

The ancient Tamils , realizing the need for this type of water , stored it in various forms and used it for various needs . It is not good if the forest stream overflows the banks and merges with the sea . Realizing this , the ancient Tamils constructed water reservoirs between the streams to stop the flowing rainwater and implemented the rainwater storage scheme . The ancient Tamils' foresight is shown in their Avartha texts.

They dammed the overflowing flood with sand and straw (vv . 17, 18). It is true that any plan will not be of any use without the cooperation of the people . In this way , the people came together and worked together to save rainwater . During the rainy season , they beat drums , gathered the people together , and stored the water (vv . 22- 28). When the rising flood was dammed with straw and sand , a sound like the sound of war arose (vv . 30:19).

the farmers stopped the flood by raising the trees was called ' Penangokopusal ' . In this way , the reservoirs were created in the middle of the overflowing river , and the sight was described as if the eyes of the river were opened to see (Gali.33 :2). In this way , the vision of the ancient Tamils to conserve water and land resources by implementing rainwater harvesting can be seen as a precursor to today's rainwater harvesting system .

Weaving technology

and use the natural resources of nature . Thus , technology begins to emerge in the primitive human activity of designing things such as leaves and bark as clothing . However , it can be considered that his technological knowledge began to blossom only when he began to use the second-order animal skins and the third-order cotton and silk . Among these , the stage where the raw materials (cotton , silk cocoon) were produced , secondary materials (yarn , silk thread) were created from them , the tertiary product was woven into cloth , and then the stage where clothes with various shapes , colors , and decorative designs were woven according to the use was put forward as the highest stage of technological advancement . Thus , this section aims to provide an overview of the technology of the ancient Tamils in the weaving industry through their literary records .

A. Different clothes

, old , and tattered clothes of the poor and needy who sought their help and dress them in new clothes . The clothes thus provided were described as having various kinds of intricate designs and as a manifestation of diverse technologies .

The king gave the wise men various kinds of clothes, which were as shiny as snakeskin , as soft as the skin inside bamboo , with intricate patterns of woven threads and flowers (Puram . 383:9-11). He took off the old , moss-like rags of the nightingales and made them wear clothes like soft clouds (Perumpan . 468-469). The woven threads were so intricately woven that they were as smooth as snakeskin , with intricate patterns of woven threads and flowers , and with intricate patterns of woven threads and flowers ,

The visionary is not a stone, but a flower.

The arauri Anna-Aruvai- Nalki

(Porunar . 82-83)

It can be seen from the .

B. Micro- processing

, and therefore countries, can achieve good results on the basis of low prices . In the open market practice, many other factors besides low prices also destroy competitiveness . Industrial scholars of this period define the technology of the weaving industry and the market opportunities that arise from it , saying that if we look at it from the customer demand perspective , there is no doubt that specialty items such as decorative items (thini shion items) , embroidery , accessories like jikina , high-value additions like lace, and high-decoration handicrafts will increase the competitiveness (Pilgrim , February , 2005, p.2) . It can be seen that the ancient Tamils had mastered

certain times . Women mostly wore the tukili while bathing and taking a bath . White was worn by women who had separated from their husbands (Pattinap :107,108).

D. Color loading

the art of dyeing clothes . The blue colour was used in a woven garment . ' **The blue which was woven together** is like a blue cloth ' (Kali .72:1) . Also , **the red colour was used in a garment** ,

The sun is shining brightly.

Checker Anna Sivanthunanku Uruvin

The eye-catching lotus- shaped lingam (Madurai 431-433)

In that ,

can also be seen in the words ' **Kopatannathoyapundukil** ' (Tirumurugu . 15) .

Poonthukilai is also mentioned in the literature as ' **Atarankavachuthudaipundukil** ' (Mani . 3:139) .

E. Blanket

Blankets are one of the types of clothing of the Tamils . In addition to creating clothes to cover the body , they also had the technique of producing blankets woven thicker than clothes for the cold . For covering and covering at night . We can also find the news that women wore blankets made of skin (Ved . 74). On that occasion, the technique of making those blankets is also explained .

Similarly , the literature also highlights the place of the ' blanket ' in the inner life (Agam.136) . In this , the leader reminds the woman who is standing on the verge of joining her husband after going to a prostitute , of a past event . In this , the blanket, which is a book, is highlighted . Similarly ,

The path of the mind is all wrapped up in darkness.

We are the ones who will receive this blanket.

Inshayalmarpankurininuyanaga (8601.65:3-5)

In , it is said that the head is covered with a blanket to see the leader . Here . The white blanket is the one that is being used .

The golden lingam is beautiful.

The Spirit of the Lord of the Arundhiral (Sirupan.85,86)

In the Sirupana , the warrior is described as follows . While walking through the forest , the peacock , feeling cold and inexplicable , the warrior, who is endowed with a sense of grace , puts on his blanket . In this , it is understood that the king had put on a blanket for the cold . From this , it is clear that the blanket was worn by both men and women . The blanket can also be seen in the ' **thick blanket thrown inside** ' (Sirupana . 256) . The leopard is covered with many colored hairs . The figure of the Arimavetta is carved , and the figures of various flowers such as the flower of the flower in the vast forest are also carved , and the blanket is softly wrapped ,

The animal is a hairy, muscular man.

The hunting ground for the hunters

When the baby is teething, the flowers bloom.

Mellithinviritasekai

(Length .128-131)

It can be seen in the above . Therefore , references to two types of blankets are found in the Sangha literature . One was made of leather , the other of thread . Furthermore , the thread blanket was woven for both men and women . It was used for clothing and sleeping .

The smell of the goat's natural festival

The great hand of the multitude of the wearers

The wind blew.

The flower of the guardian angel

(Psalm 90:1-5)

In it , the woman who dances at the festival , the one

Construction Technology

in natural caves and tree holes , his knowledge of construction technology emerged as he began to construct artificial shelters . While constructing such shelters , many factors such as the nature of the soil , the environment , the possibilities of living together , the nature of the industrial lands adjacent to the shelters , and protection from natural disasters have to be taken into consideration . It is only after this kind of forethought and planning that small and large villages appeared in ancient Tamil Nadu . Literature records that the ancient Tamils were skilled in constructing such shelters and in mastering architectural techniques . Thus , this section examines the technological

elements found in settlements , fortifications , urban structures , etc. , as well as the technological prowess found in other structures .

found in the old Tamil villages and the houses built along the streets in the city . There are many houses made of local materials in the villages . These , apart from fulfilling the need for shelter , are not considered to be technologically advanced . City houses are superior to the local houses in terms of architecture and technology . Therefore , in addition to the houses , huts , and mansions built in the city , the construction technology seen in the creation of water bodies , the establishment of defensive fortifications , and the construction of lighthouses is being considered here .

A. Apartments

A. (i) Various techniques in the residence

On both sides of the streets , large houses were built with various uses and techniques . In the high and well-built houses , which were like air vents , windows were built here and there for ventilation (Madurai , 356-358). There were places with moonlit courtyards , large rooms with large windows , and mansions with windows made like deer's eyes . This ,

Veyamadamumviyankalā is also present.

The places of worship of the Lord of the Rings (Silambu 5:7-8)

The evidence also shows that there was a long wall that looked like it was made of copper , and that a unique floral flag with beautiful flowers was painted on the wall .

Copper wire mesh

The flower is a flag.

After the fetus is born, it is called a fetus.

The evidence shows that .

, adorned with emeralds and a thousand pearls ,

With the auspicious flag in the sky

Emerald-clad yam

Coral-inlaid gold plate

Long-term mansion

(Silambu.5 :146-149)

The words "show" are ...

) ii) Weatherproof platforms

Multi-storey buildings , seasonal cooling platforms (special design for the summer season),

Airborne upper respiratory tract

The sun shines brightly.

Straightforward, unwavering, solid

The Battle of the Gate (Length 60-63)

Similarly , the construction technology of the inner walls, which was designed separately for the Vanil period and the Kauthir period ,

The sun has passed away.

The blind man closed his eyes (Silambu .4:60-61)

It can be seen in . In this , it is reported that they avoided going to the full moon temple of the Ilaveni period and stayed in the intermediate temple of the Kauthira period . Similarly , the temple with the seven-level high tower, which is decorated with gold and gems , can be seen in ' **Idachirantu Uyarya Ehu Nilayamathatu** ' (Mullai .86) .

Furthermore , the palace that measures the sky and the women playing ball in the moonlight in it is mentioned in ' **Vanroi Madatthavaripandasai** ' (Perumpan.333) , the palaces in the city were very high and close together like a group of mountains in ' **Malaikanathannamadamsilamba** ' (Puram.390 :7) , and the palace that shines more brightly than the highest mani in ' **Kathirvidumaniyilkanborumadam** ' (Puram.53 :2) . The fact that the stone is more shiny than the marble indicates that the technique of polishing selected stones and using them for construction was acquired , which may be similar to the marble used today . This suggests that the ancient Tamils had the tools and techniques to select , cut , and polish the stone .

A (iii) Attic

among the ancient Tamil sites . It illustrates the progress of life , civilization , and technological ability of the people of that time . It has short steps , long ladders , curved windows , many arches , small gates , large gates , and large corridors . The Madams were built with a window as a place for air to enter .

Short-legged

After feeding the baby,

Passageway

The rain is falling on the rooftop (Pattinap.142-145)

The footsteps are shooting . The Veyadamadam stands for the full moon structure . It is now called ' Mottaimaadi ' . It shows a wide structure as a women's ballroom . The walls were like the walls of the madam . There , the Vallikoothu took place . The high structure of the madam . It became a symbol of the city's excellence .

