

## **CHAPTER 3**

### **RESEARCH METHODOLOGY AND PROFILE OF STUDY AREA**

#### **3.1 METHODOLOGY**

Research methodology involves “The activity of research is how to proceed and how to measure the progress and what constitutes success” (Perez, 2017). The Merriam Webster online dictionary defines research as “studious inquires or examination, especially an investigation or experimentation aimed at the discovery and interpretation of fact or practical application of such a new or revised theory or the law”. It describes that the purpose of the research is to discover answers to the question by applying the scientific procedure.” The research methodology is a systematic method to solve a research problem. It includes concepts such as paradigm, phases, and quantitative or qualitative techniques used in analyzing the data. The concepts discussed in earlier chapters and the reviews of previous research studies form the basis for constructing the methodology used in this study. A description of the research design, data and sampling design, and the tools used for analysis are presented in this chapter.

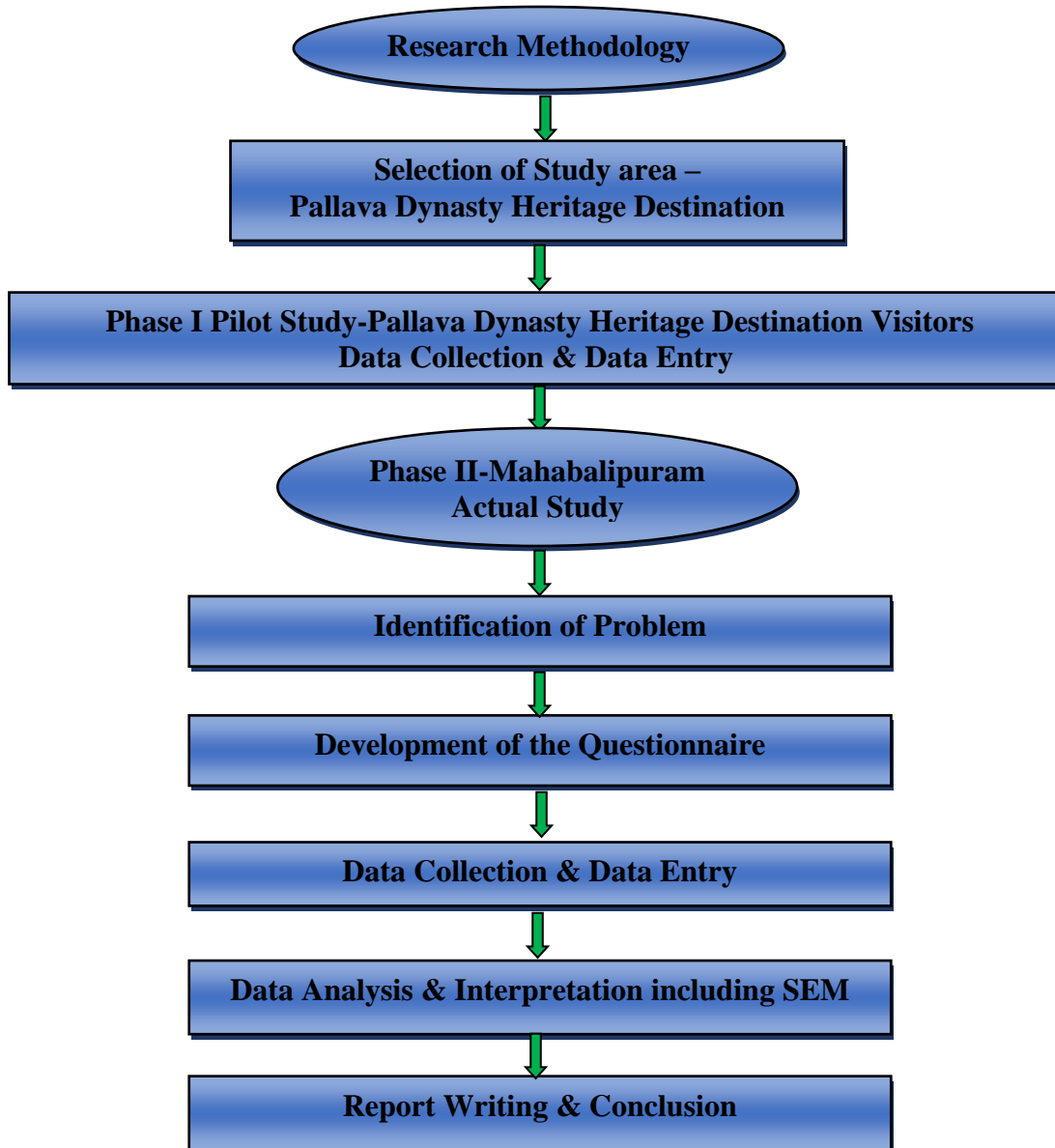
#### **3.2 DEFINITION**

According to Grinnell (1999), “research is a formal, systematic, intensive process of carrying on the scientific method of analysis”. It involves a more systematic investigation, usually resulting in some formal records of procedures and reports of results or conclusions. Kothari (2004) defined as “research is the pursuit of truth with the help of study, observation, comparison, and experiment; the search for knowledge through an objective and systematic method of finding solutions to a problem”.

#### **3.3 RESEARCH DESIGN**

The research design is intended to provide an appropriate framework for the study. A very significant decision in the research design process is the choice to be made regarding the research approach since it determines how relevant information for a study will be obtained; however, the research design process involves many interrelated decisions (Aaker et al, 2000). Research design positions for planning the approaches to be adopted for collecting the relevant data and techniques for their analysis.

**Figure 3.1. Research design of the current research study on Destination Image, Visitor Satisfaction and Destination Loyalty in Heritage Tourism:  
A Case Study of Mahabalipuram**



(Source: Primary data)

A descriptive research design is used for the study where the questionnaire was given to the respondents to gather information systematically. For a better understanding concerning the behavioral styles of the respondents, analytical research is also utilized for the study where the hypothetical relationship between the variables could be recognized. The research design of the current research “study on destination image, visitor satisfaction and destination loyalty in heritage tourism” is represented above in Figure 3.1.

### **3.4 SOURCE DATA**

The researcher had used primary and secondary data for the study. A structured questionnaire was intended as a primary research instrument and circulated among the visitors of Mahabalipuram for their feedback. Further coding and analysis were done for each responded question, arrive at the findings, suggestions, and finally, conclude the research topic.

#### **3.4.1 Primary Data**

Primary data are collected by the researcher for the particular research work, and happens to be original in character. Primary data were collected by means of a structured questionnaire with multiple-choice questions from the visitors of Mahabalipuram.

#### **3.4.2 Secondary Data**

The secondary sources already collected by previous researchers from published books, articles, journals, internet, and published survey reports of various countries on heritage tourism, destination identity, visitor satisfaction, and destination loyalty and sustainable tourism development.

### **3.5 QUESTIONNAIRE**

A questionnaire contains several questions printed in a particular order or methods to collect the attitudinal measures of the respondents. The scaling technique used in the research method for the questionnaire is a five-point Likert scale. It includes the points like strongly agree, agrees, neutral, disagree, strongly disagree, ranging from Five to One.

