CHAPTER 3

STUDY AREA DESCRIPTION

3.1 GENERAL

Coimbatore is the second largest city in the state of Tamil Nadu. It is the administrative headquarters of Coimbatore District. Coimbatore, popularly known as Manchester of South India, is situated in the western part of the state of Tamil Nadu. Covering an extent of 105.6 sq. km it is also a part of the Kongu Nadu region of Tamil Nadu. Including its sub-urban areas the population is around 15 lakhs. Situated on the banks of the Noyyal River, Coimbatore is known for its textile Mills, factories, engineering firms, automobile parts manufacturers, health care facilities, educational institutions, pleasant weather, hospitality and for its Kongu Tamil. Ooty and Valparai are close to the city making it a good tourist attraction. The city has an airport (Coimbatore Airport) at Peelamedu (11 km from the city) and an air-force base at Sulur (15 km). The Coimbatore airport caters to domestic flights to all the major Indian cities and international flights. The Coimbatore Junction is well connected to major Indian cities like Chennai, Bangalore, New Delhi and Mumbai, besides the neighbouring State of Kerala. It is second highest revenue yielding station in the Southern Railway division of Indian Railways. The city has six major arterial roads and three National Highways namely NH-47 (Kanyakumari–Salem), NH-67 (Mysore–Nagappattinam) and NH 209 (Bangalore–Dindigul). A new bypass highway built has helped reduce truck traffic in the city.
Coimbatore has 6 major bus stands. They are:

- Gandhipuram Bus Stand
- Singanallur Bus Stand
- Town Bus Stand
- Thiruvalluvar Bus Stand
- Ukkadam Bus Stand
- Mettupalayam Road Bus Stand

Coimbatore is the highest revenue earning district in Tamil Nadu. Coimbatore is called the Manchester of South India due to its extensive textile industry, fed by the surrounding cotton fields. It is also called as the pump city of India. The City houses large number of small scale engineering companies. The motor and pump industry supplies two thirds of India’s requirements, while its wet-grinder industry has a near monopoly. Agriculture is still the major occupation in the district as in any other part of the Country. General trade attracts people from all over the state including the neighbouring Kerala. The neighbouring city of Tirupur is home to Asia’s largest garment manufacturing companies, exporting hosiery clothes. Coimbatore is also emerging as an IT and BPO city. Coimbatore is ranked at 17th place among the global outsourcing cities.

3.2 LOCATION

Coimbatore is situated in the extreme west of Tamil Nadu, near the state of Kerala at latitude of 11°02'N and longitude of 76°59'E. It is surrounded by mountains on the west, with reserve forests and the (Nilgiri Biosphere Reserve) on the northern side. The eastern side of the district, including the city is predominantly dry. The entire western and northern part
of the district borders the Western Ghats with the Nilgiri biosphere as well as the Anaimalai and Munnar ranges. A western pass to Kerala, popularly referred to as the Palghat Gap provides its boundary. Because of its close proximity to the Western Ghats, the district is rich in fauna.

3.3 CLIMATE

Coimbatore has a pleasant climate, not reaching the high temperatures of other southern India cities. Situated in the Western part of the state of Tamil Nadu, Coimbatore is located at an elevation of about 398 meters. The mean maximum and minimum temperatures during summer and winter varies between 35°C to 18°C. Highest temperature ever recorded is 41°C and lowest is 12°C.

Due to the presence of the mountain pass, major parts of the district benefit from the south-west monsoon in the months from June to August. After a warm, humid September, the regular monsoon starts from October lasting till early November. These monsoons are brought about by the retreating North-eastern monsoon. The average annual rainfall is around 700 mm with the North East and the South West monsoons contributing to 47% and 28% respectively to the total rainfall. Although this rainfall is not enough to sustain the needs of the city for the entire year, small rivers like the Siruvani and Atthikadavu fulfil the city's water needs.

3.4 ROADS AND JUNCTIONS

The following 25 air quality monitoring stations were carefully selected in Coimbatore city based on the traffic count, nature of traffic, busy road intersections with traffic signals having maximum vehicle idling time, traffic congestion and nearness to commercial & industrial places.
1. **Thudialur (ITI)**

Thudiyalur is a panchayat town in Coimbatore district in the Indian state of Tamil Nadu. It is 12 km from Coimbatore City center. Thudiyalur is ideally located on the famous Mettupalayam Road on the way to Coimbatore to Ottacamund (The Queen of Hills). The station located in this area is near the ITI at the intersection between Mettupalayam road NH67 which connects Coimbatore to Ottacamund, and NH 209 which connects Coimbatore with Bangalore.

2. **Agriculture University**

Agriculture University is located on the Marudhamalai Road. Many Educational Institutions like GCT, Forest College, Central Institute for Cotton Research, Water Technology Centre and Technology Park are situated in this region. The station selected in this locality was near the Agriculture University at the intersection point that connects Lawley road and Maruthamalai road.

3. **Race course area**

Race Course is situated near Gopalapuram and Avinashi Road. Sungam Bus Depot and Medical College Hospital are located in this area. It has heavy traffic volume during the peak hours. The station in this area was selected at the intersection of Kamaraj road, Abdul Rahim road, near SIEMA.

