

CHAPTER VIII

SUMMARY AND CONCLUSION

SUMMARY

1. The study in brief :

In order to achieve the objectives of the study, it was necessary to study Anand from various different viewpoints e.g. the growth pattern as governed by the geographical structure of Anand and its areal relationship with the region. This aspect of study dealt with explanation to various types of land uses and their peculiar characteristics. Another point of view taken up was to study individual themes of processes and forces behind certain functions of Anand in relation to the evolution of urban function, which consists of economic, socio-cultural, historical, political and administrative factors.

An attempt to highlight the forces, which contribute to the development pattern and present level of development of the city, is made. Factors such as site and situation, excellent locational advantage, size and rate of growth and future expansion and its impact, more elaborately, as well as the socio-economic development of the surrounding region which is a rich agricultural economy, with comparatively high literacy rates, bold entrepreneurs etc. are worth mentioning.

The historical events in proper chronology is noteworthy in order to synthesize the traditional urban genesis and to know which elements contributed to Anand's growing urban character and functions. Some basic issues like the type of urban forms, their morphological characteristics along with the functional inter-relationship with respect to other leading urban centres like Nadiad (in terms of population) in Kheda district, are discussed. This synthesis leads to understand the spatial organisation of human activities with schematic

representations and models of land use, structure and morphology in relation to its periphery and obtain an area of urban influence i.e. 'Umland'.

Thus, it was very necessary to study these aspects in order to examine the spatial organisation by knowing the different types of zones of influences, which depict the dynamic growth of Anand since almost four decades (1951-91). However, several complex historical and political changes and recent trends in urbanisation have greater influence on Anand's growth and development.

After studying the city in relation to the other urban centres of the district it is found to be a unique place with best location where from, the needs of other urban centres and surrounding regions can be satisfied.

2. Urban Morphology and Spatial structure :

Anand is located in the heart of the flat alluvial area of the fertile 'Charotar' region of Kheda district, on the National Highway No.8, connecting Ahmedabad and Mumbai. Anand is just 70 km south of Ahmedabad. The availability of water by tanks and wells and the healthy climate has favoured the settlement growth.

The present municipality covers 21.13 Sq.km being divided into 14 municipal wards. The municipal boundary is same as the revenue boundary.

Anand was a self-sufficient village entirely dependent on agriculture in the early 19th century, but the railway introduced by the British army and the establishment of the Polson

dairy to cater the needs of the army, in this area in the later part of this century, the village grew towards the railway line to the east of Gamtal (Core) (Chapter IV, Fig : 4.1)

The city is situated at 22° 35' north latitude and 72° 57' east longitude, at an elevation of 143 feet from mean sea level, with a population of 1,31,104 in 1991.

The general slope of the city is from northeast to southwest. Some hillocks are also seen on the western boundary of the city.

The soil is composed of sedimentary deposits brought by Mahi and Shedhi rivers, it is very deep, well drained and fairly moisture retentive, rich in potash.

Due to its location on the Tropic of Cancer the city enjoys a tropical climate. The average maximum and minimum temperatures recorded are 105.29 F and 56.50 F respectively with maximum 57.25" and 12.50" rainfall.

The present Anand City like other towns evolved from a village 'Anandpur' which was settled in the 14th century by a Gosai named Anandgir. The Gosai street, Mathio Chora and Bavano math in Nana adath of Gamtal are the proof that the Gosai were the early settlers in the town, which slowly changed its name from Anandpur to present Anand.

Nearly a century ago, it was a village of about 8000 souls, entirely depending on agriculture, residing within the Gamtal surrounded by their farms.

The evolution of the townscape of Anand bears an intimate relationship with the physical setting of its site. The lowest gradient and almost plain region along well developed rail and roadways running from north to south and east to west, with roads running radially in

all directions, through fertile plains of the surrounding region; with adequate water supply, healthy climate and courageous entrepreneurs, has favoured its fast growth.