### **3.6 RESEARCH INSTRUMENT**

To study the objectives and to test the hypotheses, a structured questionnaire was used as a tool to collect the data. The survey for visitors has been separated into five aspects to accomplish the objectives of the study. The first section focuses on the demographic characteristics of visitors and the second section focuses on travel characteristics & travel patterns of the visitors. The third section captures the visitor's awareness of the heritage identity of the destination. The fourth section studies the visitor's satisfaction by measuring the factors of destination image, service quality, perceived value, and destination loyalty at Mahabalipuram.

### **3.7 SAMPLING DESIGN**

According to Suganda Devi (2017), "a sample design is a definite plan for finding a sample from a given population, which refers to the technique or a procedure the researcher would adopt in selecting an item for the sample". The sample design deals with the method of selecting the item to be observed with the given study. The sample design is determined before the data collection. A Non-Probability sampling technique, namely simple random sampling, was adapted to pick the sample respondents. The respondents were selected based on the interest in a specific field and willingness to participate in the interview and collected for a period from September 2019 to February 2020. Determining the correct sample size is a complex process, as a sample should not be too large or too small (Kapoor & Kulshrestha, 2010). The sample size denotes the number of items to be selected from the universe to constitute a sample. The sample size is the number of individuals or elements that need to be included in a study to represent the entire population (Malhotra, 2010). The researcher has taken visitors' arrival data from 2015 - 2019 and calculated the average tourist arrival data to arrive at the population for the study. Using the above calculation, the population for this study was ascertained to be 32,00,00 visitors. A minimum sample of 385 respondents has been arrived at 95 percent confidence level with 5 percent significant level. Though the minimum sample size thus arrived at was 385, the researcher chose to study a sample of respondents' 50 percent higher than the minimum sample size. Therefore, the final

sample collected was 625. Incomplete questionnaires were rejected, and 611 completed questionnaires were considered for the study.

### **3.7.1 Cochran's Sample Size Formulae:**

The Cochran formula allows us to calculate an ideal sample size given a desired level of precision, desired confidence level, and the estimated proportion of the attribute present in the population.

The formula used to arrive at the sample size is,

$$n = \frac{X^2 * N * P * (1-P)}{(ME^2 * (N-1) + [X^2 * P * (1-P)])}$$

Where;

n = Sample Size

X<sup>2</sup> = Chi-Square for the specified confidence level at one degree of freedom

N = Population Size

P = Population Proportion (0.50 for this Table)

ME = Desired Margin of Error (Expressed as a Proportion)

### **3.8 PRETESTING AND PILOT STUDY**

A pilot study was conducted at Pallava dynasty heritage destinations with data collected from 250 respondents, and all statistical analyses were carried out. The results revealed the relationship between the variables used for the study. Data reliability test was carried out based on the responses and personal observations of the researcher; necessary changes were incorporated in the interview schedule.

### **3.9 RELIABILITY AND NORMALITY TESTING OF DATA**

#### **3.9.1 Reliability Testing**

Validity explains how well the collected data covers the actual area of investigation (Ghuri and Gronhaug, 2005). Validity means measure what is intended to be measured (Field, 2005). Testing for reliability is essential as it refers to the consistency across the parts of a measuring instrument (Huck, 2007). The most commonly used

internal consistency measure is the Cronbach Alpha coefficient. It is viewed as the most appropriate measure of reliability when using Likert scales (Whitley, 2002 & Robinson, 2009). Reliability concerns the extent to which a measurement of a phenomenon provides stable and consistent results (Carmines & Zeller, 1979). Therefore, by analyzing the data, its reliability should be measured to ensure consistency in the data collected and generalize the results. To analyze the objectives framed, data were collected from the visitors of the heritage destination Mahabalipuram. The following table gives the reliability of various factors under study. The total number of factors in the questionnaire is six, hence 'N' of items in the below Cronbach's Alpha test is six. Each factor has variables related to the N number of variables /items in the questionnaire, including fifty-nine items, among which fifty are Likert scale items, and nine are demographic factors.

**Reliability Coefficient of various constructs**

**Table 3.1. Test of Reliability**

| <b>Reliability Statistics</b> |            |
|-------------------------------|------------|
| Cronbach Alpha                | N of Items |
| 0.908                         | 61         |

(Source: Primary data)

In the above table 3.1, the reliability coefficient is 0.908 (close to unity). This confirms the reliability of factors and hence the survey as a whole. The data collected from visitors were analyzed by applying a parametric test, A basic but a strong assumption on which the P test based on is normality i.e. data should have come from normal population.

**3.10 TOOLS USED FOR ANALYSIS**

Data were analyzed using SPSS (statistical package for social science) version 21.0 with descriptive statistics such as Frequencies, Mean Descriptive Statistics, ANOVA with Post Hoc, Z- Test, Factor analysis, and SEM (Structural Equation Model).

### **3.10.1 Frequencies**

A frequency is a distribution generally issued for looking at detailed information on nominal (category) data and describing the results. It is used to obtain counts on a single variable value and can be included in a summary table of descriptive statistics. It can be shown as absolute frequencies and relative frequencies. Absolute frequencies provide the exact number of observations, whereas relative frequencies calculated as the number of views divided by the total size of the category (Christopher et al., 2017).

### **3.10.2 Mean**

Mean, which is also known as arithmetic average, its principal use consists of summarizing the essential features of a series and enabling data to be compared. It is agreeable to algebraic management and used in further calculations (Kothari, 2004).

### **3.10.3 T-Test**

A T-test is a statistical test used to compare the means of two groups. The *t*-test is any statistical hypothesis test in which the test statistic follows a Student's *t*-distribution under the null hypothesis. A *t*-test is the most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistics (under certain conditions) follow a Student's *t* distribution. It is often used in hypothesis testing to determine whether a process or treatment affects the population of interest or whether two groups are different from one another. To compare more than two groups or multiple pair wise comparisons, ANOVA test or a Post-hoc test is performed (Kothari, 2004).

### **3.10.4 ANOVA**

Analysis of variance (abbreviated as ANOVA) is an extremely useful technique concerning researches in the fields of economics, biology, education, psychology, sociology, and business/industry and researches of several other disciplines. This technique is used when multiple sample cases are involved. The ANOVA technique is important in all situations where one can compare more than two populations. ANOVA is essentially a procedure for testing the difference among groups of data for homogeneity.

There may be variation between samples and also within sample items. The basic principle is to test for differences among the means of the population by examining the amount of variation within each of these samples, relative to the amount of variation between samples (Kothari, 2004). One-way ANOVA is administered to find the difference between the various constructs and demographic factors among the visitors of Mahabalipuram. The demographic factors taken for the study are education, occupation, income, travel pattern, travel companion, source of information, and mode of transportation.

