Evaluation of Small and Medium Towns of India

Thesis submitted in

Partial Fulfilment for

the Award of the Degree of

Master of Urban and Regional Planning

by

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Evaluation of Small and Medium Towns of India

The contents presented in this Thesis represent my original work and it has not been submitted for the award of any other Degree or Diploma anywhere else.

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This Thesis is submitted in partial fulfilment of the requirements for the

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The present work has been carried out under our supervision and

guidance and it meets the standard for awarding the above stated degree.

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Abstract

"Our urban spaces and governance mechanisms have become the theatres for political conflicts and economic struggles. 'Exclusionary' urbanization is benefitting certain social groups to the detriment of others, and directing resources to large metropolises depriving small and medium towns of funds needed for infrastructure and essential services" — Hamid Ansari, Vice President of India (2007-17)

In the present day undoubtedly, Indian cities and towns are the most important subsets that primarily contribute to the country's piercing growth. In line to the rapid Indian Urbanization today, the Indian towns are emerging in a unique way. They are not only the transitional urban centres but may also be seen as evolving investment magnets.

Indian urbanization rate is rising from 28.53% (2001) to 31.16% (2011) to 34.47 % (2019). In such a context, small towns are ideal places in terms of having particular social and cultural identity and a special way of life for their residents. Although SMSTs may be places with enliven public realm where pedestrians shall be unhindered by moving traffic, promote and encourage local arts and crafts as well as traditional bindings to the past through local cuisine and local place specific produce, act as a platform where inhabitants may think broad but act indigenously, yet the race of urbanization challenges the growth of the small urban centres and threatens their development and culture impacting the liveability and quality of life of its inhabitants. The study hence revolves around the actual condition of Small and Medium Towns of Indian along with parameters of their development.

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Dedication

Every challenging work, needs self-efforts as well as guidance of elders especially those who were very close to our heart.

My humble effort I dedicate to my sweet and loving

Father & Mother,

Whose affection, love, encouragement and prays of day and night make me able to get such success and honour,

Along with all hard working and respected

Teachers

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Acknowledgments

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List of Abbreviations

GDP	Gross Domestic Product
IDSMT	Integrated Development Scheme for Small and Medium Towns
UIDSSMT	Urban Infrastructure Development Scheme for Small and Medium Town
UN	United Nations
NIUA	National Institute of Urban Affairs
MOHUA	Ministry of Housing and Urban Affairs
MOUD	Ministry of Urban Development
URDPFI	Urban and Regional Development Plans Formulation and Implementation
VMC	Vadodara Municipal Corporation
VUDA	Vadodara Urban Development Authority
DCHB	District Census Hand-book
CPHEEO	The Central Public Health and Environmental Engineering Organisation
R-U	Rural to Urban
ESPON	European Spatial Planning Observation Network
HDI	Human Development Index
ICSSR	Indian Council of Social Science Research
RTE	Right to Education Act
NILERD	National Institute of Labour Economics Research and Development
JNNURM	The Jawaharlal Nehru National Urban Renewal Mission
CT	Census Town
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
PURA	Providing Urban facilities in Rural Areas
WFPR	Workforce Participation Rate
INA	Industrial Notified Area
DMIC	Delhi-Mumbai Industrial Corridor
M.CORP	Municipal Corporation
OG	Out-growth
M	Municipality
IT	Information Technology
FDI	Foreign-Direct Investment
MNC	Multi-National Company
MSME	Micro, Small and Medium Enterprise
LULC	Land Use / Land Cover
SC	Schedule Caste
ST	Schedule Tribe
NI	Non- Indigenous

LPCD	Litre per capita per day
PAS	Performance Assessment System
GIDC	Gujarat Industrial Development Corporation
HH	House-hold
GSFC	Gujarat State Fertilizers & Chemicals Limited
NH	National Highway
ULB	Urban Local Body
BSUP	Basic Services to Urban Poor
IHSDP	Integrated Housing & Slum Development Programme.
PMAY	Pradhan Mantri Awas Yojana
RAY	Rajiv Awas Yojana
MGY	Mukhyamantri Gruh Yojana
SBM	Swachh Bharat Mission
SJMMSVY	Swarnim Jayanti Mukhya Mantri Shaheri Vikas Yojana
FYP	Five Year Plan
HUDCO	Housing and Urban Development Corporation
IUDP	Integrated Urban development Programme
BMTPC	Building Material Technology Promotion Council
UBSP	Urban Basic Services for the Poor
PPP	Public-Private Partnership
NUHHP	The National Urban Housing & Habitat Policy
SHGS	Self-Help Groups
SGSY	Swarnjayanti Gram Swarojgar Yojana
PMO	Prime Minister Office
MOUA	Ministry Of Urban Affairs
SLSC	State Level Sanctioning Committee
SLNA	State Level Nodal Agency
UIG	Urban Infrastructure and Governance
LAP	Local Area Plan
TPS	Town Planning Scheme
GUDM	Gujarat Urban Development Mission
DDA	District Development Authority
TCUC	Tradition & Culture Upliftment Committee
STGB	State Town Governing Body
NUIS	National Urban Information System
NEGP	National e-Governance Plan
SIDSMTO	Scheme for Inclusive Development of Small and Medium Towns Only
GIS	Graphical Information System

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Chapter 1– Introduction

1.1 – Background

India is currently one of the fastest growing economy with increasing population growth and migration which has resulted into an increase in urbanization. Urbanization level of India has increased from 27.81% in 2001 to 31.16% In 2011 (Ministry of Housing and Urban Affairs, 2011). But this urbanization is not something that can be seen throughout the country. If we see the urbanization level in different Class of cities and towns as defined by the census (Class I cities to Class VI cities), most of the urbanization can be seen in Class I cities and mostly in million plus cities. As per the census 2011, there are 53 million plus cities which accounts almost 70% of the total urban population in the country and it contributes 58% of GDP. So, most of the population and economic opportunities are concentrated in Class I cities and million plus cities.

As per the figure 1, we can see that urbanization is dominated by the Class I cities. The other medium and smaller cities towns have been neglected in the process of urbanization and there are other reasons behind it like lack of employment and educational opportunities, lack of basic services, poor quality of life in the small and medium towns.
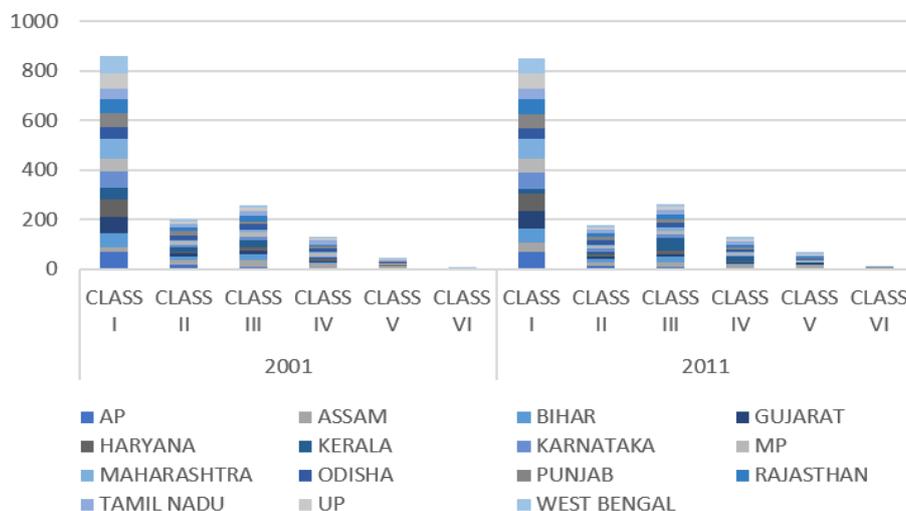
Figure 1-1: Class wise Percentage of Urban population in different States of India

Source: Determinants of Urbanization in Different Size/Class Distribution of Cities/Towns in India

But more important is the fact that a significant part of this growth is contributed by small and medium towns. These towns act as an employment base for the Class I cities. But despite the significant contribution of these small and medium towns, they remain invisible in the policy discourse (Shastri, 2011). Development of small and medium towns is also as important as the development of larger cities. As most of the Class I cities are now facing challenges related to less infrastructure capacity, housing shortage, increasing number of slums etc. And these all problems are the result of an increasing population and migration which has created huge pressure on the large cities. So, the development across all class of cities is something which is important for the better growth of the country. And as the small and medium towns contributes larger share of urban population after the Class I cities, the development in these towns are important. And by improving living conditions in small towns with better housing, education, water supply and socio-economic incentives towns can be revived while reducing the pressure on Class I cities (Shastri, 2011). But as mentioned earlier that major focus of funding for the development has remained limited to large cities as those cities are attracting investment as well are engines the country's growth. And also because of the various policies some of the large cities were also able raise their own resources for the development while on the other hand small and medium towns got left out of this process.

Specifically governing small and medium towns is becoming some challenge as small and medium town have inadequate finances, weak institutional framework as well as lack of capacity for service delivery. These three are the major challenges which small and medium towns are currently facing hence this research covers the small and medium towns in reference with the challenges mentioned. If we see particularly infrastructure in small and medium towns, then most of the towns lacks in terms of providing basic services. The reason behind that is the weak institutional framework as well as inadequate finance including their own revenues and central, state funding. A number of programs have been launched by the central government including the Integrated Development Scheme for Small and Medium Towns (IDSMT), the Urban Infrastructure Development Scheme for Small and Medium Town (UIDSSMT), and apart from that there are various State Government Programs and Schemes have been launched for improving infrastructure facilities and services to the people. Most of the projects in small and medium towns are dependent on large subsidies and

grants from the central and state government and this is the case for most of the small and medium towns in India as they have no financial capabilities to provide services. In some cases, the small and medium towns are not even able to perform basic function of provision as well as operation and maintenance related to basic amenities and this function is being performed by the parastatal agency of the state. So, though the 74" amendment act has given functional and financial powers to cities and towns, it has not been implemented fully specially in the small and medium towns across different states in India. Hence this research covers the functional aspects of infrastructure, funding and demographic check in small and medium towns.

1.1.1 – Hypothesis
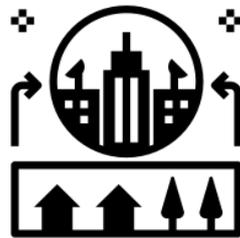
URBAN PROFILE

World Urbanization scenario:

- 65 % population - rural areas (half century ago)
- 55 % population - urban area (today in 2021)
- 68 % population - urban area (by 2050, UN)

Indian Urbanization scenario:

- 31 % in urban area
- 60 % of GDP
- 65.71 % urban population – Cities
- Metropolitan cities increase – 35 -53 (2001-11)
- Class 1 cities – 70.2% urban population (68%, 2001)
- 2774 towns increased – 5161 (2001) to 7935 (2011)

Figure 1-2: Decadal comparison of Indian Urbanization Rate

Source: Census of India, 2011

Figure 1-3: Rural – Urban Distribution in India

Source: Census of India, 2011

	1991-2001	2001-2011	Difference
India	21.5	17.6	-3.9
Rural	18.1	12.2	-5.9
Urban	31.5	31.8	+0.3

Table 1-1: Growth Rate of population (%)

Source: Census of India, 2011
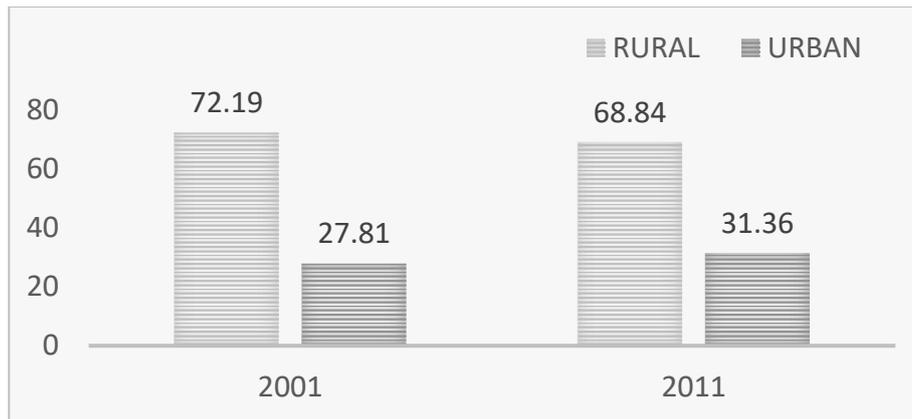
Figure 1-4: Population Increase %

Source: Census of India, 2011

Apparently, India needs to release this excessive pressure on metropolitan cities by decentralizing population. In present scenario, small and medium towns can be considered as most suitable places of residence along with having their own identity and a special way of life for their residents.

Source: Census of India, NIUA, MOHUA, MOUD

1.2 – Significance of the Study

According to the 2011 census, there are 7935 towns and cities in India. Out of these, there are 468 cities which are Class I cities having population more than 1,00,000. And from these 468 cities there are 53 metropolitan cities known as million plus cities, home to around 40% of the urban population. And hence, 60% of India's urban population lives not in the metros but in towns with population of less than 1,00,000 going down to just 5000. While urban India as a whole face huge problem, particularly of infrastructure, to support a growing population, the worse-off are these small and medium towns that have to struggle with the absence of basic services, inadequate finance and weak institutional capacity (Sharma, 2005). Many of these towns get water for a few minutes once a week or every alternate day No one even talks about the appalling absence of infrastructure in these towns Most of us have a stereotypical image of small-town India Pined roads, piles of garbage, open drains, stagnant pools

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of water, overhead electric wires, long power-cuts, acute water shortage etc. (Sharma, 2008).

Absence of the basic infrastructure services in small and medium town is one of the key problems faced by them. One of the reasons is that, the local bodies of such towns are unable to raise their own revenues as well as less funding and investment from the central and state government in these towns. While the big cities and metro cities are able to generate their own revenue as the urban economy yields higher revenues and on the other hand greater poverty makes it impossible for small and medium towns to collect fund for the local services Despite this most of the grants from the central government and state government are being allocated to the bigger cities and metro cities and small and medium cons are continuing to be neglected Apart from that, institutional framework is very weak specially in small and medium towns. As the powers have been devolved to local bodies with the 74% amendment act, it was expected that functional and financial status of urban local bodies would improve. But the implementation has not been done fully even in the bigger cities. In the small and medium towns, the situation is even worse. Hence as a result, even the basic services that could be delivered remain unaddressed. (Sharma, 2008)

So, there are three prominent challenges that small and medium towns are facing which includes inadequate finances, weak institutional framework as well as lack of capacity for service delivery. Hence this research covers the overall institutional arrangement, municipal finance and service delivery of six selected towns with special reference to demographic conditions and infrastructure provisions. The research will also identify the challenges faced by the selected towns in terms of providing as well as financing services. And it will also give the recommendation for improving the finance and institutional framework for the same in selected towns.

1.2.1 – Need of the study

Below listed are the important points; why this study is need of the hour today:

- SMSTs house good deal of population and are also evolving business hubs.

- SMSTs form an important linkage between larger cities and the rural in terms of flow of goods, produce, circuits of capital and migration of people.

- SMSTs have been transformed into 'URBAN' in their legal identities, but their social and physical infrastructure still remain at a rudimentary level.

- SMSTs are characterized by the absence of local democratic institutions, poor urban infrastructure and continued loss of agricultural/forest land to development projects.

- Census data of SMSTs show a very slight rise in urban population and declining growth rates.