Similarly , the following literary records show inner chambers rising like mountains and reaching the sky . Wide chambers , chambers arranged in rows , and chambers with multiple levels (elevated) chambers . ' **Vanthoi matadthuvvari pandu asai** ' (Perumpan.333), ' **Vinporanivantveyama matadhu . The night - flying langusudarnjekili** (Perumban.348-49) , the wind - blown lamp - shrouded , the **vadavalli** (Perumban.369-70) , the mountain - like .

Furthermore , the skill of the poets who adorned the chambers in the new style , and the painting and coloring of the chambers like ice, and the different arrangement of its pillars , **can be seen in** ' Pudupiraiyannasasuthaiseiyamattu , panikayathannaneelnagar ' (**Puram.378**) , ' Suthaimaduanilamutram ') **Kali.96**) , ' **Nedungalmadamtuoleri** ' (Pattinap.111) , ' **Kodungalmadamtunedungadai** ' (Pattinap.261) . All the palace chambers were coated with silver-like limestone . Black pillars like sapphires were seen here and there . The long inner wall, made of copper, was inscribed with beautiful floral banners (Nedunal . 72-114).

A (iv) Nagar

The word "nagar" refers to a very rich location and city . ' **Murasumuzhangunedunagar** ' (Pat . 12), ' **Urujuhuedunagar** ' (Pat . 88), ' **Varikuinrannavanthoyedunagar** ' (Agam . 93), ' **Vinporuedunagar** ' (Agam . 167). The references ' **Nelludainedunagar** ' (inside .176: outside .287), ' **Malaipurainedunagar** ' (inside .296), ' **Venmanalnivanthapolankadaiinedunagar** ' (inside .325), ' **Ponnudaiinedunagar** ' (inside .385), and ' **Nedunagarvaraipillapadumuzhaorkum** ' (outside .177), ' **Kadumunongiyainedunarvaraippu** ' (outside .405), ' **Nedunagarvyandakarikuthirpalli** ' (inside .159), ' **Kadiyudaiviyalnagar** ' (inside .49) illustrate the structure and nature of the **houses** in the Nedunagar .

The above-mentioned city is known to have a mountain-like structure . It is surrounded by white sand . It is built of bricks : It is of a high structure . It is surrounded by walls : It has beautiful gates . It is illuminated by torches : It is full of rice fields: It is

beautiful in appearance : It is inhabited by many people . It is full of wealth : It has the sound of a resounding drum : It is known to have a vibrating drum . From these we can learn about the prosperity and construction technology of the ancient Tamils .

B. The structure of the metropolis

The structure of the city was organized in such a way that it gave importance to security , transportation , and industry . The layout of the city was systematically arranged with the king's seat in the center , with streets for the four major castes of the Brahmins , merchants , and merchants , and streets for people engaged in various professions such as blacksmiths , blacksmiths , and potters . This structure is like the petals of a lotus flower arranged around the center of the flower, as described by Pulavar Kattuvar , who described Madurai and Kachinagar as follows .

Mayonnaise lotus blossom

The flower is blooming.

Idalagandu Annayatheruva Annalkoil

All the good Tamil children of the mother

of the city of Enamadurai

(Par.8 :1-5)

Blue-green algae

Four-faced, one-sided, tooth-shaped, and leaf-shaped

The lotus flower is blooming.

.....

The world's most diverse flower industry

The fruit of the tree is a fruit that has been raised above the ground

(Perumpan.402-411)

The architecture of Kachima City is also on display .

From these, we can learn about the construction technology of the ancient Tamils and the far-sighted planning in urban development .

B. (i) Health facilities

Short

Small houses were also planned with ventilation and sanitary facilities . Facilities were provided for the discharge of sewage from the houses . These cesspits are called ' **Shurungai Thoomphu** ' . ' The sewage from the houses was taken out of the house through a new sewer , and the sewage of many houses was collected together and taken out of the village.' (Ancient Tamil Industries , p . 269). The small chimney , which was built with stones to drain the sewage from the houses , can be seen in the phrase ' **The house was covered with a small chimney** ' (Mani.28 :5) , and the sewage that was discharged through the small chimney can be seen in the phrase ' The street was covered with mud ' (Silambu.14 :65) .

Long tunnel, middle passage

Like water that is hardened and thrown away,

Long-necked water funnel

When the wall is poured

(20 :104-107)

In it , the scene of the water falling into the ditch is described as an elephant's leap . In addition to the tunnels built with bricks , they also dug black stones to create such canals . This .

The stone-throwing Ittuwai temple

Good oil

(Madurai .730,31)

It can be seen in . Generally, the word "suruṅgai" is used to refer to a structure that runs under water . The author of the first discourse says, " The entrance to the street is hidden so that no one knows about the entrance of the water. " (Silambu .14:65).

E. Hall

from the epics . Although these arenas are seen as places where artistic performances take place , the arena differs greatly from the ' Pothiyil ' and ' Mandram ' in structure and technology . These arenas are designed for the staging of artistic performances . Moreover . It is known that these were ' temporary auditoriums' that were set up immediately for the performances . Some journals discuss the structure of the arena in detail . The author of the selected sculpture book does not deviate from the standard method at all . They chose a place free from weeds to set up the stage , and then cut down the bamboos that grew tall on the sacred mountain , the Pothiya mountain, with a gap of one saan between each node , and according to the scriptures, they cut the bamboos to the size of the twenty-four thumbs of the venerable man . Then , using that as a measuring stick, they set up a dance stage seven rods wide , eight rods long , and one rod high. There were two gates to this stage . They set up lamps

here and there so that the shadows of the pillars would not fall on the stage or on them , and they set up a screen for the figure , a front screen , a back screen , and a back screen . They also made a canopy with paintings . They hung the famous pearl garlands such as sariya , tokum , and dhama everywhere beautifully (Silambu.3 :95-112) . This kind of technology and innovation makes the arenas look like a stage . These arenas show the development of the forum . The Mani Mekalai also refers to the arena as ' **the arena is surrounded by hot clay** ' (Mani.18 :33) . In this , the permanent arena and its large structure are visible .

D. Defensive walls

for others to conquer , vast beyond measure , indestructible , and unapproachable ; a fortress is one that is small enough to protect us , and has a place to protect us . It is one that destroys the urge of enmity ; a fortress is one that is rare enough to be captured by outsiders , has many kinds of food, and is a good helper in times of destruction by outsiders ; a fortress that conquers those who do not abandon the fortress ; a fortress that is The ancient Tamils had the talent to construct such unique and magnificent forts with various technologies .

D. (i) Ginger

Inju + e = ginger ; Injudul means to tighten ; Injiyattuinji : The ginger is made of copper and is made of black powder and is called inji enbar (Palanthamizharatchi . p.58). The ancient Tamils had acquired the technique of tying this type of ginger as a strong and very high-quality protective material and also as a weapon .

In Vanthoya , ginger made of half-earth is called ' **half-earth ginger** ' (Puram .341:5; Pati .58:6; Malaipadu .92; Agam .35:2). Since gingers are decorated with earth, they are called ' **manpunai ginger** ' (Pati .58:6), ' **punaiman ginger** ' (Agam .195:3) . Possessing the four qualities of height , width , strength , and beauty , they are also called mountain ginger , which is called maanpalkoturazh ginger, and varibool ginger (Pati .16:1: 62:10). In Vanthoya, the tall ginger ,

Movie: The Stone Tomb

The mountain of the mountain (90-91)

The footsteps are ringing .

Moreover , there were many towers built outside the water-filled storehouse (Puram 350:1,2; Pati 62:10). They had watchtowers (watchtowers) to watch and attack the enemy (Pati 16:1), and the mighty warriors stood guard over them to be feared (Pati 62:11). It is also known that in ancient Tamil Nadu , copper-plated towers were

preferred in some places, and semi-earthen and sudaman inchi were especially popular .

D. (ii) Copper-plated

The ancient Tamils had the technology of casting and melting copper to build forts . This technology was used to stabilize the fortresses and to make them strong to resist the attacks of enemy forces . It is clear that various techniques and machines must have been used to melt copper and use them in the construction industry . ' Chembupunaituiyadasenaedumpurisai ' (Puram.201 :9), ' ChembuuzhpurisaiPazhinuuriAgam.375 :13) include the purisai made of copper ,

The sharp-edged sword

Sempuralpurisai Semmalmudhur (Puram.37 :9-10)

In it , the sound of the raised bell can also be heard.

) iii) Machine-tooled forts

The high walls were dotted with watchtowers , artillery pieces , and machinery that were concealed from view , and the construction techniques used to operate them .

..... Falconry

The sound of the

O thou who art the chief of the host (Puram.343 :15-17)

In it , we can see fortresses with high walls and weapons equipped with falcons . Furthermore , the literature shows a fortress with a high , narrow gate equipped with a machine gun that cannot be entered even by a mouse (Puram.177 :4-6), and a fortress with a machine gun that is a jointed structure with a hinged mouth (Pati.53 :5-7) .

Also , the watchtower , the trench , the self-propelled cannons , the black monkey- like traps with the fangs , the slings for throwing stones, the pots for boiling oil to pour on the wall, the pots for melting copper, the furnaces for smelting iron, the baskets with stones , the tools shaped like bait , the chains for twisting the neck , the stoves shaped like the male head , the broken horns for pushing while climbing the wall , the ox-sticks , the quivers of arrows , the hideous fighting men , the trees for holding the heads of the approaching men , Ilangovadikal shows the fort of Madurai , which is very well-known for its elaborate constructions , such as needle traps that pierce the hand of the attacker , fish-eating bird -like traps that attack the enemy , pig traps that tear apart the person who climbs the wall , traps like the pan that are placed on the

inside of the door to strengthen the door, the snares, the tiger traps, etc. (Silambu.15 :201-219). In this demonstration , the development of the construction technology of the ancient Tamils can be seen .