### **3.10.5 Exploratory Factor Analysis (EFA)**

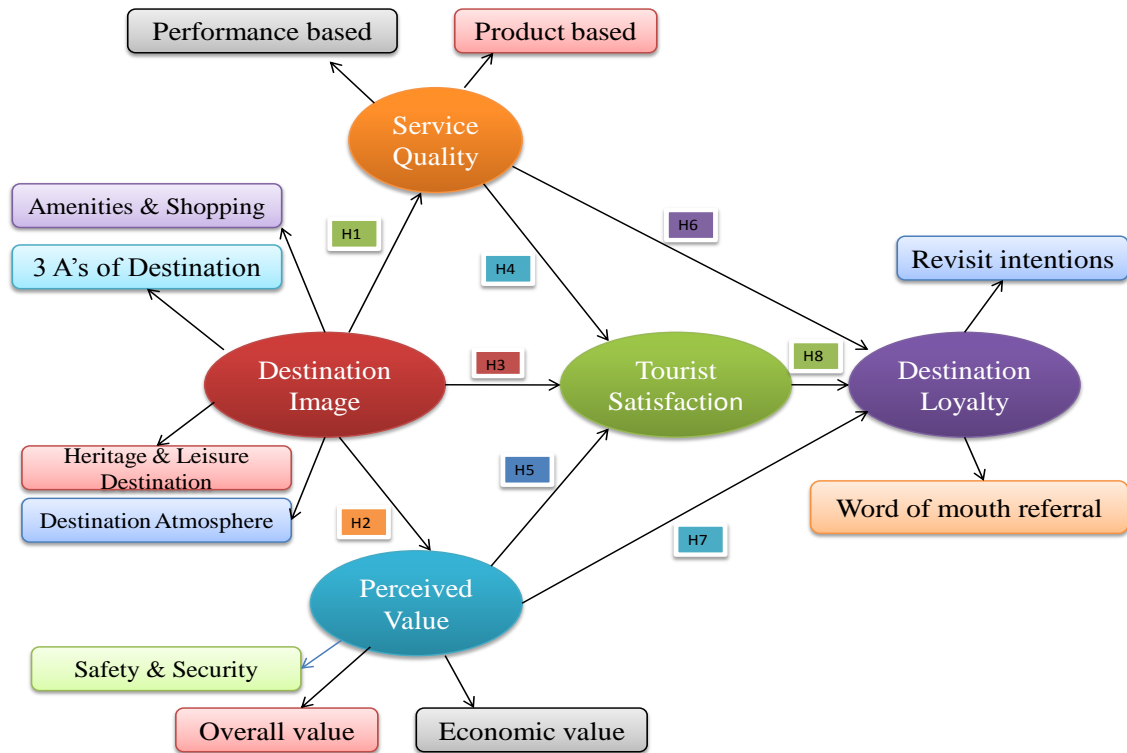
In multivariate statistics, exploratory factor analysis is a statistical method used to uncover the underlying structure of a relatively large set of variables. EFA is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables. Factor analysis helps decide a broad set of variables in terms of relatively few categories known as factors. This technique allows group variables into factors so consequential as new variables and their resultant value by summing the benefits of the original variables (Kothari, 2004).

### **3.10.6 Structural Equation Modelling (SEM)**

Structural equation modeling (SEM) is a statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a fundamental theory bearing on some phenomenon (Bentler, 1988). Structural equation modeling (SEM) is a methodology for representing, estimating, and testing a network of relationships between variables (measured variables and latent constructs).

### 3.11 CONCEPTUAL MODEL

**Figure 3.2. Conceptual Model of Destination Image, Visitor Satisfaction and Destination Loyalty for Sustainable Heritage Tourism at Mahabalipuram**



(Source: Primary Data)

### 3.12 HYPOTHESIS TESTING

The following hypothesis were framed by the researcher for the present study

H<sub>1</sub>- More favorable the destination image, higher the perceived service quality.

H<sub>2</sub>- More favorable the destination image, higher the perceived value.

H<sub>3</sub>- More favorable the destination image, higher the overall satisfaction.

H<sub>4</sub>-Service quality has a direct positive effect on overall satisfaction.

H<sub>5</sub>-Service quality has a direct positive effect on destination loyalty.

H<sub>6</sub>-Perceived value is a direct antecedent of overall satisfaction.

H7-Perceived value is a direct antecedent of destination loyalty.

H8-Tourist satisfaction has a direct positive effect on destination loyalty.

### 3.13 DEVELOPED INDICATORS AND ATTRIBUTES

**Table 3.2. Developed Indicators and Attributes**

| Indicators                              | Attributes   |
|---|--|
| Destination Image<br>(Kim et al., 2013) | Exciting heritage destination                      |
|   | Easily accessible destination                      |
|   | Different modes of transportation are available    |
|   | Guides services available                          |
|   | Well defined signboards and parking                |
|   | Suitable accommodation                             |
|   | Clean and tidy environment                         |
|   | Convenient shopping                                |
|   | Variety of cuisines                                |
|   | Friendly local people                              |
| Service Quality<br>(Chen et al., 2007)  | Service people are competent                       |
|   | Service people are reliable                        |
|   | Service people understand needs                    |
|   | Service people are easy to contact                 |
|   | Quality of tourism product                         |
|   | Quality of food                                    |
|   | Quality of lodging facilities                      |
| Perceived Value<br>(Chen et al., 2007)  | Good results as a leisure cum heritage destination |
|   | Must see heritage destination of South India       |
|   | Reasonably priced arts and crafts                  |
|   | Reasonably priced accommodation and food           |
|   | Destination is reasonably priced                   |
|   | Modes of transportation are affordable             |

| <b>Indicators</b>                               | <b>Attributes</b>   |
|---|---|
| Visitor Satisfaction<br>(Valle et al., 2006)    | I am satisfied with the visit to Mahabalipuram                            |
|   | Satisfied with the destination considering the time and effort I invested |
|   | Satisfied with Mahabalipuram tour compared with my expectations           |
| Destination Loyalty<br>(Cruz Ruiz et al., 2018) | High likelihood of revisiting   |
|   | Plans to revisit  |
|   | Say positive things   |
|   | Recommend to others   |
|   | Refer Mahabalipuram destination to other people                           |