- The need of this study thus is to **examine the on-ground dynamics of the small and medium towns and provide systematic solution to the limitations of their growth process**

SOURCE: CENSUS OF INDIA, NIUA

1.3 – Research problems

The main domain of the study is 'Urbanization and its impacts'. Today world is experiencing accelerating urbanization and it has resulted into varied situations. To maintain a balance, it is inevitable to critically study the positive and negative effects of urban rise to human and environment. As we understand the impacts, they can be divided into two main parts. One is the impact to urban population and second is the impact on rural population. The study swifts further focusing only on the urban population. Now the urban population resides in briefly large cities and small and medium towns. The study focuses mainly the small and medium towns who are found neglected in the planning process. Among all the parameters to study these small and medium towns, the study zooms on the planning and governance portion.
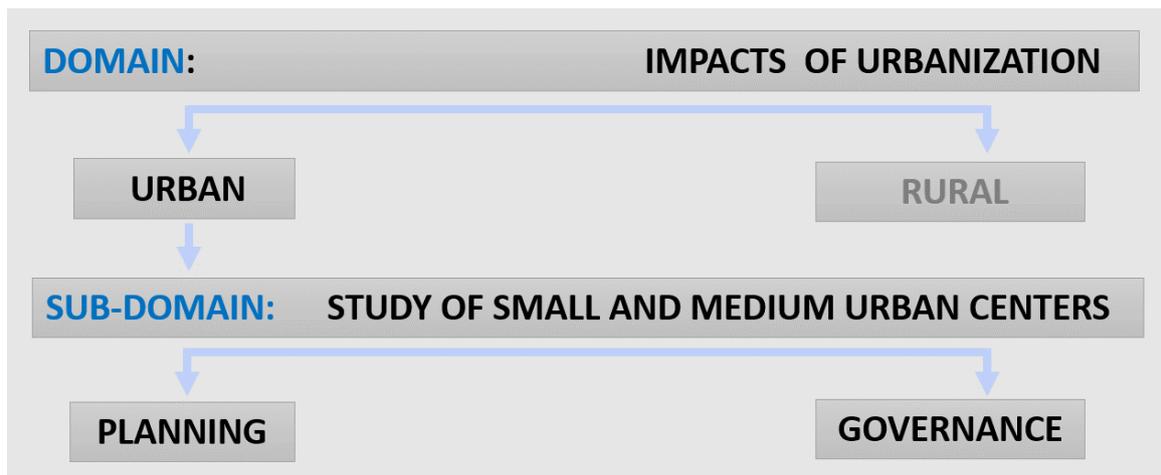
Figure 1-5: Research Domain

1.3.1 – Problems of Research

- Considering the past planning efforts of government, are small and medium urban centers growing and given required attention?

- What are the problems faced by small and medium towns and why?

1.3.2 – Research question

- What is the actual status of small and medium towns of India?

1.4 – Aim & Objectives

1.4.1 – Aim

The aim of the research is to evaluate the actual development of small & medium towns.

1.4.2 – Objectives

1. To study demography of SMSTs

2. To analyze amenities and infrastructure provisions for SMSTs

3. To study past planning efforts by government for SMSTs

4. Identification of issues and providing strategic solutions

1.5 – Scope & limitation

1.5.1 – Scope

Study is specific to the small and medium sized towns only.

1.5.2 – Limitation

- Study is limited to adjacent towns of Vadodara city, Gujarat
- Economic data of towns is unavailable

1.6 – Research methodology

The methodology followed for the research is described below. It includes the objective wise data required as well as the source of that data. As the research assess the institutional and financial aspect of small and medium towns, the institutional aspect has been assessed by talking to respective stakeholders in the towns. While financial aspect has been assessed by analyzing the budget of the towns

OBJECTIVE	ACTIVITIES	METHODOLOGY
1. To study demography of SMSTs	Important demographic information as listed below is studied by checking with guidelines and comparing the condition with district and state. Data list: Population, Population Density, Growth Rate, Sex Ratio, Literacy Rate, Workforce Participation Rate, Composition, Occupation, Employment, Slums Ratio, Industry, Banking, Safety, Per-capita income, Migration reasons, Cultural activities, Satisfaction in place of residence, etc.	The process of collection of required data is divided into two parts: 1. Primary data collection A survey is being carried out through a goggle form in all 6 towns. Over 200 samples are collected. Meeting is being carried out with governing authorities viz. Regional Commissionerate of District Vadodara, VMC, Municipalities, Village Panchayats and Police Stations. 2. Secondary data collection: Various reports of Census of India, NIUA, MOUD and DCHB, Vadodara are being studied to extract needed information. The collected data is then verified for its sufficiency with guidelines and manuals like CPHEEO, URDPFI, etc.

| 2. To analyze amenities and infrastructure provisions for SMSTs | Important infrastructure information as listed below is studied by checking with guidelines and comparing the condition with district and state.
Data list: Health, Education, Road, Transport, Recreation, Water, Drainage, Electricity, Solid waste, Community hall, etc. | The process of collection of required data is divided into two parts:
1. Primary data collection
A survey is being carried out through a goggle form in all 6 towns. Over 200 samples are collected.
Meeting is being carried out with governing authorities viz. Regional Commissionerate of District Vadodara, VMC, Municipalities, Village Panchayats and Police Stations.
2. Secondary data collection:
Various reports of Census of India, NIUA, MOUD and DCHB, Vadodara are being studied to extract needed information. The collected data is then verified for its sufficiency with guidelines and manuals like CPHEEO, URDPFI, etc. |
| 3. To study past planning efforts by government for SMSTs | To identify the top to bottom approach of funding for the towns. To study the National, State and local policies, Grants | Various reports of schemes like JNNRUM, IDSSMT, UIDSSMT, GUDM, etc. are being studied to analyze the |

	and Subsidies available for small and medium towns, thereby check on its funding method and implementation status. To identify agencies involved in development of SMSTs	funding method, intensity and structure for SMSTs. Regional Commissionerate of District, Municipalities, and Village Panchayat authorities are being contacted for data regarding the funding pattern of policies, grants and subsidies
4. Identification of issues and providing strategic solutions	To analyze the data collected and critically look into gaps. The inferences are being made for each parameter studied and then a final conclusion list is being extracted which are basically the problems identified. Each problem is being connected to the objectives and further provided with required recommendations and strategic solutions	The answer to research question is inferred. For each objective, inferences are found as per data analysis. Each inference is thereby provided with suitable recommendations and strategic solutions. The solutions include important data like the implementation agencies, funding schemes, the functions and coverage along with additional information required.

Table 1-2: Research process with activities and method

Figure 1-6: Research design
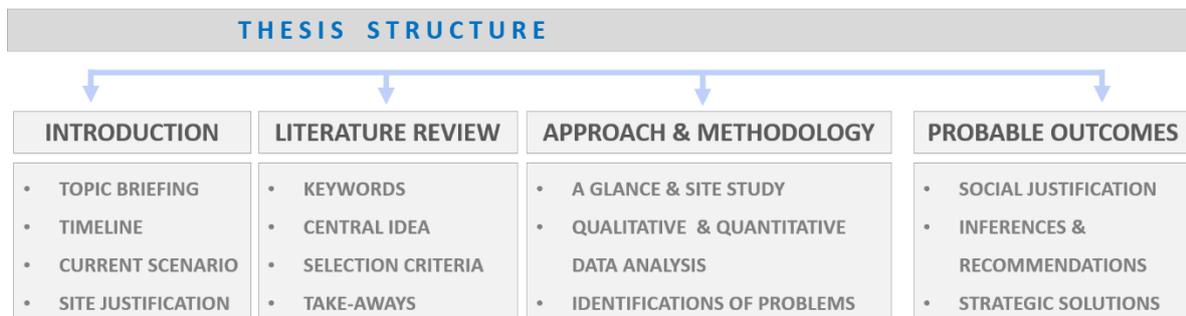
Figure 1-7: Thesis Structure

Chapter 2 – Literature Review

A literature review shall be briefed as search and evaluation of the available literature of your subject or chosen topic area. It documents the state of the art in lines to the subject or topic you study about.

A literature review has four main objectives:

- Literature review surveys the literature in your chosen area of study
- Literature review synthesizes the information in that literature into a summary
- Literature review critically analyses the information gathered by identifying gaps in current knowledge; by showing limitations of theories and points of view; and by formulating areas for further research and reviewing areas of controversy
- Literature review presents the literature in an organized way

The general purpose of a case study is to:

- Describe an individual situation (case), e.g. A person, business, organization, or institution, in detail;
- Identify the prime issues of the case (your research question should tell you what to focus on);
- Study the case using relevant theories and concepts from your unit or discipline;
- Provide solution to a course of action for that particular case (particularly for problem-solving case study).

The main purpose of the literature review for this study is to understand the character, situations & functions of SMSTs. For coverage of maximum information of the towns, the literature review has been systemized as follows:

- Many Inter-national literature reviews are being studied to understand how the towns function throughout the world
- Many National literature reviews are being studied to understand the unique situations in India. For e.g., A study is based on town of most urbanized state of India, in contrast to that, second study shows the scenario of towns of least urbanized state. Total 8 reviews are being presented

- Each review is presented with important drivers like Central Idea, Key-words, Selection criteria and the Key Take-aways.

2.1 – Central Idea, Key words & Selection Criteria

The literature studied are presented below:

1) *Selected Readings on SMST dynamics*

Status:

National: Centre de Sciences Humaines (CSH) of New Delhi, 2015

Key-words:

decentralization, town governance

Central idea:

A-Magnitude of the demographic growth

B-Growth Sources

C-transformation of economies and social structures

D-Land, territorial transformations

E-decentralization, schemes, governance & political economy

Take away:

- Small town & rural linkage study

- SMST situation isn't homogeneous

- Mega projects affect economy

- Decentralized Governance policies is a tool to uplift SMST.

- Urban town remains under rural governance

2) *SMST & R-U Linkages: India Case Study*

Status:

National: INDIA, 2014

Key-words:

Urban settlements, census towns, rural hinterland

Central idea:

The report aims at providing detailed information on urban-rural linkages. The study mentions number of debates due to importance of the "Urban perceived as an engine of growth" by policy makers and more recently due to the rise of these Census towns

Take away:

- SMST intermediary point in rural to urban residential migration

- Burgeoning small Town fixes population pressure & aids suitable distribution

- Cluster economy is important

- District integrated planning needed to analyze towns

3) *SMST Issues in Governance & Urban Planning*

Status:

National: WEST BENGAL

Key-words:

Partition, governance, policies

Central idea:

At the national level, the growth rate of urban population surpassed that of the rural and West Bengal to 14%. From the 2500+ new census towns of India, West Bengal tops the list with about 582 new towns. Currently, the researchers are finding the reasons for this change.

- The West Bengal Municipal Act of 1993 allots special power to the "non-municipal urban area" on governance relating to (a) building regulations, (b) street alignment, (c) conversion of land or building from 1 specific use to other, and (d) social safety and nuisance

4) *Urbanization & Growth of SMST*

Status:

National: ASSAM

Key-words:

Traditionally rural character, spatial study

Central idea:

Assam is one of the least urbanized states of India. While the percentage of urban population 1951 was only 4.29%, it rises to 12.90% in 2001, (National average 27.78%). The research attempts to study the backdrop status of SMST in Assam.

Take away:

- Slight resistance by village to become urban as they would lose rural policy advantage & tax rise

- Spatial study of SMST reveals unevenness, linear in pattern, high concentration around the city Locational map study of SMST is inevitable

5) *SMSTs in their functional territorial context*

Status:

Inter-national: EUROPE

Key-words:

contextual analysis, town project

Central idea:

The aim of TOWN project was to construct 'new' knowledge about European SMSTs. Hence TOWN research team structured a multi-method, multi-level research framework on both qualitative and quantitative evidence.

Take away:

- A functional criterion defines a town or urban center as an urban municipality containing a concentration of jobs, services that serve its hinterland, forming together socio-spatial system integrated by functional inter-relations.

6) *The Role of Small and Medium-Sized Towns*

Status:

Inter-national: ESPON

Key-words:

Urban entities, role, method of identification

Central idea:

The tpoic aim is to derive options for typologies of SMSTs and their regional context, which could facilitate the formulation of policies oriented towards urban development countering diversity of potentials and challenges faced.

Take away:

- Spatial position: agglomerated, networked, isolated

- Socio-economic performance: dynamic/growing, declining, restructuring, potential developing

- Relationship: urban nodes & administrative units

- 1-town = one mayor

7) *Small and intermediate urban centers*

Status:

Inter-national: AFRICA,2016

Key-words:

Urban centers, economic parameters

Central idea:

This research describes how a large proportion of sub-Saharan Africa's national (and urban) population lives in urban centers other than large cities and considers what we know about risk in these urban centers.

Take away:

- The potential of SMST depends, on location, on capacity of government & on links with other urban centers

- Most new investment, income earning opportunity is concentrated here

- Should increase non-agricultural economic base

8) *Nature of poverty and identification of poor in SMST*

Status:

National: INDIA

Key-words:

social vulnerabilities, household poverty

Central idea:

This study aims at understanding the nature of poverty in SMST in India, focusing on occupational, environmental and social vulnerabilities of households.

Take away:

Methodology:

-Coverage and Selection of Towns

-Data Collection

Tools:

-Questionnaire, Focus Group Discussion, Poverty Ranking Exercise

Sample Selection:

-Consultations with Municipality staff, Rickshaw pullers and town residents, & Settlement Mapping

9) *Challenges of Small Towns in Urban India*

Status:

National: INDIA

Key-words:

Culture, livability, inherent legacy

Central idea:

The accelerated urbanization challenges the small urban places and intimidates their vitality and culture. The aim of the research is to define the challenges that are being faced by small towns in India.

Take away:

- Suggests proposals or plans relative to land use mapping, educational infrastructure, healthcare facilities, community services linked to the quality of living of its inhabitants.

- Spatial provisions like public playgrounds and parks, open green spaces, overcrowding and pollution control strategies which affect the livability

10) *City Resilience Framework for SMST*

Status:

National: INDIA

Key-words:

Framework for small and medium towns

Central idea:

With a strong focus on SMST of India, this paper acts as a tool to help cities to self-assess themselves through a streamlined qualitative process with a series of steps & processes

Take away:

1- To know the city & its challenges

2- to prioritize the identified vulnerabilities

3- Resilience as a team effort (multi-stake holder approach)

4- To amalgamate the interventions with relevant existing or upcoming city plans and leverage them to achieve resource efficiency.

11) *Migration in India: Causes & consequences*

Status:

National: INDIA

Key-words:

pull and push factors, movement

Central idea:

Majority of migrated population specially in large and metropolitan cities lives in marginal settlements, slums and squatter areas. The paper attempts to find the causes.

Take away:

- There is migration from rural villages to direct metro cities

- Causes of Migration:

1. Urbanization

2. Marriage

3. Employment

4. Education

5. Lack of Security

6. Loss of cultural activities

12) *National Workshop on Internal Migration & HDI*

Status:

National: ICSSR, 2011

Key-words:

Migration: Trends and Pattern

Central idea:

Lately, several changes in India are likely to have impacted on the pattern and pace of migration. Why pattern of growth in the last two decades has continuously widened the gap between rural and urban areas?

Take away:

Formulation of a migration policy for Inclusive urban development:

1- Employment and food security

2- Ensuring basic entitlements and social security

3- Implementing the RTE

4- Role of Panchayats

5- A regional development policy and pro-poor uplift in backward areas

13) *Beyond Metropolitan Shadow*

Status:

National: NILERD

Key-words:

Gaps in policies, urban governance mechanism

Central idea:

This article, based on the secondary data covering three states (West Bengal, Bihar & Jharkhand) of eastern India, analyses how new urbanization is challenging the urban core.