E. Lighthouse

The three dynasties of ancient Tamil Nadu , the Cheras , Cholas and Pandis, had various types of water transport vessels and separate tributaries .

up to mark the ports . To guide ships that were lost at sea and to call ships (ship + □□□□□□□□). These lighthouses were built . The towers for this were high and were made with technology that would not be affected by sea waves , salt air, etc.

Near the port of Poompukar , Poompukarnagar , it is said that a lighthouse was shining brightly to welcome domestic and foreign ships , and to ensure that the ships did not go astray , as can be seen in ' Gangunmatiyakanaikathironshudar ' (Nat . 219) . Also , in Silappathikaram , large lighthouses were shining brightly in Kaveri Poompattinam to guide ships coming from foreign countries . ' Ilangu Niravarapilla Kalankaraivilakamum ' (Silambu . 6:141) shows that the lights shining brightly at night, shining brightly, were guiding ships sailing in the sea. They were so high that they could not be climbed even with the help of a ladder . This .

Like a sky-high religion

Ladder lift Arunchennai

The starry sky

The nightingale, the fiery sun

**The water of the fertilizer is poured into the vessel and the water is boiled
(P. 346-350)**

The evidence shows that .

F. Building materials

and durability of the buildings and used building materials obtained from nature and created artificially . Among the building materials created artificially by technology , semi-sand (a material like cement), fired clay (bricks , tiles), copper paste , cut black stone , marble , plaster , gold leaf , coral , and white chalk are prominent .

) i). Semi-soil

Early Tamil texts refer to a fort made by grinding soil and using it to make it strong as ' **Arammaninji** ' .

The half-moon-shaped ginger flag opens (page 341:5)

In it , a flag is shown flying over a fort built of mud .

) ii) Plastering soil (clay) and white chalk

- soil used for the reinforcement of buildings , clay was also used to decorate the outside of the walls . This clay was made into a paste and applied as a coating on the buildings . Since the walls were decorated with this type of coating, they were known as ' manpunaiinji ' and ' punaimaninji ' . This can be seen in the words ' manpunaiinjimatilkadanthallu ' (Pati.58 :7) and ' punaimaninjipoovalpootti ' (Agam :195:3) . Because the walls were coated with this coating , it looked as if they had been coated with molten copper .

Copper wire mesh (No. 112)

You can find out in .

Furthermore , the technique of making whitewash for the walls of buildings is known. By **applying this type of whitewash** to the walls , the plasterers made them shine as if they had melted and poured silver . This is called ' **Velli Anna Vilangum Suthai Uri** ' (110) by Nedunalvadai .

(ii) Brick

using bricks for construction work, " **Adupanonkiyanedunnagarvarappu** ' Perumpani , 4105 and * Nedumaniinjineilnagarvarappupathi 8:16 ;) It is known that the boundary of the house was made of bricks . Similarly , the radial wall of the houses was built with bricks . It can be known in ' Ittigainedunjuvar ' (Agam 1609;10) . The literature also mentions the walls of the houses made of kamen and the high outer walls surrounding the house . Perumpani 405 411 Similarly , the walls of the houses are made of kadumana and the walls of the houses are also mentioned .

(iv) Tiles and metal sheets

The walls of the house were made of bricks , while the roof was made of beams . They used different technologies to produce these two materials . This is evident from the example of a house with a long floor made of tiles, ' **A house with a long floor made of clay** ' , Man 3:127 . Meanwhile , the houses of the wealthy were not made of baked clay but of metal sheets . This is explained by the fact that

The special feature of the mountain is the water.

The kingdom is in a state of flux

(Silambu , 14:146-

7)

is known as the roof of houses, which is made of tiles and metal sheets .

) 1) **Black stone**

They cut black stones into intricate shapes and used them to build the walls of wells to protect them from natural erosion. **This** technique is referred to in the literature as ' **kallaruthuyayavalluvarkuval** ' (Puram.3311) and ' **kalluruthuyayavaluvarpaduvil** ' (Agam.79 :4) .

) vi) **Marbles**

Marble stones were found and cut , and palaces and halls were built using them . The **marble** hall was built , and the people inside the hall were visible to those outside , and the architectural design technique combined with the technology of **not knowing which entrance was which** , can be seen in the words ' **Palikaraimantapambavaiyaipukuke** ' (Mani.4 :87) and ' **Thazholimantapandaankaiyailthadai** ' (Mani.5 :9) .

And a hall of shining marble , with pillars of coral , walls of gold , and a ceiling covered with paintings .

Coral ' Pillars, gold , red walls

The light of the still life

The Bright and Spacious Marble Hall

(18:45-47)

The footsteps are ringing .

Metallurgical technology

in the development of mankind is the science of metallurgy . The end of the Stone Age civilization in the world and the beginning of the use of metal by man became a major cause of social change . The extent of the use of metal became the measure of the civilizational development and scientific development of a society . This knowledge of metallurgy became the basis for introducing technology into all kinds of industries , for sophisticated work , for time management , and for the invention of various kinds of machines .

This kind of metallurgical knowledge was possessed by the ancient Tamils , which can be seen from the various types of utensils, various tools , and various machines they used . In particular , they used a lot of gold utensils . Apart from these , silver smelting is also found . Metallurgical techniques led to the use of machines .

This shows the prosperity and wealth of the society of that time . Furthermore , in many places in ancient Tamil texts , just as the iron furnace is mentioned , blacksmiths and goldsmiths are also mentioned . The use of metal is also seen in household items , agricultural tools , construction materials , weapons , and machine tools .

in the era of scientific advancement, it can be seen that there are many difficulties and obstacles in the iron industry . It is commendable that many centuries ago, the Tamils had acquired knowledge to the extent of collecting iron ores, smelting them, and producing iron ingots, and from them , they had acquired knowledge to the extent of making various weapons and tools (Iron Industry in Ancient Tamil Nadu , 2)

A. Gold mining

The ancient Tamil literature contains references to the extraction of gold from mountains . In the fertile mountains , gold was extracted using the tusk of a wild elephant , and there , along with the gold , other gems were also found .

Perumalai Chilampin-Vettambogi

The one who is full of arrows

The elephant with the white stripe is far away.

The water is a beautiful thing, and the gold is a beautiful thing.

A twinkle in the eye

The most important thing is to be happy.

A sweet kiss

All three are united (Agam.282 :1-10)

The lyrics show that . In this , the finest gold is dug out of the mountain with the elephant's horn , and the pearls are revealed and shine with the gold . In addition . The hunter who bundles the pearls that have fallen from the elephant's horn , like hailstones , and carries them as a sandalwood kavadi , is depicted . In this , the metallurgical knowledge of the ancient Tamils and the wealth of the mountains are depicted together .

B. Purification

Gold for ornaments is classified into two types: natural pure and refined (Ancient Tamil Civilization and Culture, p.61 (. The technique of gold refining is found in ancient Tamil . This ,

The golden - golden

The hot water is the source of the fire (Par.12 :87)

It can be understood from the following . ' **Like burning gold** ' (Kural.267) is said by Valluvar .

E. Towns

in ancient Tamil Nadu about towns that were specialized in making costumes . Among them , the specialty of the town of ' Kodumanam ' is highlighted .

' The cruel and honorable man ' (Pr . 74:5)

This can be seen in the fact that they were also skilled in making jewelry with precious stones (Ancient Tamil Occupations , p . 102). Similarly , it can be seen that various types of metal jewelry were in use .

The types , shapes , features , and accessories of ornaments are described in many books and manuscripts. The various shapes and fine workmanship of the ornaments are evident in them . There were streets dedicated to the gold trade . The literature describes the scene of the gold-laden streets as ' a gold-laden street that brings a profit ' (Deuteronomy 30:13) . Since gold was sold , that street was called a gold-laden street . The bartering of gold by giving gold to the hunter here and receiving the gold and silver he brought is described here .

through gold ornaments . Not only women , but also men and kings wore gold ornaments . The ornaments designed for kings were described as the pinnacle of gold technology . The warrior's face engraved with the ollya-poriks can be seen in ' **Oda-poo- dkai-on-porik-ka-zhal-kal** ' (Pati.34 :2) , and the gold-made vendan poons can be seen in ' **Polam-poon-vendar-pala -r-dillamma** ' (Pati.64 :2) .

and large were made in the ranks . Not only for human use . They also made ranks for animals like elephants . The difference in design between the two is clear . The golden elephant is described as ' **a golden elephant is like a thorn** ' (Pr . 34:8), and the ability to create beautiful and expensive garments by adding gold , coral , pearls , beads , etc.

Golden, golden, golden, golden, golden

Mamalaipayantakamarumani

Even though it's a little bit of a stretch,

Mechanical engineering

Ancient Tamil mechanical technology is seen in agriculture , defense , construction , and handicrafts . In agriculture , agricultural tools , machines for extracting products , animal traps for protecting crops from animals , etc. In defense , wall elements , machine tools , and automatic machines are also seen . Similarly , in construction , mechanical platforms used to launch tools in forts , automatic water drives used in dams , etc. In handicrafts , automatic machines are also evidence of ancient Tamil mechanical technology .