The city witnessed many changes after the formation of city municipality in 1889. The city was initially divided into 6 wards (1961), which today occupy the same area, but is divided into 14 wards so as to ensure better planning and administrative control. The municipality undertook many developmental schemes so as to develop roads, widening of the existing roads, built town halls, libraries, hospitals, parks and gardens, crematorium, schools and even shopping centres and markets all over the city. Much of the improvements in the city have, however been made since the beginning of the present century first by the Anand municipality and then by the Anand Urban Development Authority. In addition, a number of industrial townships and educational centres have recently developed in its neighbourhood, notable amongst which are : The Vithal Udyognagar and Vallabh Vidyanagar respectively.

The early population figures of the city are not available. The first reliable census of 1871 recorded 8773 persons and 2309 households and since then its population has been growing except for a short decline during 1901-11 and 1921-31. The growth is more or less steady upto 1921-31, but it showed a sudden jump (with over 93.1% increase) during 1931-41; and since then, the same rate of growth is more or less maintained. The very high growth rate during the last two decades (1971-81 and 1981-91) is mainly because of the installation of a number of industrial units in and around the city limits and also the improved degree of means of transport and communications.

The mean figures of density of population within the city are high (5218 persons per Sq.km in 1991) but not alarming, since the city has several vast open spaces, scrub land and wasteland spread all over the city. There are however, quite a few pockets of extreme concentrations like the Gamtal areas (Wards VIII and Wards IX). There is a centrifugal movement of population from core to the periphery due to congestion, high rents and high land value in the core. Thus, increasing number of people in industrial, commercial and other services boost Anand's progress in various fields. An attempt to project future population is therefore necessary so as to provide enough infrastructure and for proper planning strategy.

Over and above, after analysis the process of urban growth and structure, three distinct morphological areas were classified:

- (1) the central fully built up zone – core.
- (2) the moderately built up transitional zone with fully built up main streets, extending radially outwards.
- (3) the outer partially built up zone with major open spaces, scrub land, wasteland and agricultural areas, in which urban land rural characteristics intermingle.

More briefly and meaningfully, it was possible to identify four distinct morphological units:

- (a) Residential areas.
- (b) Commercial areas
- (c) Agricultural areas
- (d) Administrative areas with public institutions

Since residential land is virtually ubiquitous as compared to industrial, commercial and administrative/public land uses, it is possible to easily define the residential area distinctly.

Anand has highest percentage of land under residential use (53%). The study proves that since historical factor has strongly influenced the growth of the Central fully built up zone (core), it continues its traditional and compact pattern of spatial and unplanned growth mixed residential, commercial and administrative occupancy to a greater extent as compared to the 'core' or transitional zone. With rapid changes due to inflow of population and the recent trend in urbanisation and socio-economic development, the moderately built up transitional zone has undergone rapid changes in that the old traditional houses are demolished and replaced by multistoried mixed residential and commercial complexes.

Thus it is difficult to draw a sharp-line dividing each social area, due to administrative of all classes of people. Specially the new migrants from different social backgrounds.

With the highest degree of accessibility due to better road connectivity and advantage of its nearness to the National highway no.8, as well as Broad gauge lines running north-south (Ahmedabad to Mumbai) and west to east (Khambhat to Godhra). Anand's importance as a commercial centre has increased. All the transport terminals like S.T.Depot and Railway station are adjacent to the core and roads radiate in all directions to connect it to the periphery as well as to the surrounding regions. Because of these multifarious economic activities the CBA (including core) is most congested and eccentric growth has taken place. Thus decentralizations of certain functions and restrictions on some business functions for further expansions are urgently needed.

As far as industries are concerned government must take steps for industrial development through private ownership and the owners or new entrepreneurs should not face any legal complications leading to problems. Moreover, some big plants like fertilizer factory, petro-chemical industry, automobile and other engineering plants can be considered for inducing ancillary industrial growth.