4. **Singanallur**

The main Bus Stand is located in this area. Many schools are also situated in this area. The traffic intensity is heavy throughout the day as most of the buses pass through this area. The monitoring station located in this area is at the intersection connecting the Kamaraj road connecting the Singanallur bus terminus and the Varadharajapuram road.
5. **PSG College of Technology**

Peelamedu which has a number of Educational institutions has heavy traffic flow during the peak hours. The monitoring station in this area was located near the intersection between Avinashi road and pioneer mill road, near Sarvajana higher secondary school.

6. **TVS Nagar (Thadagam Road)**

TVS Nagar is a residential area. The monitoring station in this area was selected near the intersection of Lawley road, Thadagam road and Cowley brown road.

7. **Saibaba colony**

Saibaba colony is a residential area. It has moderate traffic during the peak hours. The monitoring station was located near the intersection of N.S.R Iyengar road, Ganapathi Gr street and 8th Cross road.

8. **Ramanathapuram**

It is residential area with low traffic intensity. The station in this locality was selected near the intersection of Trichy road, Augustinepet near Nehru park.

9. **Selvapuram**

Selvapuram is a residential and commercial area very near to Ukkadamb. During peak hours it has heavy traffic. The monitoring station in this area was located at the intersection of Perur road, and the road leading to Tamilnadu Housing Board.
10. **Gandhipuram**

Gandhipuram is a commercial area located at the heart of the City. This area is well connected to the Bus Stand, Air Port and Railway Station. Thiruvalluvar Bus Stand is located in this area where all the city buses can be accessed. It has heavy traffic congestion throughout the day. The monitoring station at this area was selected near the intersection of Dr.Nanjappa road, Dr.Rajendra Prasad (100feet road) and Chinnaswamy Naidu road.

11. **Avinashi Road (SITRA)**

South India Textile Research Association (SITRA) is a residential and commercial area. Though it is not congested with traffic more number of vehicles pass this road. There are many important landmarks in this area like the KMC Hospital, Lotus Hospital and Cordys Software. The station was selected near the intersection of Avinashi road, Aerodrome road and Industrial Estate road near SITRA. This is a residential and commercial area.

12. **Government Hospital**

Government Hospital is near the NH 67. Many Educational Institutions like the Government Arts College, St. Josephs School and St. Francis Anglo Indian School are located in this area. It has heavy traffic during the peak hours. The monitoring station was selected near the intersection of Government Arts college road, Trichy road near C.M.C Hospital.

13. **Kavundampalayam**

It is a residential area. The monitoring station in this area was located is the intersection of Metupalayam road and Housing Unit road. It is a residential area.
14. **Saravanampatti**

Saravampatty is a residential area which has many educational Institutions. Kumaraguru Engineering College, CMS College, Sanakara Institute of Technology, Rajalakshmi Arts College and many Schools are situated in this area. Major roads like the Sathy road and NH 209 run through this area. The monitoring station in this area was selected at the intersection of Sathy road and Ravindra Takur road, near Bharathi nagar a residential area.

15. **Ganapathy**

Ganapathy is a commercial and residential area with moderate traffic volume. The station in this region was located at the intersection of Athipalayam and Avarampalayam road and the road leading to Krishnarayapuram

16. **TataBad**

TataBad is a commercial area situated at the heart of the city near Gandhipuram. Private travels Bus Stand is located in this area. It has heavy traffic volume during the peak hours. The station selected in this area is near the intersection of Raju Naidu road leading from the Pykara power project and Dr.Radhakrishnan road.

17. **Ukkadam**

Situated to the south of Coimbatore, Ukkadam Bus Station is one km from Coimbatore Junction Railway Station. It is one of the 3 major bus terminals in Coimbatore and is operated by Tamil Nadu State Transport Corporation. The monitoring station was selected near the bus stand at the intersection of By-pass road and Trichy road.
18. **RS puram**

Also known as Rathina Sabapathi Puram, this is a well planned colony promoted by the Coimbatore Municipality in 1950's for housing. D.B Road is the main central road that connects all the other streets. In recent years it has become a commercial area. The station was selected at the intersection of Metupalayam road and Cowley brown road.

19. **Sundarapuram**

The station in this area was located at the intersection of NH 209 and Madhukarai road. Sundarapuram is a residential area. Many schools like Mews School, KPN School, Islamia School and ESI Hospital are located in this area. There is a big pond named Kunchi Kulam in this area.

20. **Ramnagar**

Ramnagar is a residential and commercial area situated near Ghandhipuram. The TNSTC Bus Depot is situated in this area. The station is selected at the intersection of Sastri road and Rajaji road.

21. **Peelamedu**

Peelamedu has many Educational Institutions. This station was selected near Lalbhagadur colony, a residential area at the intersection of Avarampilayam road running towards south and Avarampilayam road running towards east.

22. **Udayampalayam**

It is a residential area. The station is selected at the intersection of Sowripalayam road running towards south, Sowripalayam road running towards east and Nethaji road.
23. **Ramanuja Nagar**

Ramanuja Nagar is situated near Singanallur. It is a residential area. The station is selected near Mahathma Gandhi Museum at the intersection of Kamaraj road and the road connecting Vilankurichi road.

24. **Vadavalli**

Vadavalli is at the outskirts of the main city. It is a fast growing residential and commercial area. The station is selected at the intersection of Marudhamali road and road connecting Veerasamy Colony.

25. **Government College of Technology (GCT)**

Many educational Institutions like GCT, Forest College, Agriculture University and many Schools are situated in this area. The station was selected on the Thadagam main road at the intersection of N.S.R.Iyengar road and Thadagam road.
Figure 3.1 Location of Air pollution Monitoring Stations in Coimbatore City