A. Use of machinery in agriculture

as cultivating the land , using various seeds , and storing water . Machines were used to extract secondary products from the products . Thus , the ' sugarcane juice machine ' was developed to extract the necessary secondary product, sugarcane juice, from the product, sugarcane .

literature describes the sound of this machine as ' **resonant with the sound of the elephant's roar** ' (Ainguru 55:1) and the loud sound of the machine as ' like the sound of the sugarcane machine ' (Madurai 258) . The sugarcane machine, which made a sound so loud that the swordfish in the Marutha reservoirs jumped ,

The sugarcane machine is not suitable for the sugarcane mill.

Irunjuvalvalai (700.7)

The sound of the sugarcane juice flowing through the mill carrying the black sugarcane, the sound of **the** trees rustling like elephants in a constant roar, the sound of the smoke coming from the sugarcane juice being crushed into lumps ,

Where is the Kanachalvezhangatalvutta?

Machine gunpowder

Visayamadoompukaisoozhulalai ' (Perumpan.260-262)

The signs also show that . Similarly , the hunger is broken , the sugarcane is boiled in a pot ,

Cork and Pincamalai

The Fire of the Fire (Pattinap.9-10)

The words say .

Furthermore , the noise that arises from the sugarcane after going to the sugarcane mill , the unproductive sugarcane , and the black water flowing like rain , the rapid splitting of the nodes of the canes , is also described in the song ' **Aali Kala Marundhin Ingai Karumbu** ' (Malai Padu .119) ,

The rain-swept plant

The eye-breaking sugarcane (Malaipadu.340-341)

Similarly , the appearance of the towns was like a huge mountain covered in black smoke and shrouded in dark clouds .

Pongali is spreading with the smoke of the palm tree.

Appears on the Mangulvanathumalai (Silambu.10 :151,152)

Pulaver points out that . Through these evidences , the technology that was developed to make the sugarcane crushing machine loud and powerful , to operate continuously , and to crush excess sugarcane is obtained .

B. Animal traps

crops from animals , to obtain fodder , to trap and catch animals . The effectiveness and design of the traps varied depending on the nature of the animals . Similarly , small-scale hand tools were used to protect crops from birds , etc.

B. (ii) Large engines

which has a thick, prickly , hairy trunk and small eyes , and which grazes on the ground , is shown approaching a large field of corn from a high mountain, and is shown using a large-mouthed machine to catch it (98:1-4). Since it destroys the field of corn , it is afraid of the pigs and does not let them escape the machine trap set in their path (193–195) .

The pig that eats millet runs away in fear . **The sight of a colorful tiger trapped** in a machine called ' Perungal Adaar ' , which Punatturiyan had attached as a small trap ,

Millet-eating Iriyapunavan

Little girl with a big belly

The one who is the

This can be seen in the following . In this , the technology and efficiency of the machine are explained by the fact that the powerful tiger will not be killed .

B. (iii) Small tools

Slag and plate

climbed up the mountainside and took the parrot-snapping tools made of leaves and plates and drove the parrots away (Kurinji .41-44). The chief , wearing a garland of venison , walked gracefully and gracefully around the leaf , patting the plate , giving the parrot-snapping tools and giving the leaf-dress , saying, "These things have come to you," and the chief robbed the chief's wealth (Kuru .223:4-7) from references such as " The chief has robbed the chief's wealth" (Kuru .223:4-7)" . These are not like animal traps , but were designed in a small shape and could be operated by hand .

Dermatology

the next three years in the rural areas of the country in the sector of manufacturing leather and related products. It is worth noting that the central government has allocated about Rs . 8500 crore for the leather industry in the 10th plan . At the same time , India's total exports are very low (Plan , March 2005 p . 56) says the statistics on today's leather industry . It can be known from literary evidence that the ancient Tamils were proficient in the leather technology sector, which is explained by large capital and such expectations .

to process the skin taken from the animal . They had acquired the technology to produce various leather products from the skin . Leather workers were called ' **tanners** ' (Silambu.5 :28-34) . Leather technology is also found in abundance in **the blacksmith's forge , weapons , weaving industry , musical instruments , shoes , bedspreads , leather bags , etc.**

A. Leather

Selected and processed leather . Finely carved leather .

Spotted nightshade

The remaining remains of the deceased.

Cotton-like peduncle

I will not make steel out of iron.

The heat is intense and the appearance is fiery (Ps . 74:10-14)

The steps show that , in this , the spotted deerskin is taken , the sinew inside is removed , the other impurities are removed, the remaining circular cut skin is sewn together around the edge , and then the craftsman uses a sharp iron needle to insert beautiful beads inside and beautify it . The leather is made in a way that is suitable for heating .

B. Epidermis

of making leather shoes . They wore sandals on their feet (Puram.257 :1; Agam.129 :12-13) . The sandals were called ' todudhol ' (Perumpan.169). The shoes that covered the feet at that time were called adibudhaitodudhol (Agam.101 :9) . Also , the sandals worn on the feet of the seivel , with a leather-stitched back and decorated with a bell are mentioned in Paripatal (21:3-7). The sandals with a leather sole that makes a sound are mentioned in Akananuru (194:4).

E. Musical instruments

Various musical instruments were made from leather . Among them , the leather instrument called parai is noteworthy . The parai made from the skin of animals is called ' manrol chiru parai ayarum kuravai' (321) in the Malaipadukadam . Similarly , a poem explains the technique used to make the leather instrument called murasu . After fighting the bulls , the skin of the bull, which did not show its back and was a good warrior , was used in the manufacture of murasu .

Good morning.

The sound of the goat's horn being drawn (Agam.334 :1,2)

It can be seen in .

D. Leather bed / mattress

of soft , woolly sheepskin , sewn together , and made of tanned leather ,

The hair is pressed and the hair is pulled.

The school of poetry (Malaipadu .418.419)

Similarly , after giving birth to a child , she lay with the child on a bed of deerskin, says the Perumbanattupadiya (89,90). From these , it is understood that the ancient Tamils had the technology to produce a soft , hard-working leather bed .

E. Leather instruments

E. (i) Shield

acquired the technology of making weapons made of leather . This leather weapon was called ' Khedayam ' or ' Parisai ' . The greatness of this weapon is described by Tholkappiyar as ' Dholathuperukkamum ' (1013 BC) .

' The elephant , whose body is like a multitude of faces , is called the Vendanya , and the elephant , whose body is like the sea, is said to be like a sea, and its skin is pierced by arrows, and is made into a shape like a thorn and a star (Puram . 97:14-16) . Furthermore , a large skin resembling a cloud appears (Pati . 52:6; 62:2); and a cloud rises on the skin resembling the top of the morning cloud (Pati . 66:11, 12); The sound of arrows falling from the black skins , which were sewn together with the strings , echoed in the midnight, along with the sound of elephant bells and the sound of the trumpet (Agam . 24:13-15); the Cholas had a multi-skinned army, the color of which was like a black cloud (Agam . 123 :10) ; the royal procession , whose robes hung like finely crafted leather (Kuru. 392:7,8); and the hero who stopped the enemy's troops with one of his skins (Puram. 311:5-7) . Literature records the excellence and proliferation of the leather army .

) ii) Breastplate

The leather chest armor is explained as ' leather or leather? You ask ; You would hide your chest with a stone and a leather , but it would not fit' (Puram .300:1,2) refers to the song of Arisil Kizhar . It is alluded to as the skin that stands guard on the wall so that the enemy does not attack, and the clouds in Visumpi are like the skin that stands guard on the wall so that the enemy does not attack. Natrinai 197:10-12.

) iii) Envelope

The skin was designed as a sheath for inserting a sword . The eye of the skin (eye of the sheath) is not sharpened. The one who has the work is the best , says Purananur (98:10),

F. Leather bag

that is used today . Literature shows the tolpai used by the Panan to store meat , and the tolpai made by the Kovalar with the help of hot sticks . This can be seen in 'Pachunpeitasuvalpinipaindol' (Perumpan.283) and ' Kashuvodudusudupadaisurukkiyathorkan ' (Kali.106 :1) .

A. Wind instrument

The blowpipe used in the blacksmith's forge was made of leather . It was made of thin leather . It was called the mendholmidhiulai (Peerum .206-7) .

A. Shoulder

The sacrificer cleanses the skin of the deer and wraps it around his wife , cuts it into a circle , and decorates it with pearls and beads , both inside and outside , and makes it into a bracelet (74:10-16).

Shipbuilding technology

in maritime trade . The Sangha literature shows the sight of ships circling the ports . For this maritime trade , they had acquired the technology of manufacturing ships in the country itself . Various literary records and references by foreign seafarers are available about the maritime trade and sea voyages of the Tamils . The various names of the vessels for maritime transport found in the literature and inscriptions confirm the maritime transport and shipbuilding technology of the ancient Tamils .

Bengali

Thangamathalaithimilparaambi

Parishadava Bharatinave

Bothamthollainavai

The tree that flows over the mighty river (p . 418)

That is, the types of wooden tools ,

With the help of the Buddha.

Those who say that it is a thorn (p . 419)

Types of boats ,

The scoundrel, Ambi

The bed of the sculpin (p . 419)

The types of rafts are also summarized in the book . The use of various vessels used in water transport and the technique of the ancient Tamils who created them in various forms for various uses can be learned from it.

The custom of drinking water is not with women , says the Tolkappiyam . (980 BC), most of the Sangam literature glorifies the maritime trade of the Tamils . The literature depicts the scene of ships sailing around the ports . The technological resources of the ancient Tamils who manufactured the necessary equipment for such maritime transport within the country . Their literature shows their expertise .