Another important task of the research was to find out the regional relationship as well as Anand's influence over the regional development. Therefore in order to study its influence on the surrounding region, the extent of services offered by Anand to the surrounding region and far-flung areas in certain cases and vice versa has been considered. The interaction pattern on different aspects was mapped and Anand's growing importance in the region was highlighted. The site and situation and historical evolution has direct control over the spatial structure of the city's influence over its region, with time and in relation to various factors. The pattern of interaction is initially attributed to the advent of the rail transport and then the motorised transport in general for its door-to-door more efficient service.

Both empirical observations and theoretical approach using various indicators for different nature and extent of zones delimit different zones of influence of Anand, in order to delimit the 'Umland'. Primary and secondary zones are considered to delimit the zones and also to show administrative area covered by its 'Umland' in proportion to the municipal area. The primary zone of influence covers Anand, Petlad and Borsad talukas of Kheda district and Savli, Vadodara talukas of Vadodara district. While the secondary zone of influence covers rest of the Kheda district (Kapadvanj, Balasinor, Mehmedabad, Thasra,

Nadiad, Matar and Khambhat) as well as Godhra and Kalol talukas of panchmahal district and Dabhoi, Padra and Karjan talukas of Vadodara district.

3. Validity of the Hypothesis and justification of objectives :

Objectives achieved :

- The interaction between the physical and social system was analysed in context of the demographic factors.
- Human impact on the urban system and functions were illustrated.
- The extent of urban growth and its influence on the surrounding area was established.
- The urban growth and change in land use pattern from 1971 to 1991 was analysed and the land transformation during this period was obtained using GIS technique and Auto Cad R 14 mapping softwares.
- Anand's position in the district was examined and its comparison with other major urban centres like Nadiad was determined.
- The study of Anand as a regional centre and a central place of the district seems to

Hypothesis which proved to be valid for the present study are :

- (a) Denser and more heterogeneous the population of an area, more urbanised is the way of life and degree of industrialization.
- (b) Culturally diverse immigrants are displaced as a result of agricultural scarcity or natural calamities and ofcourse by political upheavals in the surrounding region.

(c) More prestigious the neighbourhood higher is the cost of housing.

Hypothesis that proved to be invalid for the present study are :

(a) The residential pattern of a city reflects imperfectly, but often dramatically its class structure.

(b) Higher the degree of urbanisation more is the social polarisation.

(c) Higher the administrative status, faster is the growth of a town/city.

4. Findings and suggestions :

1. Originally Anand being an agricultural center, has gradually emerged as an industrial and finally to the present industrial and commercial city with many public and private enterprises.
2. The physical conditions with due respect to site and situation are the most favourable factors for the rapid growth and development of Anand.
3. Because of this it is highly accessible due to rapid development of transport and communication system which makes it a nodal center in whole of the Kheda district.
4. Earlier Anand's growth took place towards the Railway line in the East but now it is growing towards the other side i.e. in the West towards Vallabh Vidhyanagar the famous educational town and to Karamsad in the southwest.
5. Anand's fringe area and the surrounding region to its west possesses a complete urban life with all urban functions and characteristics.

6. The high literacy rates and better socio-economic development has a good impact on the urban growth and on the demographic factors. This however doesn't apply completely to its fringe areas of the East.
7. The study of residential structure shows a complex pattern of residential land use and social areas. The city center – core, continues its old tradition of livelihood of people as in the fringe areas, while the continuous in-migration in both core and periphery has led to rapid construction of multistoried buildings with multipurpose use like residential, commercial and offices or administrative.
8. Trade and commerce and other services are the base of Anand's economy, which has put Anand to its present potential position in the region.
9. As far as industrial developmental is concerned Anand has diversification of industrial activities supported by not only the local entrepreneurs but also NRI's State government, Central government and multinational companies, which ensures Anand's industrial development and position in the region.
10. With best transport and communication and better connectivity Anand is increasing its influence over the surrounding region and distant areas through its various services, distribution and collection of products, raw materials and other commodities to and from other places respectively. This gives wide scope for Anand to be a regional center in kheda region.
11. Thus, proper planning and involvement of the people in planning process and developmental activities will continue Anand's systematic and purposeful growth for better quality of urban life in the region.