Take away:

- UIDSSMT does not cater to the provision of basic health or education services in small towns

- CTs not eligible for funds under any scheme of JNNURM because they are governed by rural panchayats

- Smaller towns must have a separate scheme similar to JNNURM

14) *Culture as a Determinant of Migration*

Status:

Inter-national: UTAH

Key-words:

Socio-Demographic Variables, in-migration

Central idea:

This article evaluates the importance of cultural factors in the destination selection process for migrants moving into and returning to the state of Utah

Take away:

- The declining trend of cultural factors results into out-migration to cities.

- Along with basic amenities and services, if there are cultural upliftment policies are nourished, the return migration to over-urbanized cities is possible

2.2 – Study findings

After understanding the literature study, a final conclusive list of important study learnings is being prepared, as listed below:

- Decentralized Governance policies, Cluster economy & District integrated planning needed to uplift SMSTs.

- Special body for "non-municipal urban area" on matters relating to (a) building regulations, (b) street alignment, (c) conversion of land or building from one use to another, (d) public safety and nuisance

- Spatial study (agglomerated, networked, isolated) of SMST reveals unevenness, linear in pattern, high concentration around the city. Locational map study of SMTs is inevitable

- Land use mapping & community services linked to livability and should be planned.

- Should increase non-agricultural economic base for new investment opportunities in SMSTs

- Migration from rural villages to direct metro cities skipping middle order urban centers. Causes of Migration: Marriage, Employment, Education, Lack of Security & Loss of cultural activities

- Formulation of a migration policy focusing on: Employment, Basic amenities, Role of Panchayats

- The declining trend of cultural and social factors results into out-migration to cities. Along with basic amenities and services, cultural upliftment policies required in urgence.

- A 'Regional development plan' for identification of small and medium towns, not merely on basis of population.

- UIDSSMT doesn't cover basic health or education services in small towns. CTs not eligible for funds under any scheme of JNNURM as governed by rural panchayats. Smaller towns to have a separate scheme similar to JNNURM for funding and avoided parameters required for growth of SMSTs

Figure 2-1: Reference map of SMST

Source: kottke.org

Chapter 3 – Overview of Small and Medium Towns

3.1 – How are Small and Medium Towns defined in India?

'Small and Medium town' is someplace where urbanity has not yet reached in its full vigour. It may also sound relatively smaller in size by area and also by population residing within it. The Small town is neither a village, nor a city. It is an economic parlance representing the area providing link between rural centres and urban places of significance but having weaker community affairs and social set-up (Sharma S., 2006). The concept of small and medium towns is still not very cleared as there are multiple definitions and criteria for being a small and medium town. So far, small and medium towns have been identified in the census as well as in the 74% amendment act. And apart from those national policies like IDSMT, JNNURM, AMRUT and other policies related to urban development have also defined small and medium towns depending upon their objectives. So, there is no clear definition of small and medium towns in India

The census has given 6 categories of towns ranging from the population of less than 5,000 to more than 1,00,000. The classification of towns as per the census is mentioned in the table below.

Size Class of Cities	Population
Class I	More than 1,00,000
Class II	50,000-99,999
Class III	20,000-49,999
Class IV	10,000-19,999
Class IV	5.000-9.999
Class VI	Less than 5,000

Table 3-1: Classification of Cities & Towns as per Census

Source: Census of India

As per the census definition, an urban centre having a population of more than one lakh is classified as a city while population less than one lakh is classified as a town. Cities having a population between 1 lakh to 5 lakhs are called as metropolitan cities and cities with population more than 5 lakhs are mega cites. And in case of towns, all the centres having population less than 1 lakh are towns. Towns are further categorised in small, medium and large towns. Hence which class of towns should be considered as small and medium towns is not defined.

The 74th amendment act gives provision for constituting three types of municipalities based on their population.

• Nagar Panchayats for transitional areas from a rural to urban area

• Municipal Councils for smaller urban areas

• Municipal Corporations for larger urban areas

And the criteria for considering smaller and larger urban areas have been left to the state government. So, each state has their own consideration of small and medium towns based on the demographic situation of the state. For constituting Municipal corporation, in case of Karnataka and West Bengal, the population should be more than 2 lakhs, for Maharashtra the population should be more than 3 lakhs and for Tamil Nadu the population should be more than 5 lakhs. So, there is a state level variation in defining size and class of the city. And in the same way, the criteria for constituting Municipalities are varied across the states. Hence small and medium towns are also defined by each state separately.

Apart from that there are national policies which have defined Small and Medium towns differently based on the objective of their scheme. Integrated Development of Small and Medium Towns (IDSMT) was specifically for small and medium towns. And according to IDSMT, the town and cities having population up to 5 lakhs will be considered as small and medium towns. Another scheme which is specifically focused on SMSTs was Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMST) which has subsumed the existing scheme of IDSMIT And UIDSSMT and JNNURM has defined SMSTs as cities having population more than 1 lakh and less than 10 lakhs. Apart from that, the researchers also use different definitions of SMSTs based on their objective and scope of their research. Some of

the definitions are given in the table below. So, there are multiple definitions and criteria for defining small and medium towns and hence most of the times it remains invisible in the development of the country.

Hence, for the study, the criteria to be termed as SMSTs is being derived by comparing the Census definition of urban and the URDPFI guidelines.

The Census of India has two methods to term a town as mentioned below:

ADMINISTRATIVE CRITERIA	FUNCTIONAL CRITERIA
1.STATUTORY TOWNS granted a municipal status by the State government 2. CENSUS TOWNS (i) the population must be 5,000 or more, (ii) the density must be at least of 400 persons per square kilometer, (iii) 75% of the male workforce should be employed in the non-agricultural sector	CLASS I : ABOVE 10,00000 – 4,99,999 CLASS II : 50,000 – 99,999 CLASS III: 20,000 – 49,999 CLASS IV: 10,000 – 19,999 CLASS V : 5,000 – 9,999 CLASS VI: 5,000 AND BELOW

Table 3-2: Urban as per Census of India

Source: Census of India, 2011

The URDPFI guidelines has a unique bifurcation of allotting a town a designation of small, medium or large as below:

SR. NO.	CLASSIFICATION	SUB-CATEGORY	POP. RANGE	GOVERNING AUTHORITY	NO. (2011)
1	**SMALL TOWN**	SMALL TOWN I	5000-20,000	NAGAR PANCHAYAT	
		SMALL TOWN II	20,000-50,000	NAGAR PANCHAYAT/ MUNICIPAL COUNCIL	7467
2	**MEDIUM TOWN**	MEDIUM TOWN I	50,000 – 1 LAKH	MUNICIPAL COUNCIL	
		MEDIUM TOWN II	1 LAKH – 5 LAKH	MUNICIPAL COUNCIL	372
3	LARGE CITY	--	5 LAKH – 10 LAKH	MUNICIPAL CORPORATION	43
4	METROPOLITAN CITY	METROPOLITAN CITY I	10 LAKH – 50 LAKH	MUNICIPAL CORPORATION/ METROPOLITAN PLANNING COMMITTEE	45
		METROPOLITAN CITY II	50 LAKH – 1 CRORE	-SAME-	5
5	MEGAPOLIS	--	MORE THAN 1 CRORE	-SAME-	3

NOTE- Any urban center having less than 5000 population may be called as Statutory Town & Census of India follows 6-fold classification

Table 3-3: URDPFI guidelines for classification of Urban settlements

Source: URDPFI guidelines modification

The 74th amendment act leaves on states to decide the criteria of small and medium towns which result into more complicated governance at a general level for nation /state. Recalling the fact that 34.29% of urban population lives in these small and medium towns as per 2011 Census of India.

Therefore, we consider the **Small and Medium Towns** as

Towns of Class II to Class VI (Population below 5,000 to 1 lakh)

Hierarchal Network of CITY-TOWN-VILLAGE shows the inter-relation of how the sequential flow of connectivity functions.
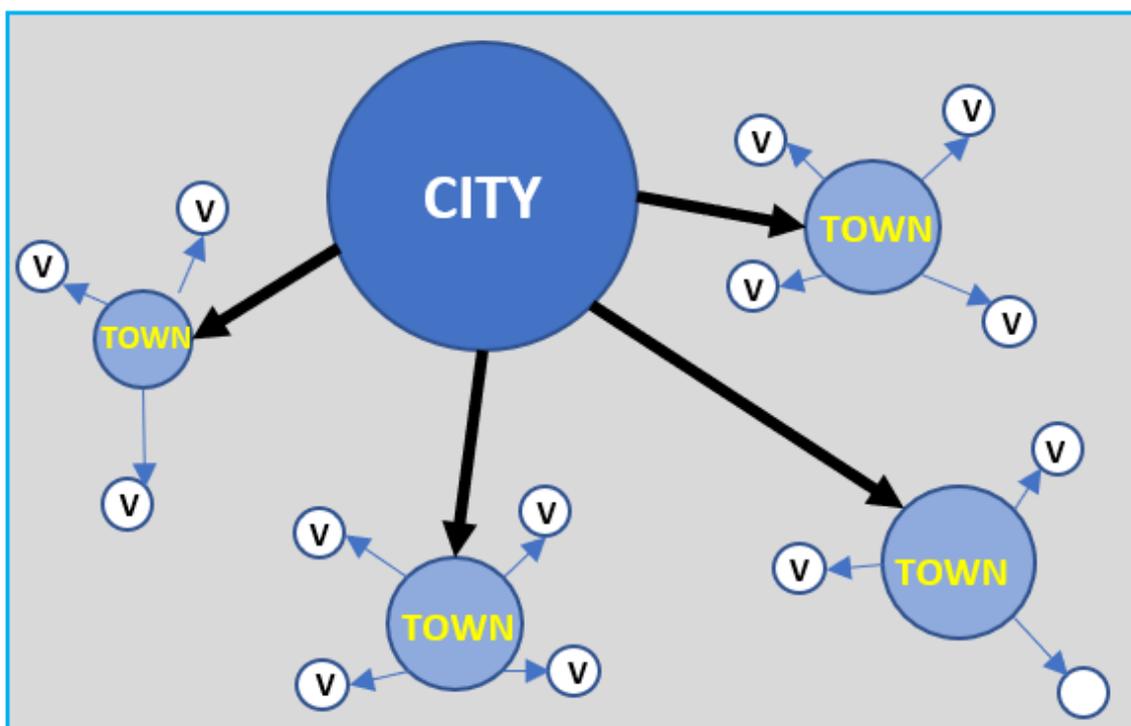
Figure 3-1: Network of Urban settlements

3.2 – Status of Small and Medium Towns in shadow of Large cities

As mentioned in the earlier section that almost 50% of the urban population lives in the cities and population less than 100000 to going down to just 5000 which can be consider as small and medium towns. And urban India as a whole facing challenges particularly of poor infrastructure, the worse off the situation is in the small and medium towns. Most of the small and medium towns are not even able to provide these services though it's a basic function of them. If we compare the small and medium towns with the large cities in terms of its finance, institutional capacity and service delivery, then in all these three parameters small and medium towns are way behind the large cities.

In case of finance, most of the funds are being allocated to large cities as they are economic growth engine of the country and their problems are visible. Even though bigger cities are able to generate their own revenue through taxes as well as they are also able to borrow money form the financial institutions because of their strong financial status, they are getting huge funds from the central and state government. While if we see the small and medium towns, neither they are able to generate their own revenue nor they are able to borrow form the financial institutions because of their weak financial status. And on top of that, they are not even getting enough funds from the central and state government which results in to poor infrastructure and service delivery in those towns.

3.3 – Major challenges faced by Small and Medium towns in India

There are various challenges faced by small and medium towns in India. The population of small and medium towns have very low per capita income due to lack of employment opportunities, less involvement in secondary sector and more growth in informal employment, which makes households highly vulnerable (Bhuvaneswari Raman, 2015). A study done by Himanshu (2008), based on the National Statistical Survey data, clearly demonstrated that poverty is higher in small towns than in any other urban centre and even villages: in 1999-2000, 16.6% of households in cities with

a population of more than 10 million, were below the poverty line 24% in cities with a population between 50 000 and 1 million and 35.3% in smaller towns, which is higher than in rural areas (28.79%). (Bhuvaneswari Raman, 2015) Also, small and medium towns facing challenges related to less employment opportunities as well as educational opportunities, the provision of basic services are poor, housing conditions are not good and all these issues results in to poor quality of life.

Apart from that there are various administration and finance related issues which small and medium town are facing. The "4" amendment gives list of 15 functions to be performed by the urban local bodies as per 12th schedule. These functions are not size sensitive, as in the million plus cities as well as small and medium towns have to perform all these 18 obligatory functions. But, in most of the states, small and medium towns are not able to perform all functions because of the financial constraint. And this financial constrains is there because of a lack of capacity of small and medium towns to raise their own revenue. Most of the functions are being carried out by respective state departments as the smaller and medium towns does not have financial resources to perform the basic functions (Sharma K., Rejuvenating India's Small Towns, 2012). Most of the times small and medium towns run deficit and highly dependent on state and central grants. And in grant also, there is a wide disparity in the availability of funds between large and small cities, pointing out that 50% of funding from HUDCO had been directed towards large cities even when the development of small towns had been one of the stated objectives (Bhuvaneswari Raman, 2015). And apart from that most of the schemes are focused on large metropolitan cities and not towards small and medium towns. So, even the grants and funds from central and state government are not enough for doing basic functions. Also, there are very less schemes programs for the development of small and medium towns compare to larger cities Hence there is need to address challenges faced by these small and medium towns specially challenges related to governance and finance. Some of the changes in governance framework are required in order to improve the revenue which can help in better development of these towns.

3.4 – Status of Small and Medium towns in India

The Indian cities and towns are classified into a six-fold classification by Census of India namely more than 100,000, 99,999-50,000, 49,999-20,000, 19,999-10,000, 9, 999 5,000, and less than 5000. The size class known as cities comprises places having a population of 100,000 and more, and the smallest category consists of small towns with a population less than 5000. For a concrete comparison of the changes in urban population across size class of cities and towns, the towns comprising of population less than 20,000 are termed as small towns (Census of India, 1991). Further, cities with population of a million and more deserve a special mention in India's urbanisation because of their large size and economic dominance in the country. These cities are called million plus or metropolitan cities. Figure below presents the percentage distribution of urban population by size class of cities from 1901 to 2011. It may be seen that about five % of the population lived in million cities in 1901, with the figure rising close to 20 % in 1951 and to nearly 42.6 % by 2011. The number of million cities has also gone up from one in 1901 to 53 in 2011. Kolkata was the only city which fell into the million cities category at the start of the twentieth century, and after that Mumbai joined the rank of million plus cities in 1911. For nearly four decades, there were only two million cities, and then Delhi, Chennai and Hyderabad joined the rank of million cities in 1951, adding the total number of million cities to five. In 1981, the million cities counted 12. By 1991, 11 more metro cities were added to the list, raising the total number to 23. During the decade 1991-2001, 12 more million plus cities have been added, followed by an addition of 18 more during 2001-2011 making the total number of million plus cities to 35 in 2001 and 53 in 2011 respectively. As a result, the concentration of urban population in million plus cities added significantly in the last decade from about one-fourth in the 1970s to 1980s to more than two-fifths in the 2000s. Among all, six cities that have a population of more than five million, namely Mumbai, Kolkata, Chennai, Delhi, Hyderabad and Bangalore, constitute one-fifth of the total urban population. When we look at all cities with a population of 100,000 and more, one-fourth of the total urban population lived in cities in 1901. This hiked to 45 per cent in 1951 and increased to the maximum of 68 per cent in 2001. In 2011, the share of population in cities with population one lakh and more slightly declined from 68 per cent in 2001 to 65 per cent in 2011. Notwithstanding

this slight decline, it is inevitable to point out that the increasing concentration of population in cities, particularly in million plus cities, has been a striking feature of India's urbanisation during the last century. However, results available from 2011 census are indicative that while urbanisation in the country has speeded up, the metropolitan cities like Delhi, Kolkata, Hyderabad, Ahmadabad and Mumbai show decline in their growth rates (Kundu. 2011). It is also important to mention that while core areas (municipal areas) of the city have been showing a declining growth, the peripheral areas adjoining the main city has comparatively grown faster during the last decade surrounding many million plus cities. To this context, the examples of cities like Navi Mumbai, Thane, Kalyan. Mira Bhayander in the Mumbai metropolitan region are noteworthy. Same is true for Gurgaon, Faridabad, Meerut, Noida around the National Capital Territory of Delhi. Thus, the nature of migration in the big metropolitan cities seems to have changed which need to be assessed in conjunction with the surrounding areas known as metropolitan region. The metropolitan cities have also very high density of population and it is prone to spill over to adjoining areas as a natural consequence. Thus, one of the important features of India's urbanisation seen from 2011 Census is not only accelerated urbanisation, but also the faster urbanisation has been possible due to the geographical expansion of urbanisation and also through the emergence of new towns. On the other hand, huge areas still remain rural and providing urban facilities in rural areas (PURA) as proposed by our former President of India A.P.J. Abdul Kalam in promoting India's economic development still remains a challenge (Kalam, 2003). Further, the civic conditions of newly emerged as well as old small and medium towns are noticeably poor.