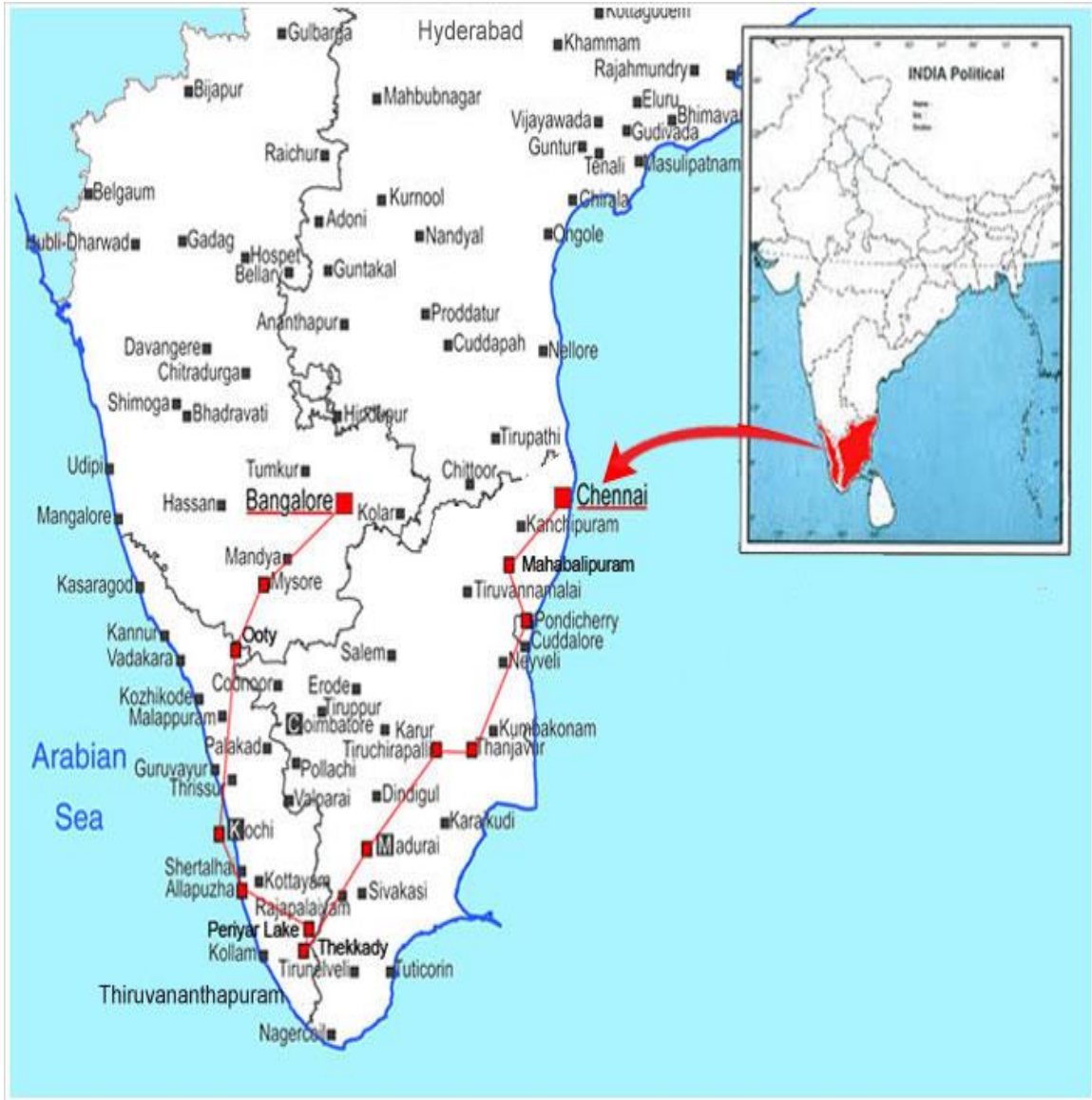
(Source: Primary data)

### **3.14 PROFILE OF THE STUDY AREA**

#### **3.14.1 Location**

Mamallapuram, also known as Mahabalipuram or the land of Seven Pagodas, is a historic town situated in the northeast Tamil Nadu state, Southeastern India. It lies along the Coromandel Coast of the Bay of Bengal 37 miles (60 km) south of Chennai (Madras). As of 2001 Indian census, Mamallapuram had a population of 12,345. Males constitute 52 percent of the population and females 48 percent. Mamallapuram has an average literacy rate of 74 percent, higher than the national average of 59.5 percent; also male literacy is 82 percent, and female literacy is 66 percent. The latitude of Mamallapuram is 12.626927, and the longitude is 80.1927109. It is located between 12°37'36.94"N and 80°11'33.76"E. The monuments are reachable by the four-lane, divided East Coast Road and Rajiv Gandhi Salai (State Highways 49 and 49A). The nearest airport is in Chennai (IATA airport code MAA). The city is connected to the rest of India through a rail network ([www.mapsofindia.com](http://www.mapsofindia.com)).

**Figure 3.3. Location Map of Mahabalipuram**



(Source: Archaeological Survey of India (ASI))

### **3.15. HISTORY AND CULTURE OF MAHABALIPURAM**

Mahabalipuram is known for its world heritage site complex of a Group of monuments of the Pallava Period. Most of the monuments at Mahabalipuram are rock-cut and monolithic. They denote the early Dravidian architecture and have inculcated in themselves the Buddhist elements of architecture. The Pallavas bridged the transition from rock-cut architecture to structural stone temples. Mahendra Varman I gloried in the

construction of temple without the use of bricks, timber, metal or mortar. He built a number of rock-cut mandapas with simple pillared halls. The main feature of the front facade is a row of pillars each 7 feet high, the shaft being square in section with a 2 foot side above and below and the corners chamfered in the middle third to give an octagonal section. A heavy bracket provides the capital. In the earliest examples at Mandagappatu and Trichinopoly, there is no cornice above the pillars, but later roll moulding was added as at Pallavaram. Mahendra Varman I successor Narsimha Varman I (Mahamalla) built the rock-cut mandapas at Mamallapuram (Mahabalipuram). Narsimha Varman also built monolithic rathas popularly called the seven pagodas.

Narasimhavarman was succeeded by his son Mahendravarman II, who ruled only for a period of two years from AD 668 to 670. Narasimha Varman II, who ruled for 28 years from about AD 700-728, assumed the titles of Rajasimha (lion among kings), Agama Priya (lover of scriptures), and Shankara Bhakta (devotee of Siva). True to his title of Shankara Bhakta, he built the Kailasanatha temple or Rajasimha Varam at Kanchi, the Siva temple at Panamalai, and a famous shore temple at Mamallapuram. Pallavas entered into a matrimonial alliance with Dantidurga of the Rashtrakutas. Because of the marriage, Dantivarman was born, who became the successor of Nandivarman Pallavamalla. The construction of the Vaikunta Perumal temple at Kanchi and the patronage of Tirumangai Alwar suggest that he must be a Vaishnavite. He is also said to have built a temple at Kanchi known as Paramesvara Visnagaram and a Kesavaperumal temple at Karam (Dola, 2015). The social structure of the Pallava period witnessed the growing impact of the Aryan culture. The site has 40 ancient monuments and Hindu temples, including Descent of the Ganges or Arjuna's Penance – one of the largest open-air rock relief in the world.

**Figure 3.4. Mahabalipuram “The Legend of Seven Pagodas”**

**PRECIOUS STONE:** The famous shore temple at Mahabalipuram

**TEMPLE SPIRE**  
The topmost point of the temple which had toppled southwards

**LION SCULPTURE**  
Two-ft-tall sandstone statue of a rearing lion, the symbol of Pallava king Rajasimha

**ROOF STONE**  
It adorned one of the four corners of the temple

**THE BIG ONE**  
The granite temple found beneath the ground is a five-tier structure, larger than the existing shore temple

**SPLENDOUR IN STONE**  
Built in the reign of Rajasimha, it has survived a millennium

**SEA TRADE**  
Maritime commerce with southeast Asia flourished and ships docked at Mahabalipuram

**TAMIL INSCRIPTION**  
The oldest yet found in Mahabalipuram, it reads *cika malla eti*. "Malla" was a title of Pallava kings.

**TERRACOTTA RING WELL**  
It was found sunk in the sand outside the temple entrance

**WHY THEY SANK**

**SEA ACTION:** The temples might have been felled by tidal waves

**SINKING BASE:** Foundation made of soft soil must have given away

**SHAKEN SHRINE:** An earthquake could have toppled the temples

**THE PALLAVA DYNASTY**  
At its zenith in the 8th century A.D., the Pallava kingdom covered a swathe of south India. The reign saw rock-cut shrines evolving into structural temples.

**CHENNAI**  
**Mahabalipuram**

**THEN**  
How it looked in 8th century A.D.

**LITTLE WONDER**  
The second, smaller shrine is further into the sea

**NOW**  
Only one temple stands on the coast

**SEARCH MISSION**  
The first dives by the ASI early this year yielded huge stone blocks hewn by men. Similar excavations on the shore revealed the ruins of the temples.