For ships engaged in maritime trade . Naval engineers were employed in the field to repair any damage that occurred during the voyage . Those who repaired ships engaged in maritime trade and sailed around ,

The oceanic Indian tree is a painkiller.

The farmer (Ps . 76:4-5)

The literature says . This means that the sea merchant who repairs the damaged wooden ship after crossing the ocean and returning (A. Manikkanar , ed . text), and it can be seen that a workshop (workshop) was located as a part of the shipyard , where the repaired vessels were repaired . Similarly . The manipulators who work in the sea areas with noisy water , are called ' **Mulangunir Mundrairakalampunarakammiyar** ' (Mani.7 :70) . The shipbuilders were called ' **kammiyar** ' . The phrase ' **kalanchayakammiyarvarukena** ' (Mani.25 :124) confirms the custom of taking along a ship's carpenter / repairer on a sea voyage .

Medical technology

In those days, doctors were called ' **Aravo** ' (Nat . 136), ' **Marutha** ', ' **Mattuthan** ' (Kali . 17:20,21; 137:24,25; Puram . 173:11) . It is generally believed that the technique of surgery in medicine was acquired through contact with Westerners . However , surgery in medicine

by the ancient Tamils . It is like the wing of a bird that dives into the water and then rises . When the chest wounds of soldiers wounded in the battlefield are stitched , there is a long white needle that dives into the blood of the wound and then rises . This ,

Fishpond after the sun sets

Spinal cord

Long-lived, broad-minded , and full of life (Rev. 42:2-4)

In this , just as a bird dives into the water and emerges , fish swim in its wings and hang on both sides , the analogy is drawn to the thread hanging on the eye of a needle that rises deep into a wound .

describes the warriors who had bandaged their wounds with cotton as ' **Panchiyumkalaiyappunnar** ' (Puram 353:16) . Since this exhibition is in the barracks, it can be understood that a military hospital was established at that time, just as a military hospital was operated at this time , and that a doctor who knew surgery and the technology and equipment for it were available in that hospital .

Other technologies

In addition to the technologies mentioned above , literature contains evidence that the ancient Tamils were familiar with other technologies such as clockwork , glassmaking , pearl mining , Jaffna vein making , cosmetics making , and mattress making .

tpdhf;fs;

t.vz ;	le;J kjpg;ngz; tpdh	LOCF Mapping		
1	goe;jkpohpd; MSikg;gz;GFwpj;JvOJf.	K2	CO 2	PO4
2	jyikf;FMfhjgz;Gfs; Fwpj;Jtpsf;Ff.	K 4	CO3	PO5
3	mikr;rhpdp; jFjpf; vd;ndd;d?	K 1	CO4	PO1
4	goe;jkpohpd; Nghh; kuGfSk; cj;jpfSk; Fwpj;njOJf.	K 5	CO5	PO2
5	rl;ltpay; mZFKiwfistphtp.	K 3	CO4	PO3

t.vz ;	vl;L kjpngz; tpdh LOCF Mapping			
1	goe;jkpohpd; tzpfKk; tzpfj; jpwDk; Fwpj;Jtpthpf;f.	K1	CO 4	PO4
2	MSikg;gz;Gfs; Fwpj;Jfl;Liutiuf.	K 4	CO 2	PO 6
3	fl;Lkhdj; njhopy;El;gk; Fwpj;JvLj;Jiuf;f.	K3	CO 1	PO5
4	ve;jputpay; gad;ghLFwp;j;Jtpsf;Ff.	K2	CO 5	PO 6
5	goe;jkpohpd; Ml;rpj;jpwDk; rl;ltpay; mZFKiwfisAk; Fwpj;Jtpthp.	K4	CO3	PO 3

UNIT –V

Contemporary Tamil Society and Management

Management philosophies

The list of existing business strategies is suggested by the ‘ Philosophy of Management ’ . While F. W. Taylor developed management theories , a French management theorist, Henri de Bois , is credited with promoting and publishing principles (or laws) for the excellence and proper functioning of management . Henri de Bois warned that management theories should be (i) versatile and independent of evolving circumstances , and (ii) intelligently applied and proportionate, as summarized below .

(i) Division of labor (or labor):

different employees (and different locations) are suited to different roles (or tasks) , based on factors resulting from geography , natural conditions , and individual skills and abilities .

- Facilitates the development of unique skills through work sharing
- All types of managerial and technical work may be related to the definition of division of labor.

Advantages of division of labor .

When the same person does the same job over and over again ,

(i) He learns knowledge and skills on the job , (i) The speed of output increases , (ii) The consistency of the products increases. (iv) He is consistent . He will report improvements in his production , production or methods of doing work .

Disadvantages of division of labor :

(i) Division of labour contributes to lack of craftsmanship . Employees become mechanical thinkers. (i) Same working hours become boring . (ii) Employees cannot be present in all places , because if one is not there , one will not work as a substitute for another .

(ii) Authority and Responsibility :

Power and duty can go hand in hand , and they should be combined . An administrator will do his duty well only because he has the appropriate authority . - Responsibility without authority or vice versa is useless .

(ii) Discipline : Discipline is absolutely essential for all organizations to function efficiently . Discipline can be defined as the adherence to agreements aimed at achieving external values of obedience , performance, and respect .

(iv) Unity of command : Command ensures that workers can accept instructions from a single supervisor (or supervisor) . In other words , if a job involves more than one person , it should not be under the influence of supervisors . Unity of command prevents ambiguity , deficiencies and delays in the completion of work .

(v) Unity of direction : A broader term than unity of order . Unlike unity of command, which concerns itself with the workers , unity of management deals with the functioning of the organization . Unity of direction means that each unit must have a strategy and a head to work towards the same goal . In other words , there must be a common strategy with the organization as a whole .

(i) Subordination of the individual to the public interest : The rights of a particular citizen should not be exercised in a way that would infringe on or dominate the public interest of the company . This is important to maintain morale and prevent conflict among workers .

(vii) Wages : Wages are the price charged by employees for the resources they provide to the organization . Wages should be equal to provide complete satisfaction to both the employer and the employee .

(viii) Centralization of power :

Centralization of authority means that authority is vested in a central authority , meaning that power is not divided among multiple parts . In a corporate organization , authority can be centralized only to the degree or level necessary for the best overall results. The degree of centralization is determined by taking into account the organization's (business) design , size, and technology .

(ix) Chain of command : The rising supervisors are considered to be an excellent chain . There should be an unbroken power and influence from the highest general manager to the lowest rank in all the ranks . The high chain can be short-circuited . This, if strictly observed, will be detrimental to the results .

(x) Order : This encourages the idea that everyone and everything in the organization has their own position . It is important to organize things and people so that the right thing (s)/ person is in the right place .

(xi) Fair Treatment : The manager should be treated equally by all his subordinates . The manager should act with kindness and justice towards his employees . As a result , the employees will be more committed and obedient to the management and the organization .

(xii) Sustainability : Healthy and safe employees are a boon to business because more labor is more valuable . A committed employee is worth more than a bunch of random workers who come and go . Poor management results in chaos .

(xi) Initiative : Initiative is one of the most rewarding activities for an educated worker . Managers must surrender their personal ego to take their own initiative and give recognition to their subordinates . A boss must encourage the initiative of his subordinates .

Teamwork : This emphasizes the need for cooperation among management employees (harmony and proper understanding) and the value of communication in achieving such teamwork . Like his predecessor Taylor , Bayol believed in the experiential model . While Taylor was primarily concerned with corporate tasks , Bayol was involved in the entire organization and focused on management , which he felt did not pay much attention to the organization's practices . It was widely accepted before Bayol that " managers are born , not made . " However , Bayol argued that leadership is a skill like any other, as long as the basic goals are known .

Human Relations Approach

Weber, Taylor and F. Taylor did not consider the elements of international relations. Human relations (also referred to as classical artists) focused on the human elements of production. They renewed classical theory by emphasizing the idea that organization is a social system and the human element is the most important variable within it. Any studies (called the Hawthorne Experiments) were conducted and investigated formal and informal associations, communication habits, and informal leadership styles. Elton Mayo is widely considered the father of the human relations school. Other prominent contributors to this school include Roethlisberger, Dixon, Dewey, and Lewin.

Hasaltocin studies

In 1927, a team of researchers led by George Elton Mayo and Fritz J. Roethlisberger at Harvard Business School was invited to join a study at the Hawthorne Works of Western Electric Company in Chicago. The experiment lasted until 1932. Previously, the National Research Council had conducted a study in conjunction with Western Electric Company from 1924 to 1927 to determine the effects of lighting and other conditions on workers and their productivity.

Light Experiment : This experiment was conducted to establish the relationship between production and light. It was found that if the intensity of light was increased, production increased. But when it was gradually reduced from the usual level, production again showed an upward trend. Thus, it was observed that there was no clear relationship between the production of the workers and the lights in the factory. It was found that some other effect affected the performance of the workers as the intensity of light increased or decreased.

Broadcasting Experiment : In this experiment, a small, uniform work group of girls was created. Several new elements were added to the work environment of this group. These included reduced working hours, breaks for relaxation, better physical conditions, polite and casual supervision, and free social interaction with community members. During the experiment, performance and morale improved dramatically. Moreover, as the changes in work quality were reversed, morale and performance were sustained. Researchers concluded that the secret to achieving significant success lies in socio-psychological factors such as importance, appreciation, attention, involvement, an integrated work community, and undirected supervision.

Bank connection wire monitoring room inspection.