Hence, we can mark those Indian large cities are attracting in-migration from rural as well as small and medium towns. Meanwhile, there is speeded reclassification of rural to urban. This brings us to the question, what good are urban places who doesn't imbibe urban characters or hold / invite population?

This study finds the reasons why these small and medium towns are skipped for being the place of residents for migrants. For only this way, India can solve the problem of population balance, thereby making all classes of urban settlements work lucidly.

	MILLION CITIES	CITIES	LARGE TOWNS	MEDIUM TOWNS	SMALL TOWNS
1901	5.86	20.11	11.29	15.64	47.1
1961	23.34	33.49	11.23	16.94	20.41
2011	42.62	23.09	9.33	12.78	11.75
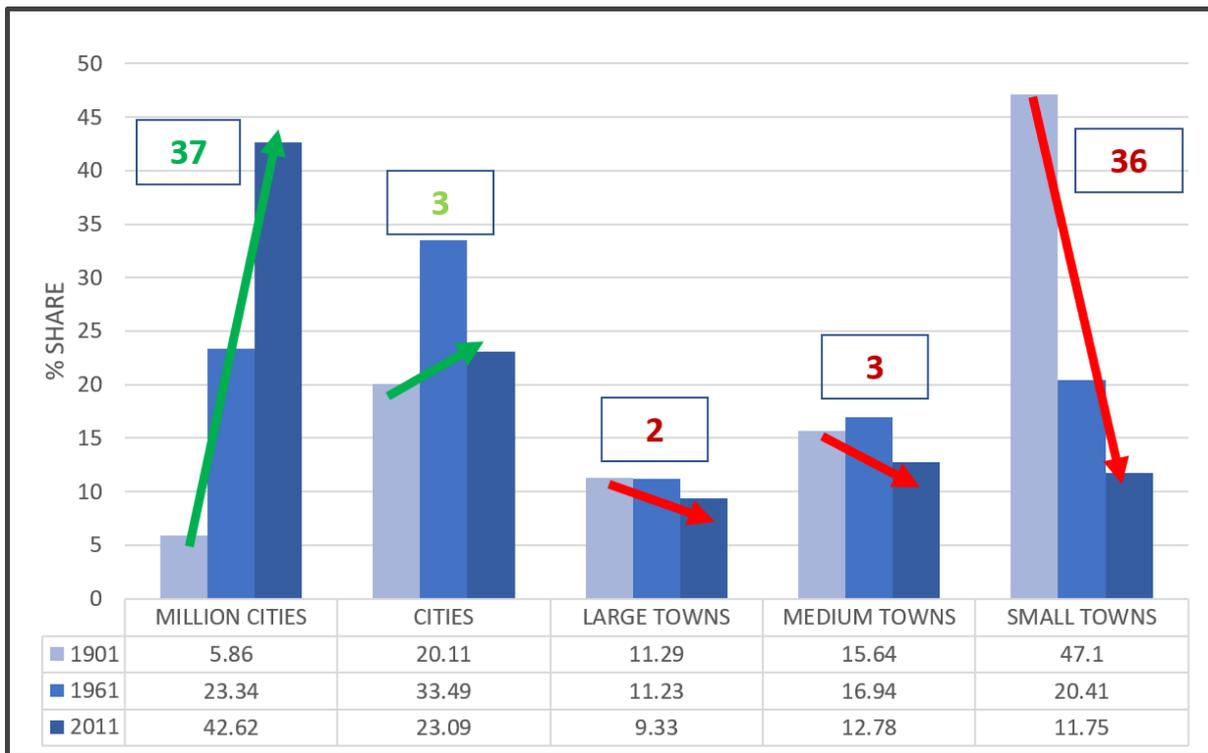
Figure 3-2: Urban population % by size of cities & towns, India, 1901–2011

Source: Various reports of Census of India
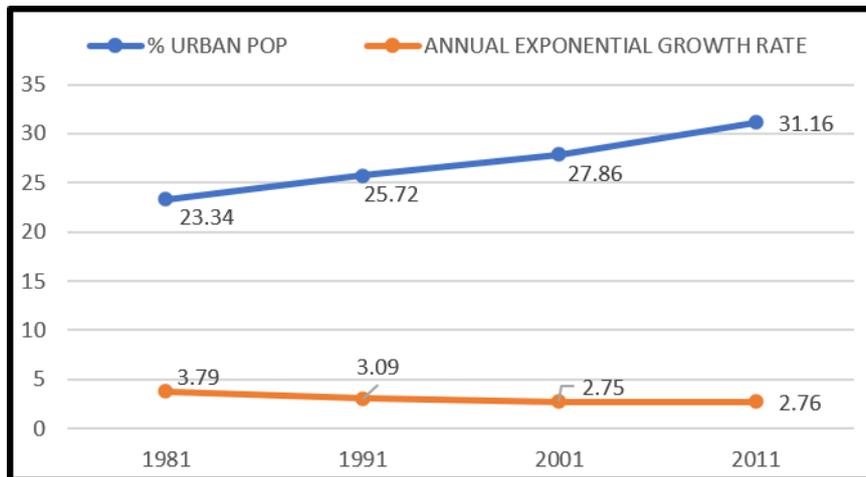
Figure 3-3: Annual exponential Urban population % and Growth Rate

Source: Various reports of Census of India

Components	Percentage Distribution			
	1971 – 81	1981 – 91	1991 – 01	2001 – 11
Urban increment	100	100	100	100
Natural increase (of initial population plus intercensal migrants)	50	62.3	57.6	43.8
Net rural-urban migration	18.6	18.7	20.8	20.6
Net reclassification from rural to urban including jurisdictional changes and out growths	31.4	19	21.5	35.6

Table 3-4: % distribution of migration and reclassification

Source: Various reports of Census of India

Inferences about SMSTs status in India:

- R-U migration increasing, R-U reclassification increasing, yet Natural increase Decreasing.

- U-U migration is at hike

- There is HIGHEST MIGRATION to MILLION CITIES from cities, large, medium & small towns

3.5 – Status in Gujarat and Vadodara

The urbanization rate of Gujarat state (42.6) is higher than national rate (31.28). The urbanization rate of Vadodara district (49.6) is higher than state and national rate. The population growth rate of Vadodara district (14.4) is lower than state (19.17) and nation (17.6). The population growth rate in urban areas (25.5) is quite high than in rural areas (5.2) of Vadodara district. In contrast to this, the workforce participation rate of rural areas (47.26) is higher than urban areas (33.94) of Vadodara district.
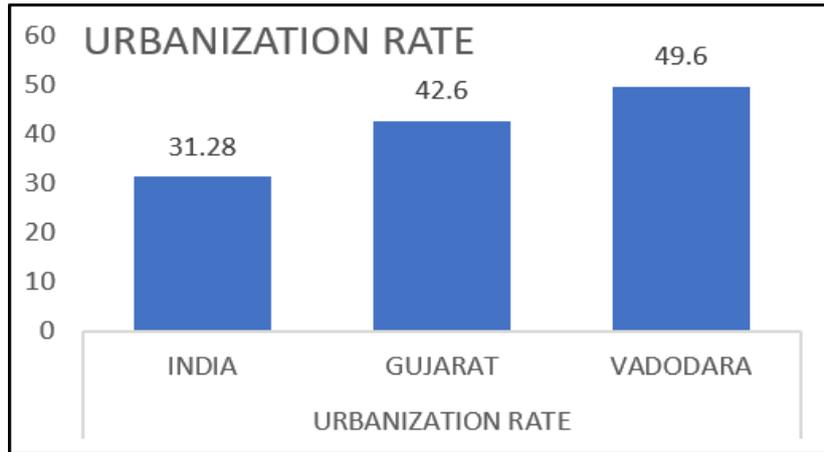
Figure 3-4: Urbanization rate comparison

Source: Various reports of Census of India
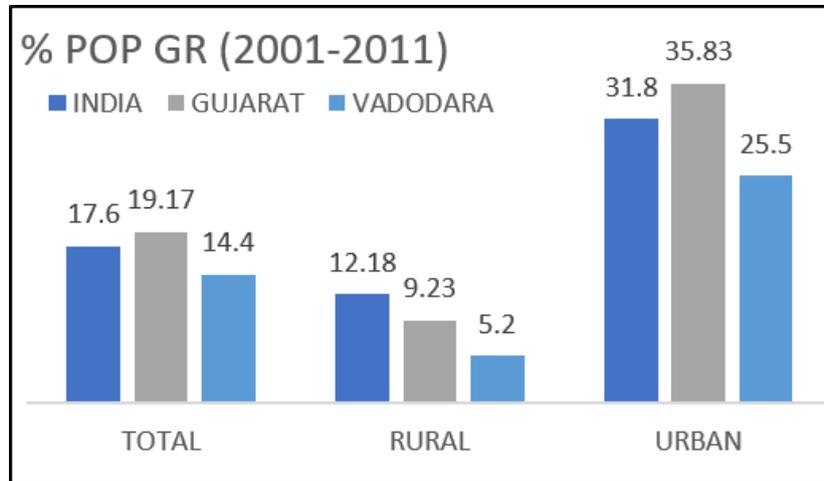
Figure 3-5: % population Growth Rate comparison

Source: Various reports of Census of India
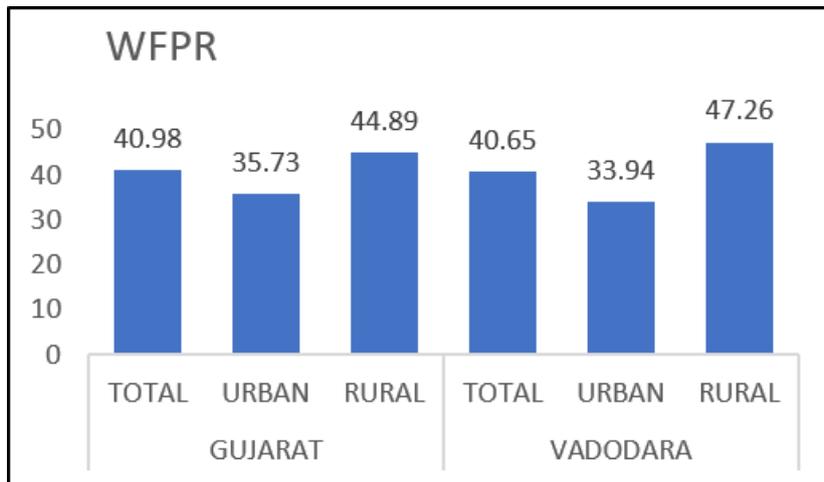
Figure 3-6: Comparison of Workforce Participation Rate

Source: Various reports of Census of India

In Gujarat state, the number of urban areas is increasing and rural areas are decreasing. Total 112 towns has increased from 2001 to 2011. In that the Statutory towns has increased by 27 and Census towns by 79.

In Vadodara district, the number of urban areas is increasing and rural areas are decreasing. Total 9 towns has increased from 2001 to 2011. In that the Census towns has increased by 7 and INA by 2.

In Gujarat the number of medium towns has risen from 33 to 36 and small towns from 179 to 284 during 2001-10. In Vadodara district, there is 1 medium town and small towns has risen from 14 to 23. In contrast to this, the villages of Gujarat have decreased by 314 and in Vadodara district by 15.

	GUJARAT		VADODARA	
	2001	2011	2001	2011
MEDIUM TOWNS	36	33	1	1
SMALL TOWNS	179	284	14	23

Table 3-5: 2001-11 data of SMSTs

Source: Vadodara DCHB

GUJARAT STATE	2001	2011	VADODARA DISTRICT	2001	2011
DISTRICTS	25	26	RANK	3	3
SUB-DISTRICTS	226	225	TALUKA	12	12
TOWNS	242	348	TOWNS	16	25
STATUTORY T	168	195	CENSUS TOWNS	7	14
CENSUS TOWNS	74	153	INA	4	5
VILLAGES	18,539	18,225	VILLAGES	1548	1533

Table 3-6: Number of Districts, Towns and villages as per 2001-11

Source: Town amenities, COI 2011

3.6 – Current scenario in pandemic

SCENARIO OF 2020-21:

- Half of the people in Gujarat's big cities are migrants. 42 lakh migrants have made Gujarat their home (2019, REGISTRAR GENERAL & CENSUS COMMISSIONER)

- Gujarat completes "biggest out migration of independent India"; evacuation of 13 lakh migrants. Same followed with second wave during Holi (2020-21, INDIAN EXPRESS)

- Several Indians are looking to permanently shift to these small towns, given the work from home concept, including the cheaper cost of living.

- The fear of the pandemic has prompted migrants to try to rebuild their lives in their home towns and villages, and shall reunite with their families. (2021, VOANEWS)

- Hence, in today's pandemic situation, trend reverses and the importance of SMSTs is increasing. They serve as most suitable places to counter reverse migration in terms of employment as well of less population congestion

3.7 – Study Area

The study area is Vadodara district, Gujarat; after the split in 2013. The focus of study is all the towns that are included in the Vadodara district boundary. Vadodara district ranks 3rd in Gujarat and 48th in India. In spite of having smaller area than metropolitans of Gujarat, the Vadodara district has made an astonishing mark not only at national level but also across the globe. The towns adjacent to Vadodara city are having varied character and economic potential. The study area covers the towns quadrant wise and 6 suitable towns are selected for detailed analysis of actual development.