**Divers of the ASI-Indian Navy team**

(Source: [www.mapsofindia.com](http://www.mapsofindia.com))

### **3.16. HERITAGE IDENTITY OF MAHABALIPURAM**

The city of Mahabalipuram was founded by the Pallava king Narasimhavarman I in the 7th century AD. The mandapa or pavilions and the rathas or shrines shaped as temple chariots are hewn from the granite rock face, while the famed Shore Temple, erected half a century later, is built from dressed stone. The town has a collection of 7th and 8th-century Hindu religious monuments that have been declared as a UNESCO World Heritage Site. The site has 40 ancient monuments and Hindu temples, including Descent of the Ganges or Arjuna's Penance – one of the world's largest open-air rock reliefs. The site includes several categories of monuments: ratha temples with the architecture of monolith processional chariots built between 630 and 668 CE; the mandapa viharas with halls and stone roofs with narratives from the Mahabharata, Shaktism, and Vaishnavism. The cave temples and monolithic temples were built during the Pallava period. The Pillars are of the Dravidian order, and the sculptures are outstanding examples of Pallava art of highly skilled sculptors. The site is managed by the Archaeological Survey of India (ASI).

Many opinions exist about the origin of the name of the site. The most popular explanation is that the place is named after benevolent King Bali, also known as Mahabali. The ancient Indian text of Vishnu Puran documents his exploits. After sacrificing himself to Vaman, an incarnation of Vishnu, he attained liberation. “Puram” is a Sanskrit term for a city or urban dwelling. Mamallapuram is the Prakrit version of the original Sanskrit name. Neolithic burial urn, cairn circles, and jars with burials dating to the 1st century BCE have been discovered near Mahabalipuram. The Sangam age poem Perumpanarrupatai relates the rule of King Thondaiman Ilam Thiraiyar at Kanchipuram of the Tondai Nadu port Nirppeyyaru, which scholars identify with the present-day Mahabalipuram. Chinese coins and Roman coins of Theodosius I in the 4th century CE have been found at Mahabalipuram, revealing the port as an active hub of global trade in the late classical period. Two Pallava coins bearing legends read as Srihari and Srinidhi have been found at Mahabalipuram. The Pallava kings ruled Mahabalipuram from Kanchipuram; the capital of the Pallava dynasty from the 3rd century to 9th century CE, and used the port to launch trade and diplomatic missions to Sri Lanka and Southeast Asia (A Ancient History Encyclopedia, 2019).

An 8th-century Tamil text written by Thirumangai Alvar described Mahabalipuram as Sea Mountain ‘where the ships rode at anchor bent to the point of breaking laden as they were with wealth, big trunked elephants and gems of nine varieties in heaps’. The temples of Mahabalipuram, portraying events described in the Mahabharata, were built largely during the reigns of King Narasimhavarman and his successor Rajasimhavarman and showed the movement from rock-cut architecture to structural building. During the rule of Mahendravarman I (600 CE – 630 CE), Mahabalipuram started to flourish as a centre of art and culture. He was a well-known poet, playwright, and orator. His patronage helped the creation of a number of the city’s most iconic landmarks. This artistic excellence period was duly continued by his son Narasimhavarman I (630 CE – 680 CE) and subsequent Pallava kings. UNESCO recognized heritage identity, monolithic architecture, rock-cut monuments, cave temples, and close to the sea with rich artistic wealth attracts visitors worldwide to visit this heritage destination (Romila Thapar - The Penguin History of Early India, 2002).

### **3.17 ART & ARCHITECTURAL MASTERPIECES IN MAHABALIPURAM**

#### **3.17.1 Cave Temples**

**Adi Varaha Perumal Cave** Temple is the earliest of all Pallava structures in Mahabalipuram, yet the least visited one. The grandeur of the actual mandapa (pavilion) is hidden behind a rather ordinary-looking latter-day structure. The construction of this site began before the reign of Mahendravarman I. Temple is dedicated to Vishnu (Varaha is an incarnation of Vishnu), and its execution follows the spirit of Vaishnava Agamic texts. Both the outer hall and sanctum sanatorium are adorned with elaborate relief sculptures. This temple houses two relief sculptures of Pallava kings, Simhavishnu (537 CE – 570 CE) and Mahendravarman I, accompanied by their respective wives. **Trimurti Cave** is dedicated to the trinity of Brahma, Vishnu, and Maheswara (Shiva), representing the process of creation, sustenance, and destruction. Aside from the deity, the carved pillars and sculptures also show devotees in various postures. Varaha and Krishna Caves exhibit mythical tales related to Vishnu and Krishna. **Mahishasuramardini Cave** can be found at a hilltop location. Mahishasuramardini is another name of the goddess Durga who is an incarnation of Shakti (power). She earned this name after the slaying of the

demon Mahishasura. This is the second, along with the Kotikal Cave, of the caves dedicated to Durga. **Yali or Tiger Cave** may not be a geographic fissure, but it boasts a set of most elaborately designed pillars and sculptures depicting several mythical creatures, lions, and tigers. This also has a relief sculpture dedicated to Narasimhavarman II or Rajasimha (700 CE – 728 CE). In many ways, the Tiger Cave sums up the evolution of the Pallava's cave temple structures over a period of time (Sastri, K. A. Nilakanta - History of South India, 1997).

### **3.17.2 Descent of the Ganges**

Alternatively known as Arjuna's Penance, Descent of the Ganges is a gigantic open-air bas-relief sculpted out of pink granite. The dramatic relief sculpture narrates the tales from Indian epics such as the Mahabharata. Nearby mandapas, particularly the Krishna Mandapa, however, showcase scenes of pastoral life amid mythical figures. Other similar rock artworks close by have been left unfinished due to some unexplained reason.

### **3.17.3 Pancha Ratha**

Pancha Ratha (five chariots) is an architectural ode to Mahabharata's five Pandava brothers Yudhistir, Bhima, Arjuna, Nakula, Sahadeva, and their wife, Draupadi. Thematically and structurally, each ratha is significantly different from the other ones, but all of them were carved out of a long stone or monolith. Spread over one to three storeys, their forms vary from square to apsidal. The walls of these ancient edifices are decorated with bas-reliefs and murals. A beautifully carved monolithic airavata (elephant) and Nandi (bull) decorate the premises. Though originally meant to be places of worship, these were never consecrated and used actively for any sacred rites.

### **3.17.4 Shore Temple**

The Shore Temple is located on the beach, and if local lore is to be trusted, it is the one surviving structure of the legendary Seven Pagodas. Despite the continuous erosive effects of the moist and salty sea air, the Shore Temple preserves its beauty in many parts. Built between 700 and 728 CE during the reign of Narasimhavarman II, this is indeed a remnant of a more massive complex of temples and civil structures, much of which lies under the sea's depth now (Romila Thapar - The Penguin History of Early

India, 2002). This five-story edifice is so situated that the first rays of the rising sun fall on the presiding deity of the temple, Shiva. Visitors enter the premises through a barrel-vaulted gopuram (gateway). The shikhara (roof) of the actual shrine resembles a pyramidal structure. Like other remarkable structures at Mahabalipuram, this too is embellished with intricate bas-reliefs. Monolithic sculptures are also seen scattered about the temple complex.