This experiment was undertaken to study the socialization of workers in groups that were as natural as possible in practice. There were fourteen workers in this department. The production records of this group were compared with their previous

production records after the experiment . There were no major improvements in either , as the usual conditions were maintained . However , the researchers noted the existence of informal social groups and informal patterns of development .

included in the bank wiring test findings :

1. Publication is limited to each person .
2. The party has its own " unofficial " victory expectations .
3. Over a period of time , the production of Nair remained relatively stable .
4. Departmental documents are being distorted due to discrepancies between actual and recorded performance or between normal and reported working hours .

Mass Interview Project : Researchers interviewed a large number of employees about their perspectives on jobs , work practices , and supervision. Initially , a direct method was used by managers and researchers , whereby interviewers posed questions that were deemed relevant . This strategy was later supplemented with an indirect method , where interviewers asked workers what they wanted to say . The results demonstrated the importance of social influences on the job in the overall work environment .

Contributions of the Human Relations Approach or Hawthorne Studies

As a result of their observations of the Hawthorne experiments , anthropologists proposed the following ideas :

1. In general , an organization is a social structure with various communication elements . The social structure determines specific responsibilities and sets expectations that may differ from the official structure . Employees are subordinate to a social ideal established by their colleagues , which determines the right task , rather than trying to achieve goals that management believes they should achieve , while this may have helped them earn as much as they actually could .
2. The social culture at work is largely shaped by the workers themselves , not by a single management model .
3. Informal enterprise occurs within a structured organizational structure and is influenced by the formal system .
4. Employees sometimes do not behave or respond as individuals in the workplace , but rather as representatives of communities . If the community of which he is a part changes its behavior , an individual will avoid the pressure to change his behavior as an

organization . One will always change it more easily. Society plays an important role in evaluating the attitudes and decisions of individual employees .

5. There is an appearance of informal leadership towards traditional leadership , and social expectations are set and enforced by the informal leader who encourages him to act as a social network , rendering official employees ineffective for the leader's responsibility because he conforms to the expectations of the group he is supposed to lead .

6. Communication in all directions is important because it brings the knowledge necessary for the proper functioning of the organization and conveys the thoughts and feelings of the people working in the organization upwards .

7. Money is one of the necessary motivations for human behavior , but not the main one . Man is driven in different ways , and socio - psychological variables act as essential motivations .

8. Man's approach is not logical . As long as there are benefits to work , he may act irrationally .

Leadership qualities

Without a doubt , leadership is one of the most discussed, written about , and researched topics in the corporate community . It comes with a sense of control . In every high-performing team, there is one person who is more knowledgeable about the art of leadership than the rest . This ability is a combination of at least four primary components :

(a) the ability to use power creatively and carefully, (b) the understanding that individuals have different motivations at different times and in different situations, (c) the ability to motivate , and (d) the ability to act in a way that encourages reaction and motivation .

(i) Power : The first element of leadership is power . Regulation is the power to influence the behavior of others . The word power means that someone has power even if they do not use it . In most organizational settings , there are five types of control : law , incentive , manipulation , citation , and expert power . A supervisor may have access to one or more of these forms .

(ii) Formal authority : This right is given to the corporate hierarchy . It is similar to the word “ authority ” . All managers have legal authority over their employees .

(iii) Reward Power : Reward is the ability to give or withhold rewards . Generally , the greater the motivational power of a manager , the more perks and rewards he or she administers to his or her subordinates .

(iv) Coercive control : This type of power has the ability to enforce compliance through social , emotional or physical threats . In some isolated settings , coercion may take the form of physical punishment . The more manipulative power a boss can wield , the more anger and hostility he or she may provoke .

(v) Reference power : Unlike other types of control , the influence of references is more limited . It is usually based on recognition or image . That is , followers may respond favorably to a leader because they share certain characteristics with the leader , such as a similar history , mindset , connection , or personality . Reference power often manifests itself in the form of enthusiasm , an inherent trait of a leader's personality that inspires commitment and enthusiasm .

(vi) Expert power : Expert power is derived from knowledge . A scientist who can create a major technological breakthrough or an expert who knows how to handle a significant and rare customer are indicators of expert influence .

(vi) Basic Human Knowledge :

of creativity . It is more important for the manager to adapt them to real people and situations . On the other hand , a planner who understands the principles of inspiration and motivational theories . He knows more about the meaning and strength of individual needs , and is better prepared to identify and design strategies to fulfill and treat them in order to obtain the necessary answers .

(vii) Ability to inspire followers to give their full potential : Leaders are usually motivated to do something when they have enthusiasm and appeal . This inspires loyalty , commitment and strong will in the followers . This is not a case of instant gratification . Rather , it is a case of selfless support of their leader's followers . The most inspiring stories of leadership come from the most difficult and frightening situations . Employees of a dying organization must follow the leader to come forward and solve the problem .

(ix) Opportunity to create an environment that enhances motivation : This element of leadership is related to the personality of the leader and the culture he or she creates . As we all know , motivational success depends largely on factors in the physical and organizational environments . It cannot be denied that creating and maintaining a successful environment is one of the main responsibilities of a manager . Since subordinates, in their view , want to obey those who provide them with the means to achieve their own goals , good managers understand how to motivate their

subordinates and how these motivations work . And they reflect this awareness in their management behavior , which will be very effective .

Different types of leadership

providing guidance , implementing strategies, and inspiring others . These can be divided into several categories :

(i) Authoritarian Management : Authoritarian leadership styles help a leader set standards of success and enforce guidelines . A person may be a show winner in situations where the leader is the most experienced member of the team . While this is a good strategy in time-constrained situations , creativity is lost due to the lack of input from the team . The authoritative model of leadership is often used when detailed guidance is required for team members .

(ii) Participatory Leadership : Participatory leadership models have their roots in democratic theory . It is important to involve group members in the decision-making process . As a result , group members feel included , committed , and empowered to contribute . The leader has the final say in decision-making processes . Finding a solution within a group where there are differences of opinion , on the other hand , is a time-consuming process . Finding a solution where there are differences , on the other hand , is a time-consuming process .

(iii) Delegative Leadership : Delegative leadership , also known as “ Lays - Pair Leadership ” , is based on the initiative of the group members . This can be a positive solution if the group members are willing , willing to take the initiative and are willing to engage in individual work . However , internal differences can divide a group among the participants , resulting in low motivation and commitment .

(iv) Transactional Leadership : To get the job done , transactional leadership structures use “ transactions ” such as benefits , penalties , and other exchanges between a leader and his followers . The leader sets realistic goals , and team members realize how their cooperation can be valued . This ‘ give and take ’ leadership model is more concerned with effectively implementing current practices and procedures within an organization than with initiating any transformative changes .

(v) Transformational Leadership : In transformational leadership styles , the founder inspires his followers by setting a goal , then empowers and supports them to achieve it . The leader often acts as a role model for the vision .

Personality

A person is known by his character traits. A person's personality is determined by those character traits. We call personality personality . Many people have the

misconception that personality is just the external appearance of a person. Personality encompasses the complete features of an individual , not just his specific characteristics. Personality is the assessment of a person's character traits.

Can a person change his personality ? The big question that many people have today. The answer to that question is , " Of course it is possible." A person who is not proud of himself and has an attitude of accepting change can change his personality. The purpose of changing personality is to change from an ordinary life to a successful life.

and difficulties that come in our lives may be truly unbearable. But we should not let those difficulties dominate our personality. If we do so , our life will be headed towards failure.

Behavior , communication skills , relationships with others , and handling human relationships in a better way play an important role in the process of changing a person . Improving such various characteristics and skills is called Personality Development .

Differences between administration and management

Management is the process of maintaining a well-organized life , with the harmonious coordination , supervision , administration and other important activities of the various tasks carried out by the organization . Due to expert management , all the businesses at the top are able to reach the highest position.

of offices , agencies , companies , departments and partners of start-up companies , the term ' administration ' applies to the overall administrative phase , which is the primary function of the company and oversees the business to manage all official , departmental and administrative duties in accordance with proper guidance , regulations and direction . It usually maintains the overall roles , duties , laws and regulations of an organization .

The biggest difference between management and administration is that management refers to getting work done, while administration refers to doing everything well with limited resources and time.

The manager appoints the people who can do the job and how they can do it , but the manager decides when to do it and how to do it.

Commerce

The scholars believe that farming and commerce are the best of a country's industries. For the development of a country, the joint prosperity of these two industries is essential (Sanga Literature-Some Views , p. 141. ' Vian Meval Villuch Selvamthu , Iru

Vagya Viksha Santhan ' , which is the best wealth praised by scholars , is the proof that the two types of wealth, namely farming and commerce, are both famous among the citizens (120,121). The trade industry occupies the leading position among the economic industries. Ancient Tamil trade can be classified as ' domestic trade ' and ' foreign trade ' . Domestic trade mostly involves land-based goods.

was also based on natural products and handicrafts , fabrics, etc. Maritime transport was suitable for foreign trade. Barter and the use of money were the basis of trade.

a country to have markets to sell its products , to distribute the available raw materials and secondary products , and to make them available to all consumers. Furthermore , having good trading places (markets) to export domestic products and to obtain foreign products reflects the development level of a country. In this way , town and city markets play an important role in the distribution of domestic goods , and coastal trading places (pattinams) play an important role in the exchange of foreign goods. In urban systems, separate streets are laid out for all goods , and each product is sold under distinctive flags.

Were done.

Domestic trade

Domestic trade is the establishment of markets in the respective cities and towns with the aim of distributing locally available and produced goods and in a way that meets the consumption power of the people. Such markets operated on a barter system. Their role in fulfilling the needs of the people is essential. This trade system helped in the distribution of regional goods. The domestic trade system was of great help in reaching the people of Kurinji, who crossed the seas, such as salt, marutham, and millet , and in making the paddy of marutham available to the people of other regions .