Chapter 4 – Study structure

4.1 – Approach and methodology

The Thesis frame-work is divided into four main sections as below:

1	INTRODUCTION
2	LITERATURE REVIEW
3	APPROACH AND METHODOLOGY
4	INFERENCES & RECOMMENDATIONS

GLANCE OF SMST's ADJACENT TO VADODARA CITY

SITE ANALYSIS	PRIMARY DATA ANALYSIS	SECONDARY DATA ANALYSIS
• STUDY REGION • LOCATION AND REGIONAL CONTEXT • MAJOR DRIVERS • SPATIAL EVOLUTION GROWTH DIRECTION • INFERENCES	• PHYSICAL SURVEY METHOD : • REGION SPECIFIC REASONS OF MIGRATION • INFERENCES	• DEMOGRAPHY • INFRASTRUCTURE • GAPS & COMPARISION WITH GUIDELINES • EFFORTS MADE BY GOVERNMENT • GOVERNANCE HIERARCHY • IMPLEMENTATION STATUS CHECK

IDENTIFICATION OF PROBLEMS

STRATEGIC SOLUTIONS FOR DEVELOPMENT OF SMST's

Figure 4-1: Methodology of thesis frame-work

4.2 – Glance of Small and Medium Towns adjacent to Vadodara
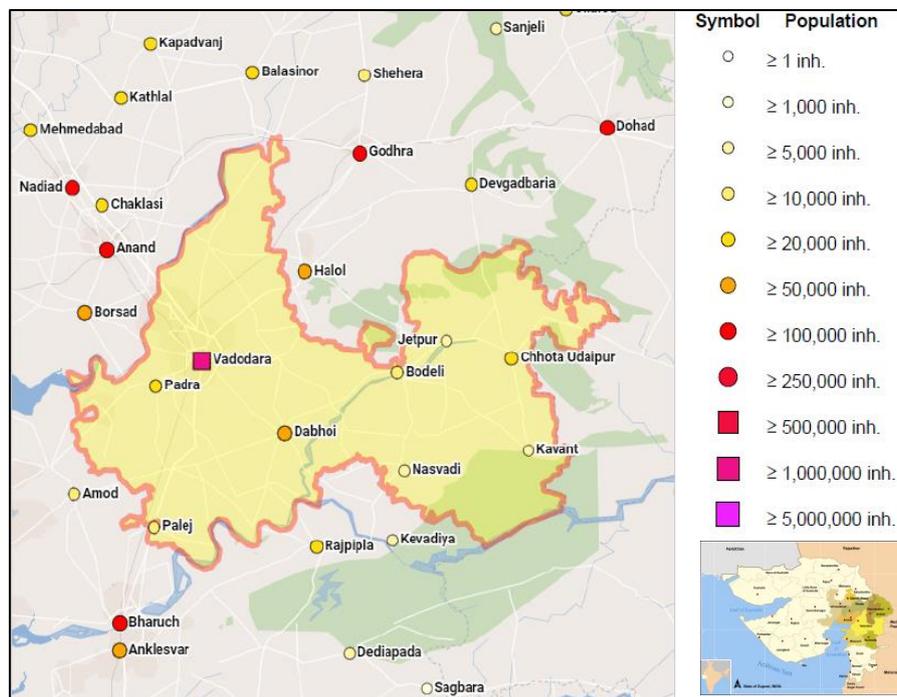
Figure 4-2: Vadodara district map, 2011

Source: Citypopulation.de

- Vadodara is renowned as the "Sanskari Nagari" (City of Culture) due to its rich cultural traditions, palaces, parks, temples and museums.

- Known as the 'Gateway to the Golden Corridor', due to its strategic location for national movement including DMIC.

- Total 25 towns (2011): 1 metro city – 1 medium town – 3 small town II – 20 small town I

- Small towns constitute 92% of Vadodara districts urban areas. Medium towns constitute 4 % and metro city 4 %.
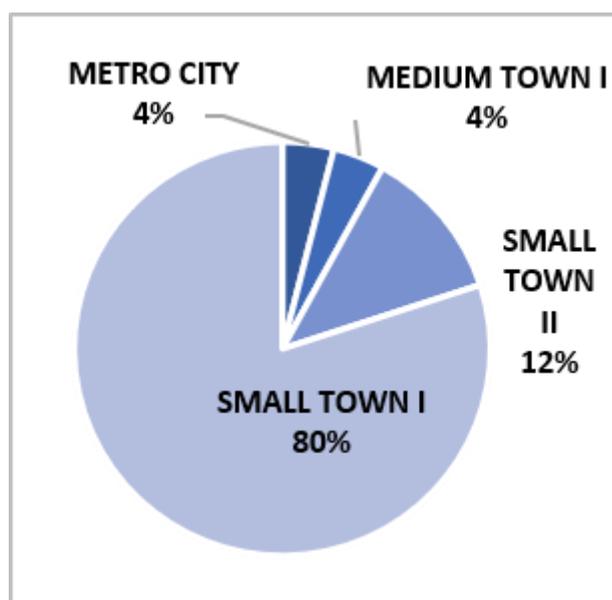
Figure 4-3: Distribution of City, Medium town and Small town

Source: Various reports of Census of India

4.3 – List of Small and Medium Towns of Vadodara district:

There are 25 towns in Vadodara district. The table below shows important data like the status of the town i.e., Municipal Corporation, Municipality, Out-growth, Census Town, Industrial Notified Area (INA); the category as per URDPFI guidelines, The Census Class, Growth Rate (2011) and Population (2011).

The Growth rate of Gujarat state is 19.28. The Growth rate of Vadodara district is 14.38. The table below shows that out of 25, just 6 towns have better growth rates than state and district. 15 towns have growth rate below district growth rate and 17 towns have growth rate below state.

No	Town Name – Vadodara District	Size (UDPFI)	Status	Growth Rate (2011)	Population (2011)
1	Vadodara (M Corp. + OG)	Metropolitan city - I	I	24.17	1752371
2	Dabhoi (M)	Medium town - I	II	-6.75	51240
3	Chhota Udaipur (M)	Small town - II	III	11.1	25787
4	Padra (M + OG)	Small town - II	III	29.89	46660
5	Karjan (M)	Small town - II	III	15.35	30405
6	Savli (M)	Small town - I	IV	2.95	18467
7	Ranoli (CT)	Small town - I	IV	6.05	11726
8	Undera (CT)	Small town - I	IV	0	16902
9	Vaghodia (CT)	Small town - I	IV	23.18	16604
10	Bodeli (CT)	Small town - I	IV	16.15	12184
11	Nandesari (CT)	Small town - I	V	14.03	8290
12	Karachiya (CT)	Small town - I	V	-8.18	7103
13	Bajwa (CT)	Small town - I	V	4.56	9611
14	Jarod (CT)	Small town - I	V	11.84	7200
15	Jetpur (CT)	Small town - I	V	7.58	7864
16	Kavant (CT)	Small town - I	V	35.1	9553
17	Nasvadi (CT)	Small town - I	V	14.31	8076
18	Alikherva (CT)	Small town - I	V	43.26	8951
19	Nandesari (INA)	Small town - I	VI	30.74	3679

20	Petro-Chemical Complex (INA)	Small town - I	VI	-73.41	1951
21	GSFC Complex (INA)	Small town - I	VI	-26.18	2242
22	Por-Ramangamdi (INA)	Small town - I	VI	0	311
23	Jawaharnagar(Gujarat Refinery)(CT)	Small town - I	VI	-26.78	3417
24	Tarsali (CT)	Small town - I	VI	-81.54	4929
25	Vaghodia (INA)	Small town - I	VI	-74.19	248

Table 4-1: Glance of towns of Vadodara district

Source: Vadodara DCHB

4.3 – Growth check of Small and Medium Towns of Vadodara district

Town wise analysis of rising vs falling with decadal growth rate comparison is done. Here the purpose is to check individual town growth status by comparison of their respective decadal growth rates.

No	Town Name		Status	Growth Rate (1991)	Growth Rate (2001)	Growth Rate (2011)	Population (2011)
1	Vadodara (M Corp. + OG)	Metropolitan city - I	I	44.54	32.93	24.17	1752371
2	Dabhoi (M)	Medium town - I	II	14.17	8.51	-6.75	51240
3	Chhota Udaipur (M)	Small town - II	III	4.18	22.12	11.1	25787

4	Padra (M + OG)	Small town - II	III	4.01	27.61	29.89	46660
5	Karjan (M)	Small town - II	III	19.32	43	15.35	30405
6	Savli (M)	Small town - I	IV			2.95	18467
7	Ranoli (CT)	Small town - I	IV		22.76	6.05	11726
8	Undera (CT)	Small town - I	IV			0	16902
9	Vaghodia (CT)	Small town - I	IV			23.18	16604
10	Bodeli (CT)	Small town - I	IV	99.8	-31.3	16.15	12184
11	Nandesari (CT)	Small town - I	V			14.03	8290
12	Karachiya (CT)	Small town - I	V		-3.96	-8.18	7103
13	Bajwa (CT)	Small town - I	V	17.5	-15.8	4.56	9611
14	Jarod (CT)	Small town - I	V			11.84	7200
15	Jetpur (CT)	Small town - I	V			7.58	7864
16	Kavant (CT)	Small town - I	V			35.1	9553

17	Nasvadi (CT)	Small town - I	V			14.31	8076
18	Alikherva (CT)	Small town - I	V			43.26	8951
19	Nandesari (INA)	Small town - I	VI	59.18	17.54	30.74	3679
20	Petro-Chemical Complex (INA)	Small town - I	VI	26.9	-20.4	-73.41	1951
21	GSFC Complex (INA)	Small town - I	VI	-23.9	-29.6	-26.18	2242
22	Por-Ramangamdi (INA)	Small town - I	VI			0	311
23	Jawaharnagar (Gujarat Refinery) (CT)	Small town - I	VI	11.09	-44.5	-26.78	3417
24	Tarsali (CT)	Small town - I	VI	34.38	90.95	-81.54	4929
25	Vaghodia (INA)	Small town - I	VI			-74.19	248

Table 4-2: Decadal Growth rate comparison of towns of Vadodara district

Source: Vadodara DCHB

NO.	INFERENCES
10	FALLING
5	RISING
10	NEWLY EMERGED
18	GROWTH RATE BELOW 17 % (NATURAL INCREASE)

Table 4-3: Inferences of towns of Vadodara district
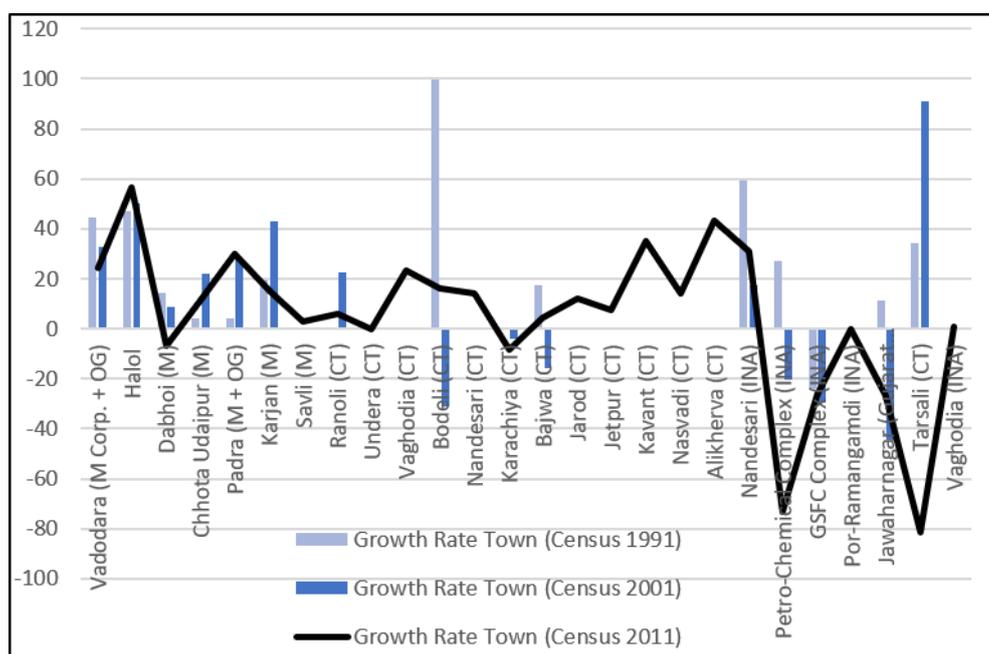
Figure 4-4: Decadal comparison of towns of Vadodara district

Source: Vadodara DCHB

4.4 – Site analysis – Regional context & district drivers

Vadodara district holds a very important regional position for state and national movement as well. Located between Ahmedabad (101 km) and Surat (150 km), the district has an international air-port, major state railway junctions and state bus station.

Vadodara is noted as an Industrial Area in the Delhi-Mumbai Industrial Corridor. This makes a strong potential for the district to boost economy if properly planned. The key sectors of the district are Industry, Education and Agriculture. The district is blessed with very rich culture and heritage attracting tourists across the globe. The current trend of rising IT sector is inviting FDI and many new MNCs, directly increasing employment and economic opportunities.
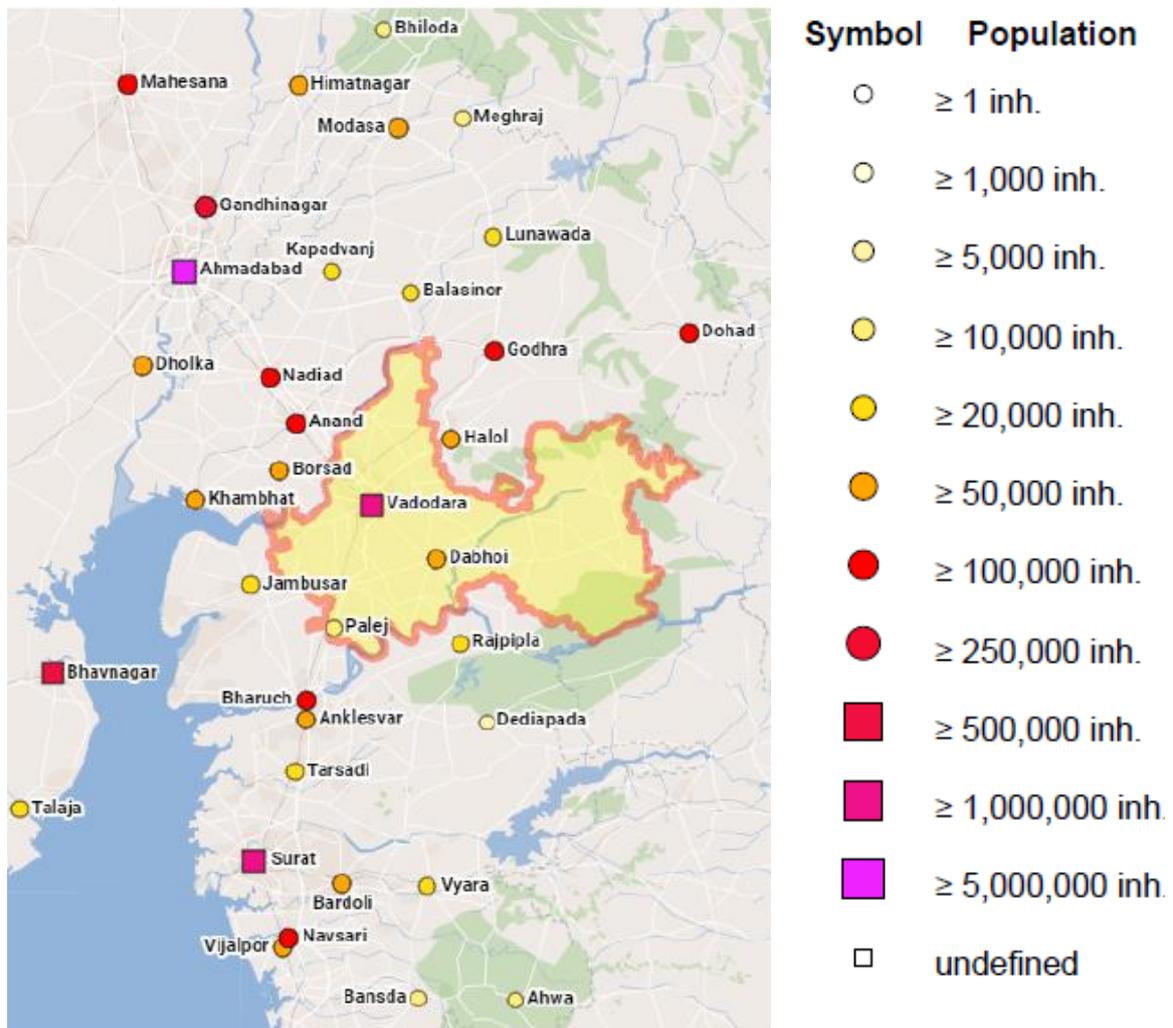
Figure 4-5: Regional map of Vadodara district with towns in context