### **3.17.5 Olakkanneshvara Temple**

Also known as the Olakkanatha Temple, the Olakkanneshvara Temple (Temple of Shiva, suggestive of the third eye of Shiva) was built about the same time as the Shore Temple. This is located atop a hill some distance away from the beach, which gave birth to a belief that it acted as a lighthouse in earlier times. This was also built atop the Mahishasuramardini Cave, but the two are different structures erected at different times.

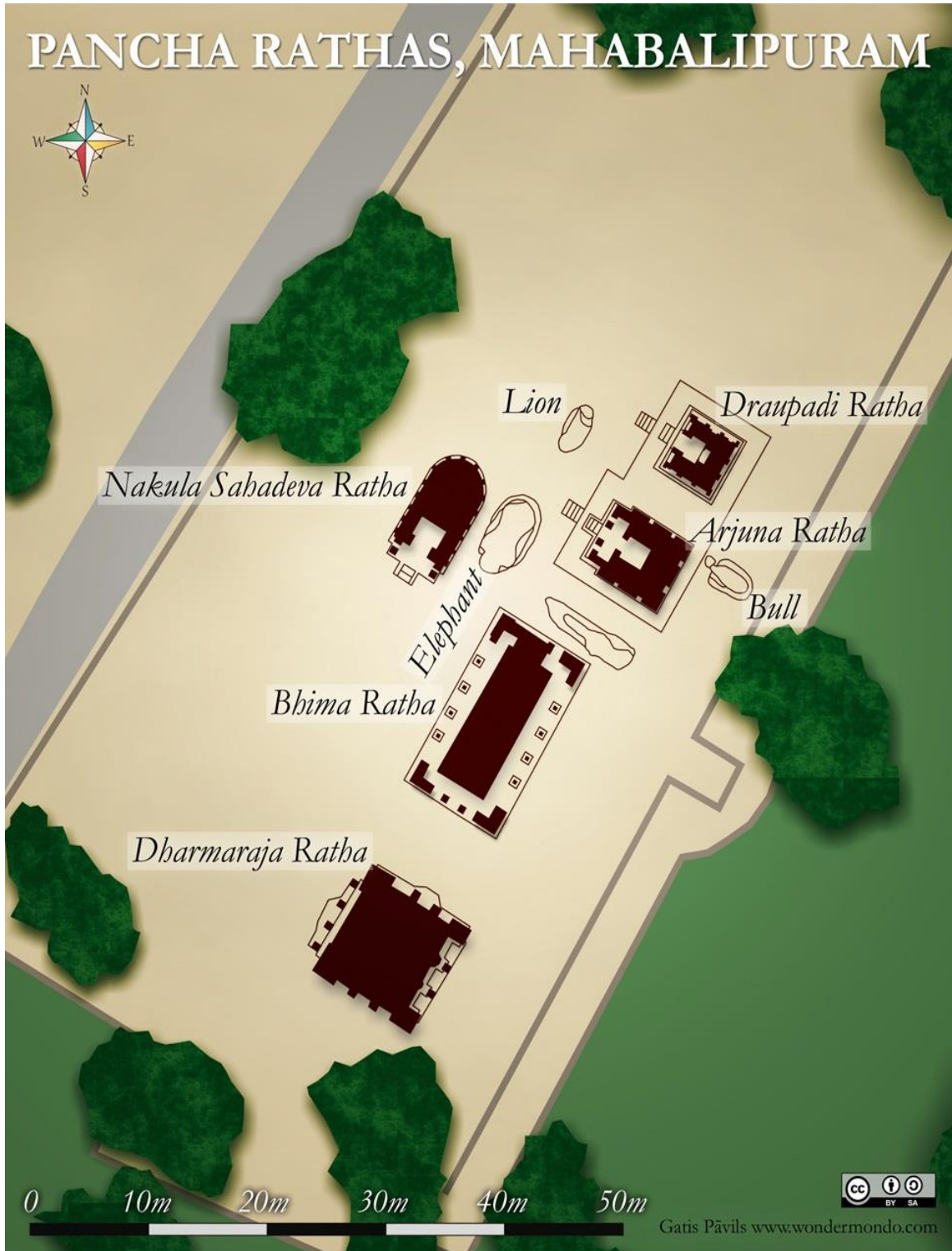
### **3.17.6 Mukunda Nayanar Temple**

This temple has ratha-like architecture. The temple, with a simple square design, is oriented to the east and its facade is supported by two slender, fluted, round pillars. Its sanctum is surrounded by granite walls, and its outer walls are articulated into pilastered columns. Artisans shaped the roof to resemble timber, and the corners have square, domed kutas (pavilions). The superstructure is tiered into squares, topped with an octagonal dome. The inside of the superstructure is cut to create a shikhara above the garbhagriha.

## **3.18 MAHABALIPURAM BEACH**

Mahabalipuram beach is one of the famous beach near Chennai, situated just around 55 km from Chennai. It's an excellent place to hang around the beach and spend some beautiful time during leisure time. The beach is clean, and cool air flows continuously with a good amount of wind pushing the water wave to shore, which one can enjoy like anything, especially the little ones. The windsurfers and swimming lovers are bound to have a fantastic time at the beach, for they are seen doing just that on the shores of the beach.

Figure 3.5. Pancharathas Map



(Source: www.tntourism.org)

To attract tourists, the beach has exciting places to offer, including a crocodile bank with about 5000 crocodiles belonging to 6 different species, a school of art & sculpture, and a snake venom extracting centre. There are also numerous resorts along the beach offering delicious food joints to fill the empty bellies of visitors. The scintillating beach has golden sand all along the stretch, surrounded by rising hills and the sparkling sea.

### **3.19 MAHABALIPURAM HERITAGE DESTINATION PRESENT SCENARIO**

There is another curious structure known as Sri Krishna's Butter Ball that fascinates everyone in Mahabalipuram. It is not a sculpted piece but more of a handiwork of nature. Mahabalipuram is trying to re-create its image as the country's premier beach resort, but it has not entirely lost touch with its past cultural exploits. Every year, it hosts classical dance and drama festivals to preserve and promote the heritage of a very ancient culture. Ironically, while the tsunami in 2004 CE created substantial damage to the existing structures and left the city water-logged for days, it also unearthed some of the treasures long hidden in the bosom of the sea. Granite sculptures, bronze statues, and ruins of what seem to be human made structures came to the fore. The underwater survey of Mahabalipuram is an ongoing process that promises to reveal many more of the city's grand edifices and solve some of the long-standing questions about its past (Dola, 2016).