The bird that the hunter who lives in the forest brings , and the curd that the women of the Mullai land bring. The Maruda land was bartered for rice ,

The hunter of the life-long hunter

The greedy and deceitful daughter of the man who has been deceived

A lot of yogurt has come out.

The resident of the air, Barry Larivier

Deep-fried vanilla bean

The names of the sons and daughters given by the fathers

(Ex. 33:1-6)

It can be seen in.

the kings protected the merchants who sold the various kinds of goods and those around them , ' kulam bhagarnar kudipurand tharaa ' (13:23) . This shows that there were separate people who sold the produce of the land. Apart from the kulam bhagarnar, there were different types of merchants for different types of goods. Various

types of goods such as sea goods , mountain goods , and goods from the Marutha land were also sold , and the golden standard with flags of various colors was observed ,

The sea, the rock, the river, and others

Valambala Probability Nananthalai Nannattu

The thorny vines are the root of the tree.

The golden robe with the golden shade was ordained (Rev. 15:16-19)

The words "sea products" can be understood as a general term for salt , pearls , fish , and other goods obtained by sea from other countries. Similarly , along with the meat of the elephant with its beautiful horn brought by the hunters , the towns with golden streets where they obtain the coat of the powerful elephant that lives in the forest and give them the price of the gold they have earned ,

The hunters in the Kanthalang mine murder

Show me the red line, oh my god.

With a white line drawn on the head

The golden robe is appointed and the turban is given.

The fragrant rose that blooms on the hill

(30:9-13)

The inscription points out.

II. A.(i) Commercial streets

In domestic trade , there are mobile trading systems and fixed trading shops. Food items , flowers (Agam. 60. Nārt. 97. 118. 142) were sold from house to house, and wool , ivory, sorghum, salt , honey , etc. were sold on the streets at a fixed price. Apart from these , daily markets and alla markets were operated in a large commercial system . The sound of these businesses could always be heard.

(5:1-2) shows the streets in Maruvurpakkam where colored powders , sandalwood , agarwood and other incense products are sold ; the streets where the weavers of cotton , silk and wool hang out ; the streets where silk , coral , sandalwood , agarwood , pearls , other gems and gold are piled up in such abundance that it is impossible to measure or know . It is also known that there were many places where the merchants of bitu , the bread bakers , the hawkers who sold the yams , the fish sellers , the salt sellers , the betel leaf sellers , the panchavasam sellers , the meat sellers , the various meat products , and the oil sellers lived close together (Silambu. 5:24-27). Furthermore , a cloth street can also be seen there , where the woven fabrics were so finely woven that the threads were not visible and were stacked in hundreds of layers (Silambu. 14:205-207).

Similarly , the ' street of shops which the king desires ' (Silambu. 14:168) is found separately. Only military equipment and many expensive items desired by the king were sold on those streets. Here , a covered cart , a wheel with two wheels , a beautiful chariot , armor suitable for entering the body , a desirable beaded bracelet , a leather palm , a curved stick , a very white camel , a boar's face , a picture of a hawk , a picture of a wild boar , daggers , things made of copper , things made of bronze , things

finished with rope , things made into garlands , tools such as swords , things made of ivory , things for incense , things for hair paste , and garlands made of flowers were found everywhere (Silambu. 14: 168-179).

, where merchants roamed everywhere , carrying a measuring instrument called a balance , a measuring stick , and a wooden stick, stood alone, with many gold coins piled up along with large bundles of pepper even in the past (Silambu: 14:208-211). The gold merchant , who distinguished the differences in the nature of gold, which is divided into four types: plain , gilded , gilded , and gilded , and who, to relieve the buyers of the distress of asking , " Where is it ?" , " It is here! " was seen alone (Silambu: 14:201- 204) . The street selling various kinds of precious gems (Silambu: 14:180-200) also stood alone, with its flag.

that the one who cuts conch shells and makes them into bangles , the one who drills holes in beads , the one who sees the texture of gold , the one who sells saris , the one who buys and sells copper, the one who finishes the kachas , the one who carefully examines and sells flowers and sandalwood , the one who paints and paints various kinds of crafts , the one who does the weaving trade, all gathered together and stood one foot next to the other in four different streets (511-522).

II a (ii) Worker locations

Along with streets where various goods were sold, there were separate living quarters for various occupations. Since the number of workers for each occupation was large , separate living quarters were established for each occupation to live together.

The smiths who made bronze vessels , the copper vessels , the carpenters who cut wood and worked , the blacksmiths with strong hands, the painters, the goldsmiths , the jewelers, the tailors , the leather workers, the weavers, the netters, the various tribes who made various shapes out of cloth and net, and who showed off their beauty and made flawless crafts, lived in separate places (Phil. 5:28-34).

of various kinds of fish. A seller of white salt , a vendor of sorghum , a merchant of bread , a meat vendor ; a potter , a maker of copper vessels. A maker of bronze vessels. A goldsmith. The street where the carpenter who cuts wood , the sculptor who is an expert in sculpture , the tailor who is a tailor , and the garland maker live , the street where the pearl gatherers who are seen with their hands cutting white conch bracelets live , the street where the various types of grains (grains) are piled up in different parts , the street where the artisans who weave clothes with many colors live in prosperity with fine threads that are rare to see with the eye , the street where the good houses of the one who interprets the meaning of gold are located , and the street where the sellers of various kinds of beads are located are all located in the city of Kachchi (Mani. 28:29-61). Similarly , the Great Panathru Banda also shows that separate settlements were established according to the nature of the occupation (129, 166,191, 253, 274,301,323, 355).

II. A (iii) Commercial vehicle

Donkeys and carts were used in domestic trade.

Mules called ' Atri ' were brought from foreign countries for use as vehicles (Agam. 350:6.7: 120:10.11: . 273:7-9). The trade caravans were collected by carrying the upper loads on the backs of the mules (Agam. 343:12-15).

* The Umanas carried salt to other places through the Sakadam (salt carts) (Nak. 4:7-10). The Neital ground salt was not only carried in carts. They carried it in bundles on donkeys to the towns in the west (Agam. 207:1-6).

* The merchant caravan carried bundles of pepper tied in small packages the size of jackfruits on donkeys. In between, customs duties were paid at the toll booth (Perumpan. 77-82).

II B. Foreign Trade

The development of foreign trade plays an important role in boosting the domestic economy. Maritime transport was an excellent means of foreign trade . Literature indicates that the ancient Tamils excelled in maritime trade. The Tolkappiyam also mentions the sea voyages of the Tamils (980 BC). ' Along with land trade, the Tamils also engaged in maritime trade. There are two types of maritime trade , coastal trade and mid-sea trade ' (Pandaith Tamilar Vanigam , p. 154). The person who worked as a boatman on the sea was called ' Meekamar ' . Those who worked as sailors were known as Bharathavar and Bharathar (Sanga Illakayam Silapaaagakal , p. 161).

The Arabs went to places like Tamil Nadu and bought fine clothes , silk saris , glassware , perfumes , agarwood , rhinoceros horn , pearls , sandalwood, etc. and loaded them on their ships. When the monsoon winds blew, they bought pepper , cardamom , cloves , ginger , sandalwood , acacia , teak , pearls , vitriol , fine clothes , silk fabrics, etc. with great pleasure and sold them in places like Alexandria , Basra , Mosul , Iraq , Baghdad , Asia Minor and made a good profit, says Marco Polo (Nammnattu Kappal Kalai , p. 200).

Nadu during the Sangam period had commercial and cultural relations with many overseas countries. The historian Kattuvar says that there was a connection with the Sumerian country as early as the fourth millennium BC (History of the Tamils. PT Srinivasa Iyengar. □ 38-39). Goods brought from the western coast of India to Egypt were taken. Gold , silver , muslin clothes. Precious gems , copper. cinnamon. Ebony wood were the trade goods. (Social Organizations in Sangam Literature , p. 287). PT Srinivasa Iyengar says that the Arabs hid the fact that cinnamon was an Indian product from others (History of the Tamils, P.98-99). The ports excelled in export and import. The ports of Kaveripoompattinam (Puram. 30:10-14; Pattinap. 129- 136), Musiri (Puram. 343:1-8) and Korkai (Maduraik. 135-138; Sirupan. 56- 58: Agam. 27:8,9; 130:9,10; 201:3-5; Nat. 25:5,6) were prominent during the Sangam period.

Those who engaged in sea trade were called Navikar. Great sailors who engaged in sea trade were called ' Manavikar ' . This name was later changed to

Manaiyakar (Sanga Literature, Some Views , p. 155). Those who excelled in sea trade were given the title ' Yetti ' (Silambu. 15:163,164, Man. 22:111-114). The ancient Tamils excelled in barter and maritime trade.

Fish and rice

Misaiyambi's marriage proposal

With a curry sauce

The calm shoreline is calm and peaceful.

Kalamdan Gold Award

The ferryman is a boatman.

Mountain and sea life

He who comes with his head bowed down (Pur. 343:1-8)

The lyrics show that rice was obtained as a substitute for fish , that bundles of pepper were stacked along the shore for export , that imported goods such as gold coins were brought ashore from the fields in boats , and that the island was filled with products grown in the mountains and products grown in the sea.

This song is a great example of the commercial excellence of the ancient Tamils. ' The economic progress of a country is supported by the income generated by that country's exports. Although our country has made progress in various fields, the export target is high only in some sectors ' (Punjab , February 2005, p. 31) with the current situation. If we look at the above evidence, the development of the foreign trade relations of the ancient Tamils will be clear.