Source: Citypopulation.de

Being an Industrial dominant area, there are varied types of set-ups from large scale production industries to clusters and MSMEs. Below are some of the major locations for the same.
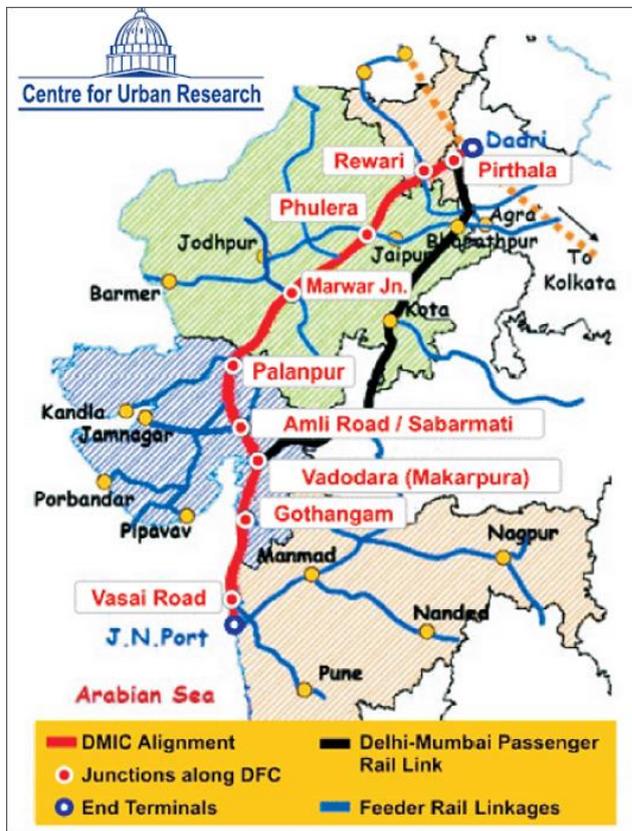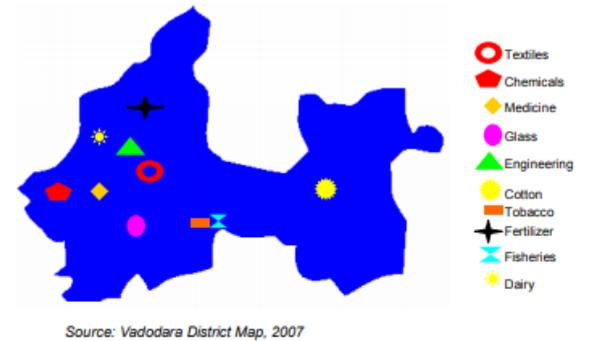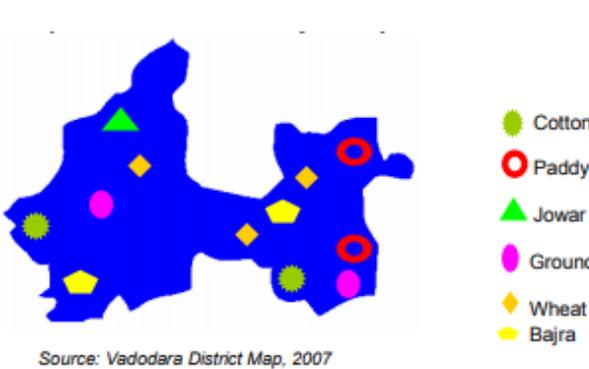
Figure 4-6: Industrial maps of Vadodara district

Source: DMIC, District Industrial Profile

4.5 – Selection criteria & identification of Small and Medium Towns for study
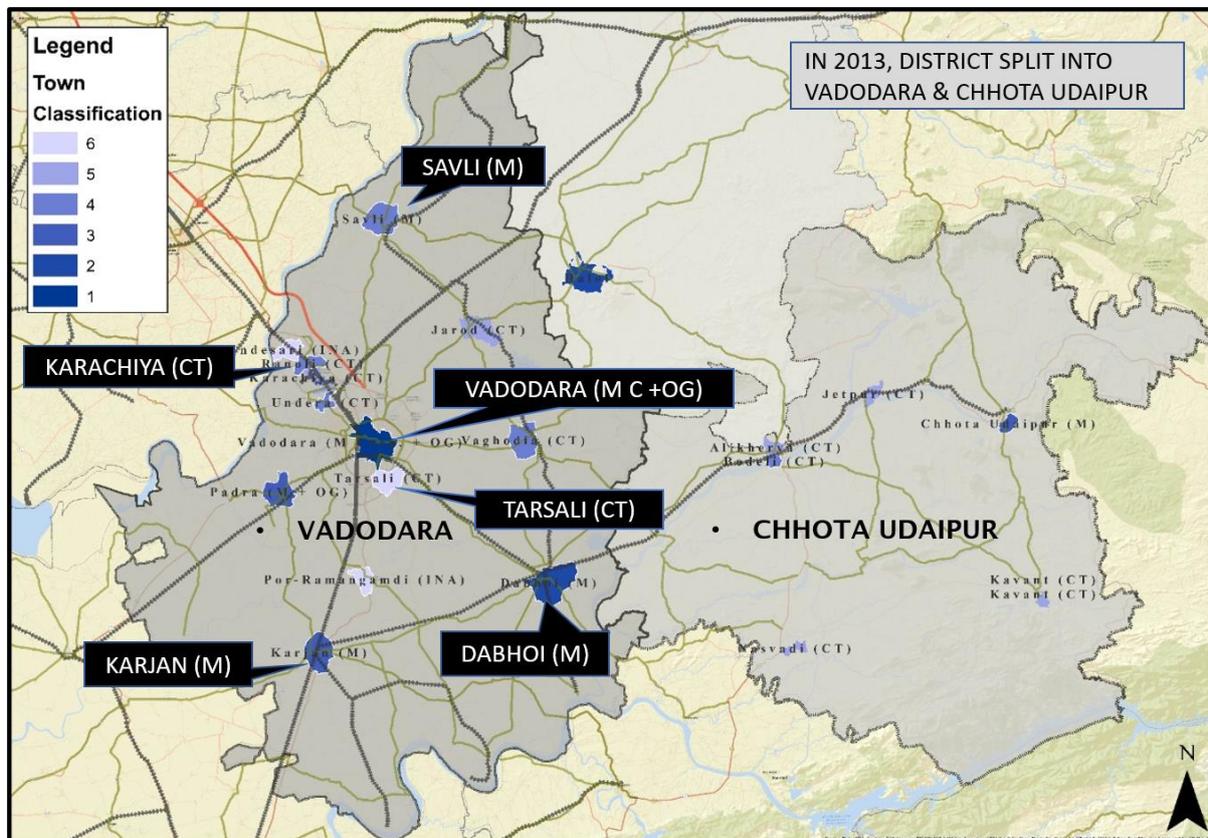
Figure 4-7: Vadodara District map after split,2013 with selected towns

SELECTION CRITERIA:

- Covering all directions

- Town should be located in Vadodara district after split in 2013

- Town of different typology & unique characteristics

- One town for each Class of urban settlement of Census of India

- Towns with Growth Rate less than State / District Growth Rate / Natural Increase (17 %)
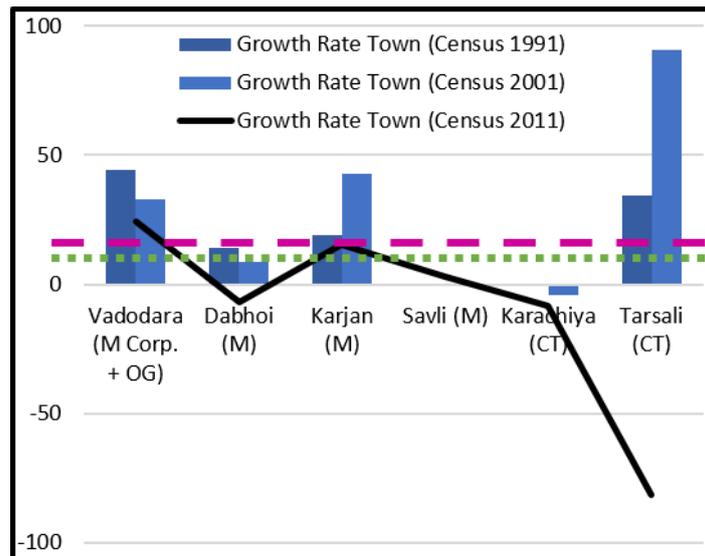
Figure 4-8: Comparison of selected towns

Source: Vadodara DCHB

The towns Vadodara (M+OG) of Class I, Dabhoi (M) of Class II, Karjan (M) of Class III, Savli (M) of Class IV, Karachiya (CT) of Class V and Tarsali (CT) of Class VI are being chosen for detailed study. Each town has either falling or lower growth rates than state and district growth rates. The towns selected possess varied economic activities and social characteristics, so as to understand an overall scenario of the district.

4.6 – Evolution & Growth directions

Spatial study is an inevitable part of urban planning. The directions of sprawl determine the urban increase and vice-versa. LULC map of an area determines the proportions of land use. Hence, by comparing the gradual decadal LULCs, we understand the evolution and the directions of growth. The evolution study reveals the true dynamics of an area along with impact and inter-relation of major economic activities happening and needed in future.

The method of the study of evolution and growth directions: Dividing district into direction wise quadrants & noting observations in context of towns respectively.
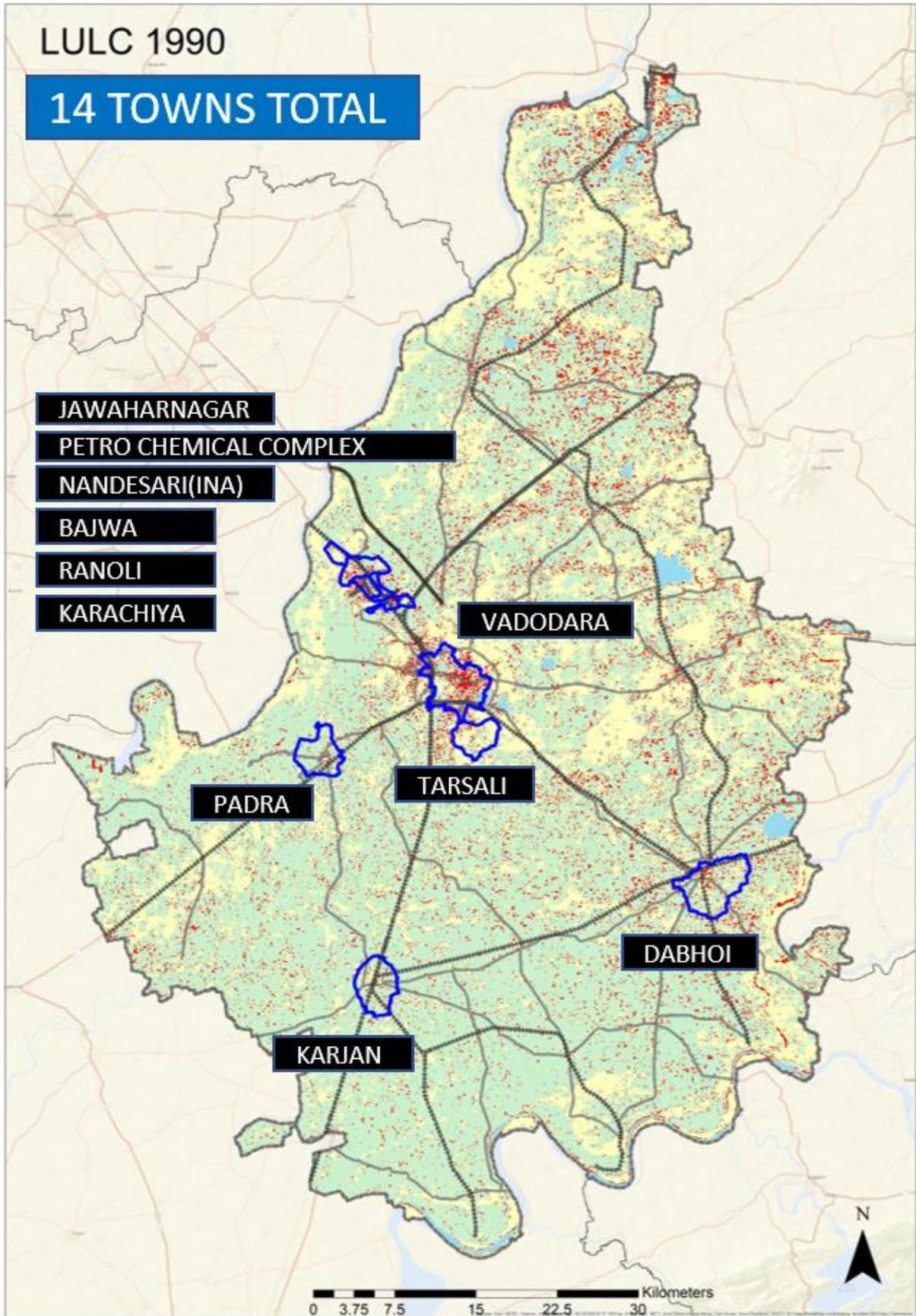
Figure 4-9: L.U.L.C, 1991 of Vadodara District