### **3.20 PRIME MINISTER NARENDRA MODI AND CHINESE PRESIDENT XI JINPING INFORMAL SUMMIT**

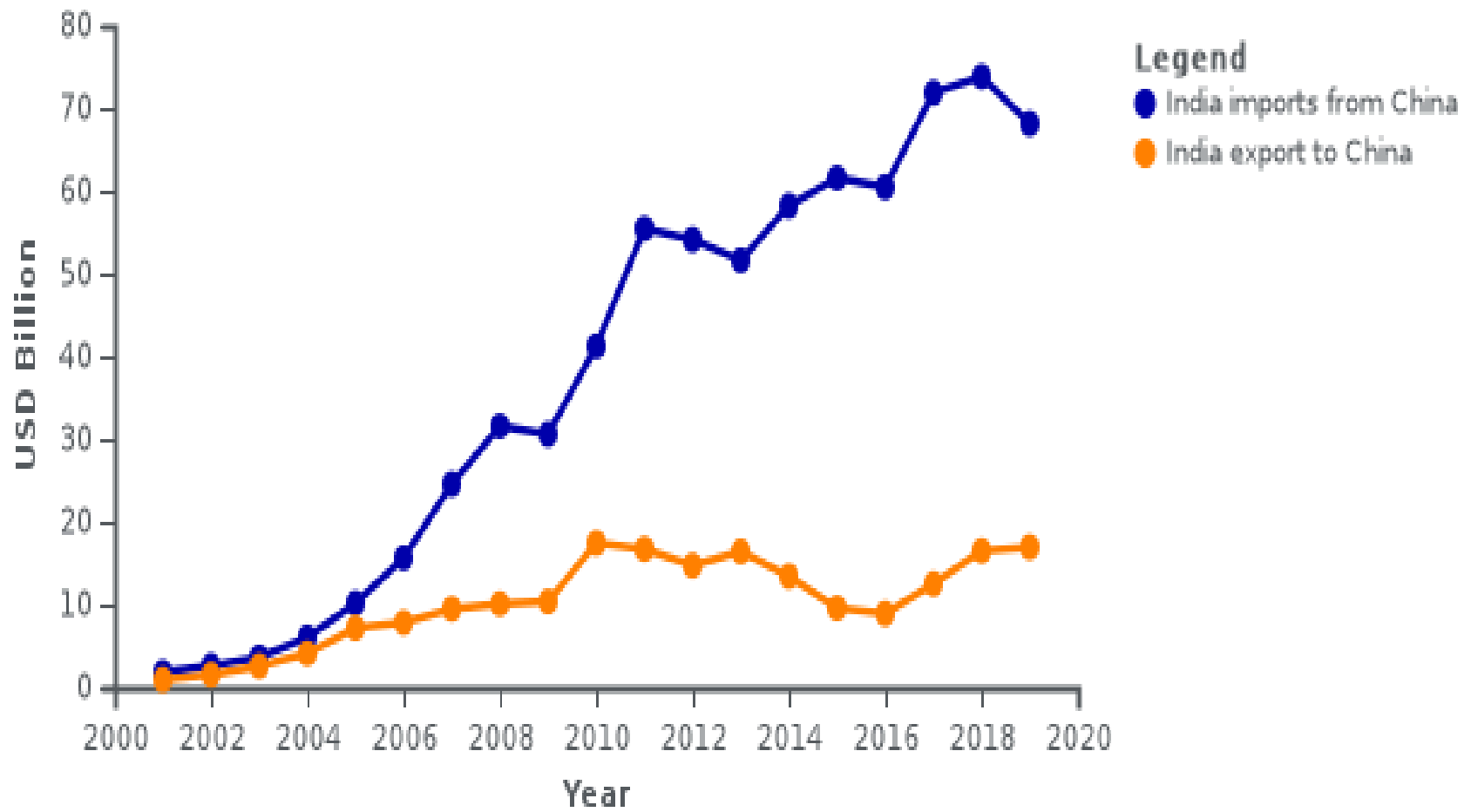
October 12, 2019, honorable Indian Prime Minister Sri. Narendra Modi and Chinese President Mr. Xi Jinping had an India – China informal Summit at the historic coastal town Mahabalipuram. Narendra Modi and Xi Jinping visited places like Arjuna's penance, Pancha rathas and shore temple and later explained the sculptures and paintings to the Chinese president. The two leaders agreed that both countries should work together to deal with the challenge of terrorism. After both the prime ministers gave a pose in front of Krishna's butterball. This is considered as one of the milestones in India - China's historical relationship.

### **3.21 INDIA - CHINA HISTORICAL CONNECTION**

Apart from arts and architecture, Narasimhavarman-I, one of the few kings who was never defeated in any of the wars, was good in trading and having partnerships with neighboring countries. According to reports, available literature shows that the Pallava kings had a trade and defence relationship with China, in which the kings agreed to help China in keeping a check on the growth of Tibet as a powerful nation during those years. Bodhidharma, one of the famous Buddhist monks in China, is believed to be the third son of a Pallava king, who traveled from Kanchipuram through Mamallapuram to China in 527 AD. Various studies by archaeologists and historians show that Mamallapuram had commercial links with countries like China, Sri Lanka, and other South-East Asian countries. Coins from China, Persia, and Rome have also been found in Mamallapuram, which acted as a trade centre for the Pallavas. Cultural and economic relations between China and India date back to ancient times. The Silk road not only served as a major trade route between India and China but is also credited for facilitating the spread of Buddhism from India to East Asia. During the 19th century, China was involved in a growing opium trade with the East India Company, which exported opium grown in India (John Keay – India - A History, 2000).