Likewise ,

The kneeling sea, the radiant kiss

The eyes that are filled with wonder and delight

The various gifts given by Bharata of Lanka

The whiteness of the dark sky is like a fire.

The vast and deep drawing of the violent darkness

Kozhumeen Kuraiya Thudikan Cloth

The great water gushes forth with a sublime tongue.

The best of the best of the best

Everything with the Lord who brought it together

Every Vaikala is a path to success

(Maduraik.

315-324)

Under the song , the beauty of the beach can be seen, along with the Tamil wooden boats loaded with sea pearls, bangles, various goods, incense, white wine, and spices, ready to go to foreign lands , the horses carrying the boats from the Yavana countries, and many others.

A ship carrying goods from abroad arrives at the shore. The goods are carried away by fishermen and salt workers , and the goods are scattered all over the way

(Exod. 30:11-15), and it is known that wine was imported from the Yavanas (Exod. 56:18) .

The sea, which has come from the ocean with its sweet-sounding waves , a vast expanse of land where the wealth of good vessels is stored , and a forest with the sweet scent of palm trees stands ,

The melody of the song is auspicious.

The good-natured, hateful, and hateful Bandarak

The golden-leafed canal is wide open.

The image of the sea is a beautiful picture

(Psalm 55:3-

7)

The footprints show that goods were collected on the coastal trade route and then transported to various parts of the country. Similarly , large, noisy vessels that floated on the sea to bring rare goods from other countries ,

The water of Arungalandar Dhariyar will quench the thirst.

The great wind blows in the direction of the wind

(Psalm 52:3-4)

The words are striking. Furthermore , the fearsome tongue , which seems to be stirring up the whole world, is torn between the waters of the great ocean with waves that smell of poison , and the wind, which does not stay in one place day or night, moves swiftly , and the boat is steered by the wind, which is a natural force , and the boatman guides the boat in a wide field with a high shore, knowing its place by the light on the deck (255:1-6). Furthermore , the great ship that was carrying goods that reached the sky ,

The sky is full of love.

.....

Golden-colored sliver

Good morning,

The great poet of Mati (75-83)

Maduraikanchi also shows that. Similarly , the ships that carried pearls , bangles , pottery , salt , carob , black cumin etc. to foreign countries ,

The kneeling, radiant kiss

.....

The sublime voice of Perun is a reminder.

.....

The merits of each lineage

(Madurai 315-324)

The steps show.

The waterways connecting the port were well maintained. They built canals to connect the Black River to the sea , and the river to the clear sea, which was a major waterway (Puram. 400:20-23). Furthermore , lighthouses were built to guide ships sailing on the sea and to identify coastal towns. These were illuminated at night (Perumpan. 349-351).

unloading goods brought from abroad and for selling local goods to foreigners. The Maduraikanchi shows that the noise made in the town due to the arrival and departure of many goods in wooden boats , and the noise made by the merchants who came from abroad negotiating the price of the ornaments, were like the sounds made by various kinds of birds (536-544). The foreigners bought the ornaments. They went to buy more. The author says that ' the merchant's eyes turned away ' (Madurai. 539) . The Perumpanathrupadi calls the city surrounded by commercial vessels ' a smooth water covered with boats ' (321) . The literature also contains many references to trade relations with the Greeks (Mullai. 61; Perumban- 316: Pat. 2: Agam:- 5:149:9; Nedunal. 101-2: Puram. 56:18).

Fine silks from the coast of Tamil Nadu went to the Persian Gulf and Babylonia (Social Organizations in Sangha Literature , p. 286). The historian cites the views of Schapp, who speaks about the trade that took place between Egypt and India. ' Thousands of years before the Greeks reached civilization, trade continued between Egypt and the old countries of India in the Persian sea. The Arabs and the ancestors of Phoenicia and the Greeks became intermediaries in this trade. As a result of the development of Indian civilization , which led to a rapid sea trade, trade with Africa and other countries flourished. The Arab merchants did not allow Tamil merchants to cross the Red Sea. The Arab merchants , who obtained precious stones and spices from the Tamil merchants , went to Egypt and made a lot of money. It is said that it was Lord Bharata who brought these goods from South India. E.M.S. Namboothiripad says in his book Tamil Culture in Southeast Asian Countries (Social Organizations in Sangha Literature p. 286).

Hunger

In the maritime area , the occupations of the land dwellers include salt production , fishing , processing of fish, weaving, etc. These occupations were carried out continuously. In the coastal areas, ships passing through the sea for trade purposes are seen in the seaports. Boats carrying goods are seen in the rivers next to the sea. To announce the destination of the ships going to the sea at night, lights are placed on the tops of high towers. Goods were loaded and unloaded from water to land and from land to water. It is known that the Chola tiger's attack was engraved on the bags of the unloaded goods in the seaport of Kaveri. ' The Periplus mentions the ports of Tondi , Musiri , Thenkumari and Korkai ' (Sangam Literature in Social Structures , p. 310).

In this city , gems and gold from the North Mountains , aram and akil from the Kudamalai , pearls grown in the South Sea , goods from the Ganges , goods from the Cauvery, Eelam , Kalagam and other foreign goods from across the sea were all piled up. The places where Greeks like the Yavanas and Milesians came and stayed for the purpose of trade were also found in this coastal area. The settlements of the people who came and stayed for the purpose of trade were located along the coast. Waterborne trade was flourishing. People speaking many languages settled in this city.

**The language has multiplied, and the blame has been laid on thee.
The sweet taste of the sweet potatoes mixed with the sweet potatoes
The Path of the Foolish (Pattinap. 216-218)**

This can be found in.

Like the Kaveripoombattinam, the port cities of Korkai , Musiri , and Thondi were also famous for foreign trade. The port of Korkai was famous for the export of pearls , and the port of Musiri for the export of pepper . The ships of the Western countries used to come and go to these port cities. The ships of the Yavanas came with gold and carried pepper ,

**The vessel of honor given by the Yavanas
Come with gold and be covered with curry leaves.
The rich man is a rich man (Psalm 149:8-10)**

That has been recorded.

The ancient Tamils were proud of their trade relations with the Western and East Asian countries and gained wealth. They were very involved in maritime life. This gave them the opportunity to interact with people from different countries and to experience their lifestyles and lifestyles firsthand. People from different countries lived in the cities and towns of Tamil Nadu, speaking many different languages (Pattinap. 214-217).

Other ports

Many ships were gathered at the port of Maruvur Pakkam in Bukhara. The flags of their respective countries hoisted on the masts of the ships swayed in the wind , and the looms they had tied were swayed by the waves , like elephants swaying incessantly

This ,

**Like the joy of the dawn
Thimphukar Screen Front
Sleep, you are lying down.
The flag of the falcon (Pattinap. 172-175)**

Literature shows that.

Poets praised the famous Poompuhar port in ancient times. Large ships entered the port at the mouth of the river without untying the ropes tied to the cones and easily unloaded the goods piled up like mountains on the shore. The poet Uraiyyur Mudukannan Sathanar, while praising the Chola Nalangilli, has described it as follows.

**The beekeeper does not weed, nor does he dig up the weeds.
The great flood that entered the city
The middle path of the desert (Ex. 30:11-13)**

tpdhf;fs;

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t.vz ;	le;J kjpg;ngz; tpdh	LOCF Mapping		
1	Nkyhz;ikj; jj;Jtq;fs; Fwpj;JvOJf.	K2	CO 2	PO4
2	njhopyhsh; gfph;tpy; cs;sed;ikfs; what?	K 3	CO3	PO5
3	jyikj;Jtj;jpd; gz;Gfistpsf;Ff.	K 4	CO4	PO1
4	MSikj;jpwd; vd;why; vd;d?	K 5	CO5	PO2
5	eph;thfj;jpw;Fk; Nkyhz;ikf;Fk; ,ilNacs;sNtWghLfs; what?	K 1	CO4	PO3

t.vz ;	vl;L kjpngz; tpdh	LOCF Mapping		
1	jw;fhyjkpo; rKjhaKk; Nkyhz;ikAk; Fwpj;Jfl;Liutiuf.	K2	CO 1	PO4
2	goe;jkpo; El;gq;fs; Fwpj;Jtphpf;f.	K 1	CO 2	PO 6
3	Rw;Wr;#oypaYk; tho;tpaYk; Fwpj;JvLj;Jiuf;f.	K4	CO 2	PO5
4	jyikj;Jtgz;Gfs; Fwpj;JtphthfnjhFj;Jiuf;f.	K3	CO 4	PO 6
5	rkhfyiyfspd; tsh;r;rpgw;wpfl;Liutiuf.	K5	CO1	PO 3

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Expected Course Outcomes		
Students will gain the following benefits from studying this subject .		
On the successful completion of the course, students will be able to		
CO 1	ving success in life by utilizing the management ideas of Tamils.	K2
CO 2	ring personality skills	K3
CO 3	rstanding financial management	K4
CO 4	ng the ability to properly manage human resources	K6
CO 5	course will help you become self-employed/develop as a CEO.	K3
Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 - Create		

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2
CLO1	2	3	3	1	2	2	2	3	2	3	2	3
CLO2	2	3	2	3	3	3	2	1	3	2	3	2
CLO3	3	3	3	2	3	3	3	2	3	3	3	2
CLO4	3	3	2	3	3	1	2	2	2	3	2	3
CLO5	3	2	3	3	3	2	3	3	3	1	3	2