51
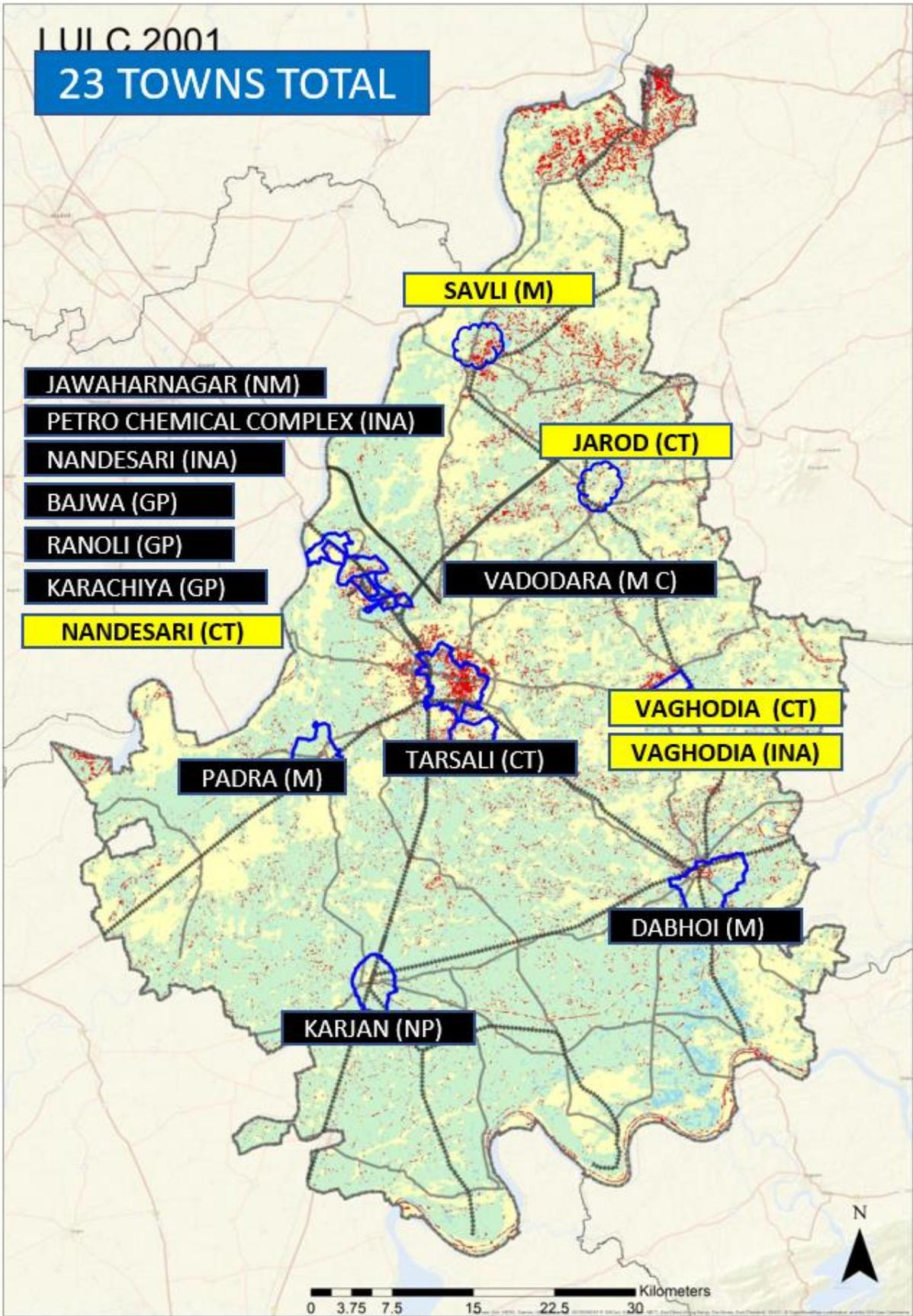
Figure 4-10: L.U.L.C, 2001 of Vadodara District
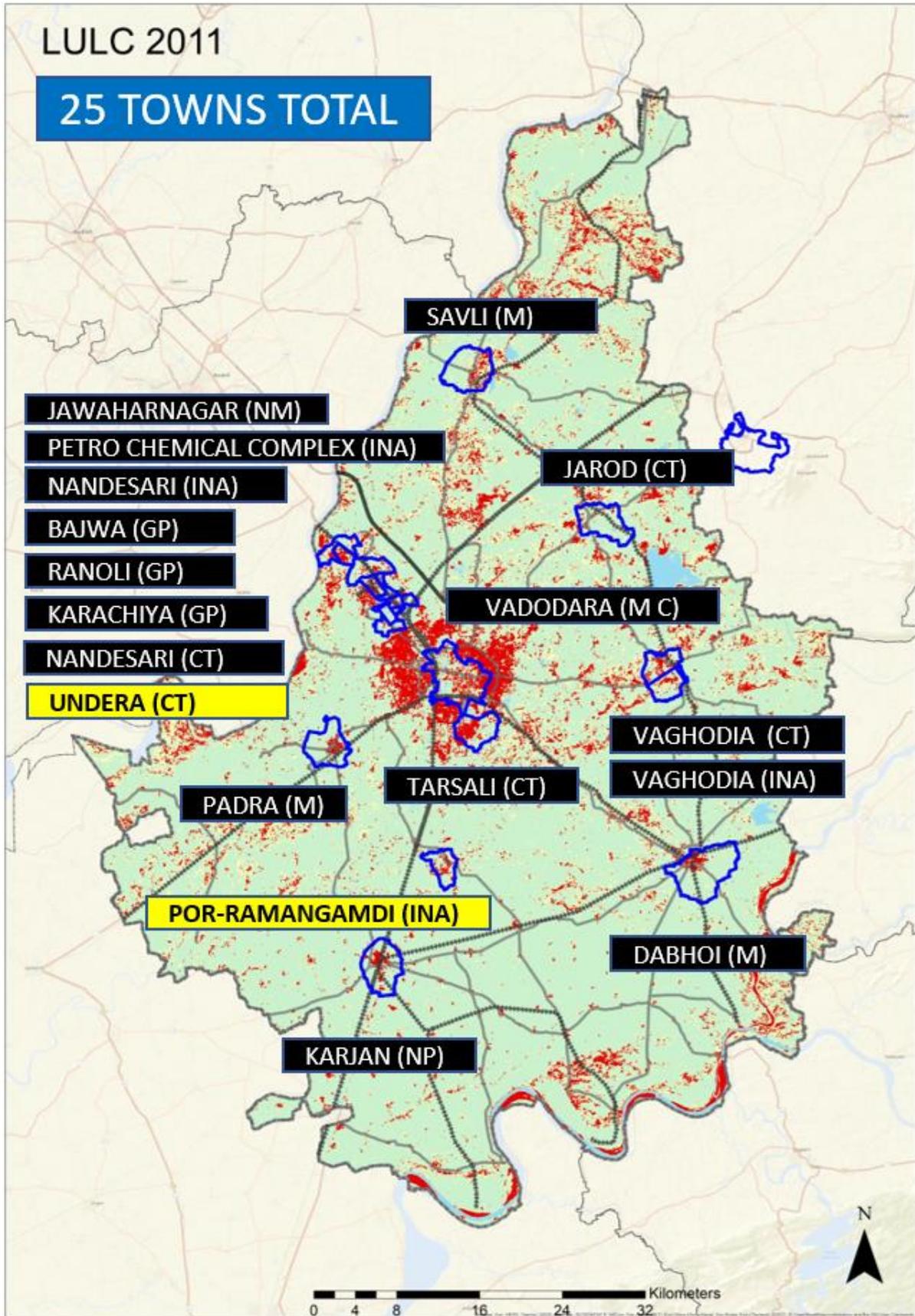
Figure 4-11: L.U.L.C, 2011 of Vadodara District

53
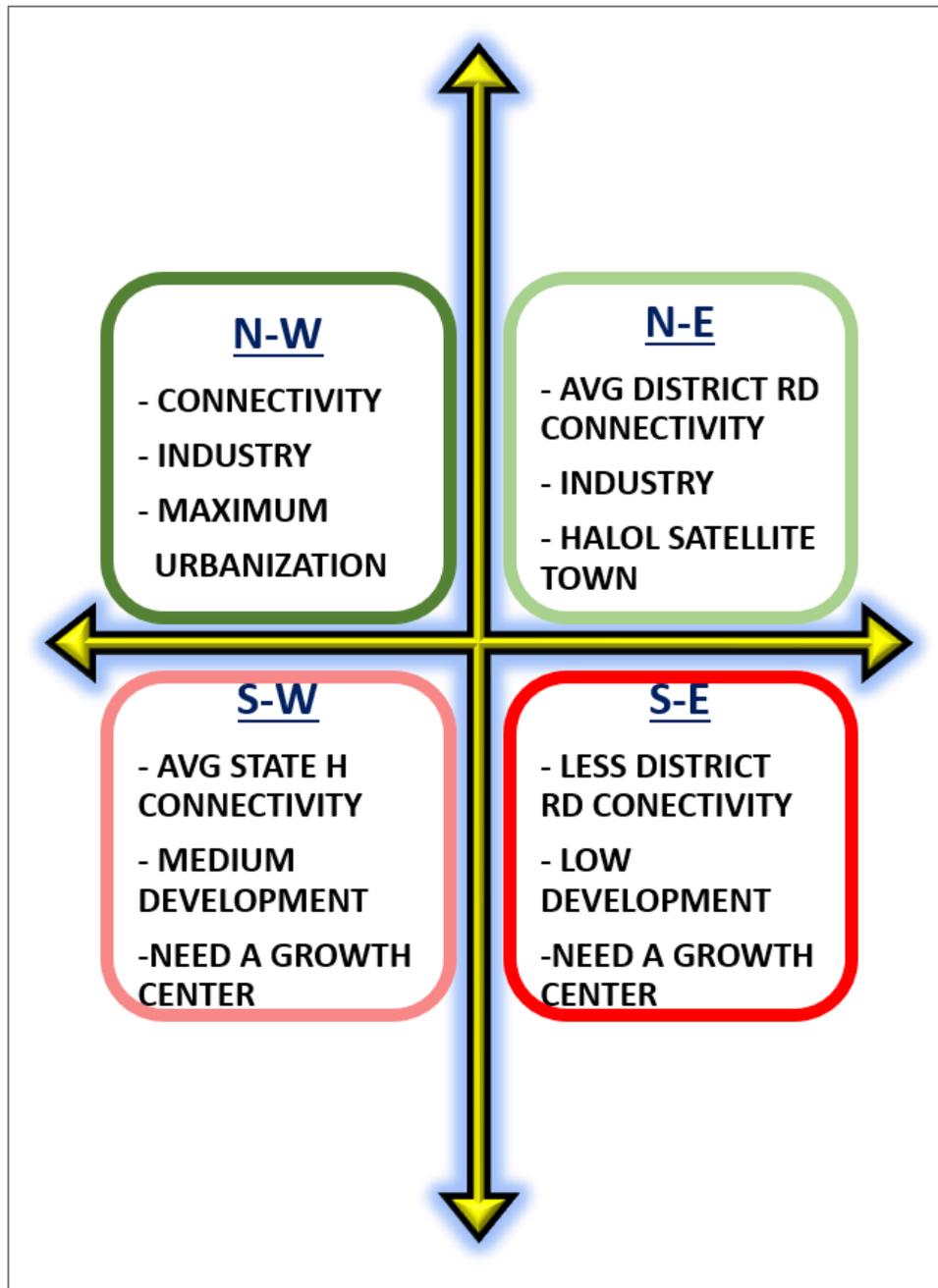
Figure 4-12: Quadrant-wise Inferences of towns of Vadodara district

Inferences:

By studying the maps, we derive observations quadrant wise radiating from Vadodara main town. We find that the North-West quadrant is most urbanized due to presence of Industries and strong intra/inter-connectivity. The quadrant has a great potential for Industrial development at a large scale if planned critically with environmental

protection norms and managing industrial pollution. The North-East quadrant is increasing the urban density gradually due to presence of few industries and average connectivity. One important parameter for urbanization in this quadrant is Halol (M), acting as a satellite town. Halol is an industrial hub providing employment to literates and illiterates workforce. The quadrant has good potential for urban development along with preserving agricultural land, creating suitable living conditions keeping in mind the presence of good district road connectivity. The South-West quadrant shows mediumly dense urban development. The quadrant has average district connectivity but good state connectivity, resulting into development of more settlements and companies. There is a need of a growth centre to provide the hinterland the required services. This shall make the quadrant a very favourable area to reside, keeping in mind the residential and education trend increasing in it. The South-East quadrant can be termed as least urbanized quadrant of all. The main reason is weak of intra/inter-connectivity. The quadrant needs a growth centre with good connectivity and has an ample of scope for setup of new economic opportunities, which in turn will attract in-migration.

The mapping study is very crucial for understanding dynamics of a region and should be practiced during preparation of Development plans. This method of evolution also helps in finding the important Growth Centres of the region. The planning for these identified Growth Centres will provide a wholistic development with scope of set-up of new economic opportunities.

Chapter 5 – Data collection and analysis

5.1 – Qualitative data method and findings

Physical survey of six selected towns is done through google forms

& Data is collected from governing authorities

5.1.1 – Method description

- Sample nature – heterogeneous & random

- Focused group interviews included

- Questionnaire – mix of open ended & close ended questions

5.1.2 – Stakeholder typology

Economic Sector wise residents & consultative departments

5.1.3 – Information covered

Migration , occupation , culture , crime , water supply , toilet , drainage , floods , electricity supply , road , transport , fuel , recreation , education , health , schemes , polluters & livability

Total surveys:

More than 200 samples are collected

5.1.4 – Region specific reasons of migration

- In search of better employment opportunities and wages

- To overcome poverty, poor villagers migrate for labor work

- Loss of cultural identity of the SMSTs

- Trend of imitation of metropolitan urban life- style

- For better social and physical infrastructure

- For better availability of routine amenities and luxury

- Indian education system is urban centric. Limited opportunities for career growth for students

- Married women migrated because of marriage

- Diminishing agriculture activity and household industries

- Depletion of environment by ignorance of maintenance, e.g. ponds , forests , wildlife , etc.
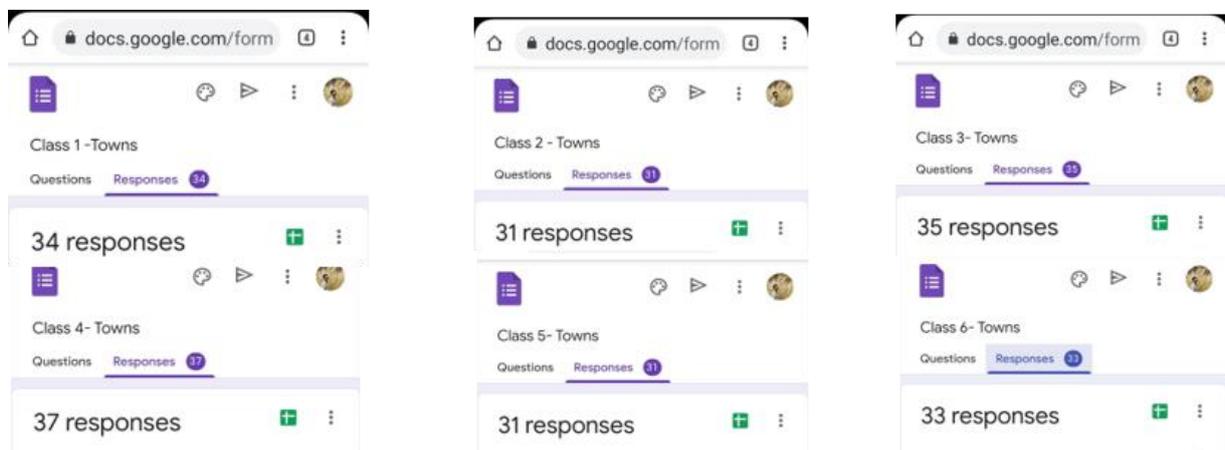
Figure 5-1: Number of surveys done per town

Source: Primary Survey

5.1.5 – Important findings of the survey

The table below presents some crucial findings of the selected towns along with the comparative analysis of the towns.