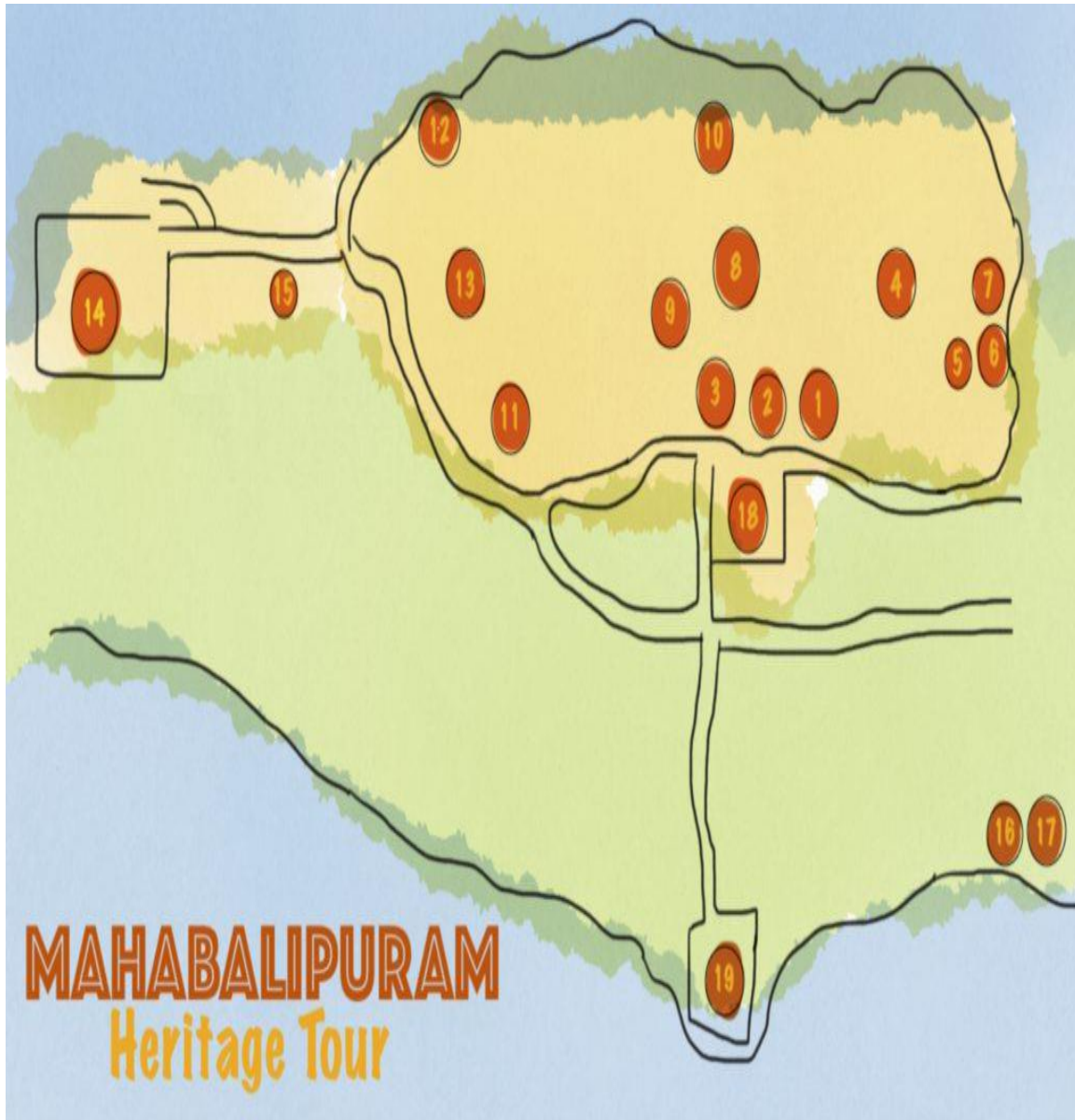
According to the Archeological Survey of India (ASI), it was a sea-port during the time of Periplus (AD 1) and Ptolemy (AD 140), and many Indian colonists sailed to South-East Asia through this port town. At the same time, there is some evidence of architectural activity going back to the period of Mahendravarman-I (AD 600-30). Chinese traveler Hiuen Tsang also mentions the sea-port in his travel records. The seed sown over 2,000 years ago from Mahabalipuram is one of the key reasons that brought India-China bilateral trade to reach \$60 billion today, though deficit in China's favour. Today, China is India's second-largest trading partner in goods, and India is China's largest trading partner in South Asia. More than 1,000 Chinese companies are doing business in India. They have put in a total investment of \$8 billion and created over 200,000 local jobs. Over two-thirds of Indian companies operating in China are making steady profits.

Figure 3.6. India and China Trade Map



(Source: Trade map of India)

**Figure 3.7. Heritage Map of Mahabalipuram**



- 1 Arjuna's Penance
- 2 Paanch Pandava Cave
- 3 Krishna Mandayam
- 4 Krishna's Butterball
- 5 Trimurthy Cave
- 6 Elephant Group

- 7 Ganesha Ratha
- 8 Varaha Temple / Mandayam
- 9 Raya Gopuram
- 10 Lion Throne
- 11 Mahishashumardini Cave
- 12 Adi Varaha Mandapam

- 13 Old Light House
- 14 Five / Pancha Rathas
- 15 Sculpture Workshop
- 16 Tiger Cave
- 17 Athiranachanda Cave
- 18 Vishnu Temple



19. The Shore Temple

more info on the site: [www.theheritagelab.in/mahabalipuram-heritage-tour](http://www.theheritagelab.in/mahabalipuram-heritage-tour)

(Source: [www.heritagemapsofindia.com](http://www.heritagemapsofindia.com))

### **3.22 MAHABALIPURAM DANCE FESTIVAL**

The Mamallapuram Dance Festival is held every year between the months of December to February in Mahabalipuram. This dance festival is organized by the department of tourism, the government of Tamil Nadu. Mamallapuram was once the ancient port of the Pallava. Mamallapuram is the renowned and ancient 7th century centre for Pallava culture and art. Exponents of Bharatanatyam, Kuchipudi, Kathak, Odissi, Mohini Attam, and Kathakali perform against this magnificent backdrop of the Pallava rock sculptures. Mamallapuram was once the ancient port of the Pallavas. It now plays host to a vibrant festival of dance. Exponents of Bharata Natyam, Kuchipudi, Kathak and Kathakali perform against the magnificent backdrop of the Pallava rock sculptures. During the dance festival time, the stones of the temple begin to resonate with music and dance rhythms. This platform is a perfect one-stop destination to witness the cultural and heritage beauty of the state of Tamil Nadu in general and that of Mahabalipuram in particular. This festival brings out the glory of different dance forms and inculcates the seed of passion in every onlooker. Wait no more, get mesmerized by the peerless dances of veteran artists at a romantic destination. Mamallapuram shore temple becomes a major attraction during the festival, and the visitors who attend the dance extravaganza do not miss a chance to visit the temple. Thousands of both national and international visitors visit Mahabalipuram Heritage Destination to witness the dance festival every year.

### **3.23 TRANSPORTATION FACILITIES**

MTC (Metropolitan Transport Corporation) and TNSTC (Tamil Nadu State Transport Corporation) (Villupuram division) operate bus services between Mamallapuram/Mahabalipuram and Chennai, Chengalpattu, Kancheepuram, Thiruttani etc. MTC's bus services available from various parts of Chennai include Deluxe and Air-conditioned buses. Mamallapuram is well connected by road with the rest of Tamil Nadu. State and private buses ply at regular and frequent intervals. The road condition is good, and the drive along the coast is quite pleasant. Depending on the budget, passengers can avail AC or non-AC buses and hire private taxis and van to reach Mahabalipuram. Chengalpattu (22 km) is the nearest railway station. However, Chennai railhead (60 kms) is the nearest major station having trains to Mahabalipuram from major cities of India like Bangalore,

Delhi, Mumbai, and Kolkata. Taxi/cabs and buses are available from these stations to reach Mahabalipuram. On arrival at the station, one can hire a cab to travel a distance of around 29 km to reach Mamallapuram. Chennai Airport serves as the closest airport to Mamallapuram. The airport is located around 58 km away from the temple town. Chennai is well connected with the rest of India by all major domestic airlines. One can board a direct or stopover flight to Chennai from anywhere in India and then hire a cab to reach the town of Mamallapuram.

### **3.24 CLIMATE**

Mahabalipuram has a tropical wet and dry climate. The average annual temperature is 28.4 °C. The temperatures are highest on average in May, at around 32.6 °C. In January, the average temperature is 24.3 °C, the lowest of the year. The average temperatures vary during the year by 8.3 °C. In a year, the average rainfall is 1219 mm. In winter, there is much less rainfall than in summer. The variation in the precipitation between the driest and wettest months is 309 mm.

### **3.25 ENTRANCE FEE**

The entry fee is 40 INR for Indians and 600 INR for foreigners (as of 2020 February). Also, entry for children below the age of 15 years is free here. Visiting Time: The temple remains open from 6am to 6pm. Visit Duration: It would take around 1 to 2 hours to visit and enjoy the surroundings of this heritage destination (TTDC, 2019).

### **3.26 MANAGEMENT**

The monument has been declared as protected under the Ancient Monuments & Archaeological Sites and Remains Act and Rules, 1958 & 1959. Once notified, the Archaeological Survey of India undertakes all conservation programmes through their national, regional, and local representatives. Archaeological Survey of India is the only institution with management authority at national, regional, and local levels.