VADODARA (M+OG)	DABHOI (M)	KARJAN (M)	SAVLI (M)	KARACHIYA (CT)	TARSALI (CT)
ANNUAL INCOME: HIGH	ANNUAL INCOME: AVG	ANNUAL INCOME: LOW	ANNUAL INCOME: LOW	ANNUAL INCOME: LOW	ANNUAL INCOME: LOW
< 1 LAKH 33% / 1-5 LAKH 42% / > 5 LAKH 25%	< 1 LAKH 39% / 1-5 LAKH 45% / > 5 LAKH 16%	< 1 LAKH 31% / 1-5 LAKH 60% / > 5 LAKH 9%	< 1 LAKH 50% / 1-5 lakh 43% / > 5 LAKH 7%	< 1 LAKH 29% / 1-5 LAKH 57% / > 5 LAKH 14%	< 1 LAKH 40% / 1 TO 5 LAKH 50% / > 5 LAKH 10%
CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :	CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :	CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :	CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :	CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :	CELEBRATION OF FESTIVALS & CULTURAL ACTIVITIES AS COMPARED TO PAST :
NEED SPIRITUAL ACTIVITIES:	NEED SPIRITUAL ACTIVITIES:	NEED SPIRITUAL ACTIVITIES:	NEED SPIRITUAL ACTIVITIES:	NEED SPIRITUAL ACTIVITIES:	NEED SPIRITUAL ACTIVITIES:
NO 22% / YES 78%	NO 27% / YES 73%	NO 32% / YES 68%	NO 25% / YES 75%	NO 29% / YES 71%	NO 30% / YES 70%
WHY OUT MIGRATION:	WHY OUT MIGRATION:	WHY OUT MIGRATION:	WHY OUT MIGRATION:	WHY OUT MIGRATION:	WHY OUT MIGRATION:
BIGGER METROS FOR BUSINESS, ABROAD, JOB	POOR ECONOMIC OPPURTUNITIES,	BETTER WAGES , HOUSING INFRASTRUCTURE WEAK	BETTER WAGES ILLETERATES , CULTURE LOSS	INDUSTRIAL POLLUTION, POOR INFRASTRUCTURE	CRIME, NON-EMPLOYMENT, POOR INFRASTRUCTURE
HOW MUCH SATISFIED WITH LIFE IN THE TOWN ?	HOW MUCH SATISFIED WITH LIFE IN THE TOWN ?	HOW MUCH SATISFIED WITH LIFE IN THE TOWN ?	HOW MUCH SATISFIED WITH LIFE IN THE TOWN ?	HOW MUCH SATISFIES WITH LIFE IN THE TOWN ?	HOW MUCH SATISFIES WITH LIFE IN THE TOWN ?

Table 5-1: Important findings of Primary Survey

5.2 – Quantitate data collection and findings

5.2.1 – Evaluation of Class I – Vadodara (M+OG) town

The demographic scenario of Vadodara (M+OG) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (1,752,371-2011) is rising at a high scale due to in-migration. Various reseaons are availability of great social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education , etc. The density (64.85, 2011) is falling by 16.59 in 2001-11 and lower then required (135) as per URDPFI guidelines. The growth rate is falling from 44.54 (1991) to 24.17 (2011). Yet the growth rate is higher than district and state. The sex-ratio (920 in 2011) is slight lower than the district (934 in 2011) and is gradually rising (980 in 2001). The literacy rate is slightly better (90.48) than the district rate (89.74). The gap between male-female literacy rate (6.88) is less than the district (7.5). The town composition (2011) is 89.3% NI, 4.07% SC and 6.63% ST. The occupation structure (2011) is 96% other workers, 2% agricultural labourers, 1% cultivators and 1% house-hold industries. For employment scenario (2011), 62% are not employed, 35% are usually employed and 3% are casually employed. The slums population (2011) is 5%

of the total population. The major three industries are Chemical, Fertilizer and Oil. In terms of banking facility (2011), there are 88 Cooperative banks, 43 Private Commercial banks and 155 Nationalised banks along with 527 Agriculture credit societies and 636 Non-Agriculture societies.

- **1,752,371** Population [2011] – *Census*
- **270.2 km²** Area
- **6,485/km²** Population Density [2011]
- **2.3%** Annual Population Change [2001 → 2011]
- Elevation: 129 m – Local dialing code: 265 – Postal code: 39000

In terms of Social and Physical Infrastructure, Vadodara (M+OG) town has good provisions. For Health sector, the town has 3 general hospitals (7 required, URDPFI), 14 Nursing homes, Maternity Homes and Child welfare centers (17 required, URDPFI), 5 family welfare centers (35 required URDPFI), 4 Vaternity centers (4 required, URDPFI), 10 dispensaries (15 required, URDPFI). The town has 24 beds per 10,000 population (district – 24 beds per 10,000 population). For Education facilities, there are 18 colleges (14 required, URDPFI), 221 Senior Secondary schools (233 required, URDPFI), 469 Primary schools (350, required, URDPFI). In terms of road condition, 36% is pucca road, 6% is kaccha road and 58% is mixed (primary survey). For transport, town has an International airport, National Railway Junction and State Bus station along with provison of City buses. For recreation, there are 7 big parks and many small parks. For Social interactions, there are 11 Community rooms (350 required, URDPFI), 11 public libraries and 11 stadiums. The drinking water source is treated tap water. The storage is in Over-head tank and provision of Fire-safety is avaivalbe. The water supply is 96 LPCD (150 required, URDPFI). The Drainage type is Closed drainage. The town has 99.76% toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 97.29% coverage. There are 7040 industrial connections, 82350 commercial connections, 7849 road light conections and 26576 other connections. The town has 23 community halls (117 required, URDPFI). For safety, there are 21 police stations.

INFRASTRUCTURE

HEALTH — DISPN 10 18, VETRN 44, FAM WLFR 5 35, NUR,CHL,MAT 14 17, GEN HOSP 7

EDUCATION — UDPFI 14, COLLEGE 18, UDPFI 233, SS-S 221, UDPFI 350, P-S 469

ROAD — KACCHA 6%, PUCCA 36%, MIXED 58%, 1015.7 KM

TRANSPORT — INT AIRPORT, N RAILWAY S, ST BUS STN

RECREATION — UDPFI, 1; PARK, 7

SOCIAL PLACES — 11 (350), 11, 11; COM RM PUB LIB STDM

WATER — 95, 150, SOURCE-TT, TANK-OHT, FIRE S- YES; T-LPCD UDPFI

DRAINAGE — CLOSED DRAINAGE, 99.76 % TOILET COVERAGE

SOLID WASTE — DAILY D-D COLLCN, SP DUMPING SITE, 100 % COVERAGE

ELECTRICITY — 82305, 78497, 7040, 26576; INDUSTRIAL COMMERCIAL ROAD LIGHT OTHERS; 97.29 % COVERAGE

COMMUNITY HALL — 117, 23; COM-HALL UDPFI

SAFETY — 21 POLICE STN, SAFE TOWN

Table 5-2: Demographic data of Vadodara (M+OG)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

DEMOGRAPHY

POPULATION — 1,752,371; P-1991, P-2001, P-2011; RISING

DENSITY — UDPFI 125, D-2011 64.85, D-2001 81.17; FALLING - LOW

GROWTH RATE — 44.54, 32.93, 24.17; GR-1991 GR-2001 GR2011; FALLING HIGH

SEX – RATIO — V-2011 934, SR-2011 920, SR-2001 908; RISING LOW

LITERACY RATE — 90.48, 89.74, G-V 7.5, GAP_M-F 6.88; LR-2011 V-LR; HIGH

W.F.P.R — 33.8, 33.94, 33; WFPR V-WFPR UDPFI; W-P 34%, NW-P 66%, 7%, MN-P, MG-P 93%; HIGH

COMPOSITION — DISTRICT 88, 5.29, 6.71; NI ST SC; TOWN 89.3, 4.07, 6.63

OCCUPATION — CULTV 1%, HH IN 1%, AG LB 2%, OT WRK 96%

EMPLOYMENT — NOT EMPLOYED 62%, USUALLY EMPLOYED 35%, CASUALLY EMPLOYED 3%

SLUMS RATIO — S-P 5%, T-P 95%

INDUSTRY — CHEMICAL, FERTILIZER, OIL

BANKING — C-B, 88; PC-B, 43; N-B, 155; N AG-CS, 636; AG-CS, 527

Table 5-3: Infrastructure data of Vadodara (M+OG)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

Strength:

- Availability of educated workforce
- Presence of multiple economic options
- Good physical & social infrastructural

Weakness:

- Non workers ratio high due to in-migration
- Jobless migrants add informal settlements
- VMC area densely populated
- Air pollution zone due to industries in VUDA area

5.2.2 – Evaluation of Class II – Dabhoi (M) town

The demographic scenario of Dabhoi (M) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (51,240-2011) is decreasing at a high scale due to out-migration. Various reseaons are non-availability of great social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education , etc. The density (21.51, 2011) is falling by 1.56 in 2001-11 and lower then required (100) as per URDPFI guidelines. The growth rate is falling from 14.17 (1991) to -6.75 (2011). The growth rate is lower than district and state. The sex-ratio (939 in 2011) is above the district (934 in 2011) and is gradually rising (923 in 2001). The literacy rate (82.9) is below than the district rate (89.74). The gap between male-female literacy rate (11.01) is higher than the district (7.5). The town composition (2011) is 81.1% NI, 14.29% SC and 4.21% ST. The occupation structure (2011) is 86% other workers, 6% agricultural labourers, 4% cultivators and 4% house-hold industries. For employment scenario (2011), 62% are not employed, 31% are usually employed and 7% are casually employed. The slums population (2011) is 11% of the total population. The major industries are Utensils and Cotton. In terms of banking facility (2011), there are 2 Cooperative banks, 1 Private Commercial bank and 10 Nationalised banks along with 1 Agriculture credit societies and no Non-Agriculture societies.
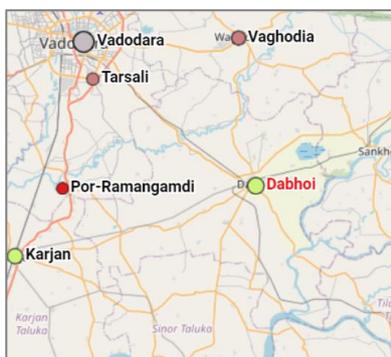
- **51,240 Population [2011] – Census**
- **23.82 km²** Area
- **2,151/km²** Population Density [2011]
- **-0.70%** Annual Population Change [2001 → 2011]
- Elevation: 99 m – Local dialing code:2663–Postal code: 391110

In terms of Social and Physical Infrastructure, Dabhoi (M) town has good provisions. For Health sector, the town has 1 general hospitals (0 required, URDPFI), 3 Nursing homes, Maternity Homes and Child welfare centers (1 required, URDPFI), 3 family welfare centers (1 required URDPFI), 1 Vaternity centers (0 required, URDPFI), 1 dispensaries (3 required, URDPFI). The town has 22 beds per 10,000 population (district – 24 beds per 10,000 population). For Education facilities, there are 0 colleges (0 required, URDPFI), 2 Senior Secondary schools (7 required, URDPFI), 17 Primary schools (10 required, URDPFI). In terms of road condition, 28% is pucca road, 11% is kaccha road and 61% is mixed (primary survey). For transport, town has a Railway Junction and State Bus station. For recreation, there are 2 big parks (3 required, URDPFI). For Social interactions, there are 0 Community rooms (10 required, URDPFI), 2 public libraries and 1 stadium. The drinking water source is treated tap water. The storage is in Over-head tank and provision of Fire-safety is avaivalbe. The water supply is 94 LPCD (135 required, URDPFI). The Drainage type is Closed drainage. The town has 98.85% toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 97.26% coverage. There are 139 industrial connections, 2186 commercial connections, 3200 road light conections and 0 other connections. The town has 1 community hall (3 required, URDPFI). For safety, there is 1 police station.
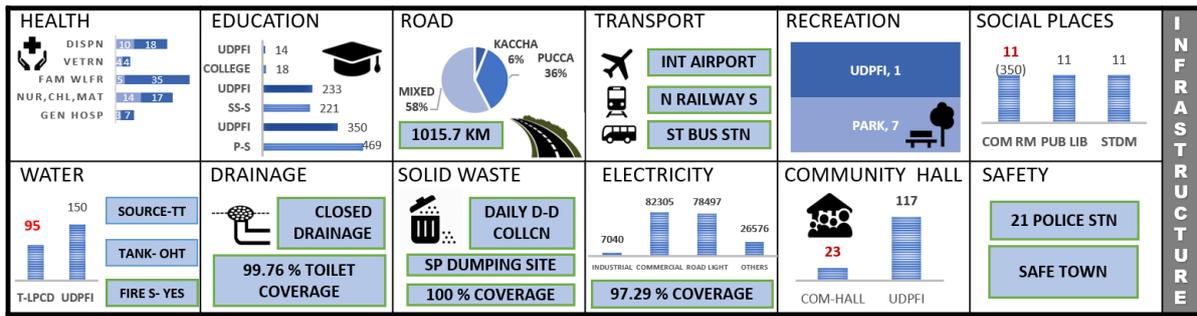
DEMOGRAPHY

POPULATION	DENSITY	GROWTH RATE	SEX – RATIO	LITERACY RATE	W.F.P.R
17937 (P-2001) / 18467 (P-2011)	UDPFI 75 / D-2011 11.67	14.38 / 2.95 (D-GR, T-GR)	V-2011 934 / SR-2011 946	89.74 / 82.01 (LR-2011, V-LR) GAP_M-F, 14.01 / G-V, 7.5	34.9 / 33.94 / 33 (WFPR, V-WFPR, UDPFI) 22% / W-P 35% / NW-P 65% / MN-P / MG-P 78%
RISING	LOW	LOW	HIGH	LOW F L LOW	HIGH

COMPOSITION	OCCUPATION	EMPLOYMENT	SLUMS RATIO	INDUSTRY	BANKING
NI 88 / 80.91 ; ST 5.29 / 9.97 ; SC 6.71 / 9.12 (DISTRICT / TOWN)	OT WRK 60% / CULTV 8% / AG LB 31% / HH IN 1%	NOT EMPLOYED 62% / USUALLY EMPLOYED 31% / CASUALLY EMPLOYED 7%	S-P 9% / R-P 91%	TOBACCO / CASTOR OIL	C-B, 2 / PC-B, 1 / N-B, 3 / N AG-CS, 1 / AG-CS, 1

Table 5-4: Demographic data of Dabhoi (M)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

INFRASTRUCTURE

HEALTH	EDUCATION	ROAD	TRANSPORT	RECREATION	SOCIAL PLACES
DISPN 1 ; FAM WLF 1 ; NUR,CHL,MAT 3 ; GEN H 2	UDPFI 0 ; COLLEGE 5 ; UDPFI 2 ; SS-S 1 ; UDPFI 3 ; P-S 4	MIXED 38% / KACCHA 16% / PUCCA 46% / 23.5 KM	RAILWAY S / ST BUS STN	UDPFI, 3 / PARK, 1	1 (3) / 1 / 0 (COM RM, PUB LIB, STDM)

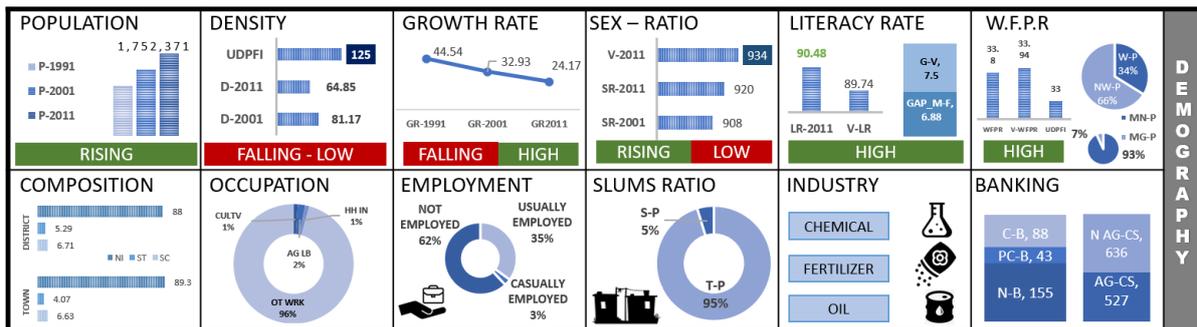| WATER	DRAINAGE	SOLID WASTE	ELECTRICITY	COMMUNITY HALL	SAFETY
70 / 33 (T-LPCD, UDPFI) / SOURCE-HP / TANK- OHT / FIRE S- NO	NOT AVAILABLE / 89.00 % TOILET COVERAGE	DAILY D-D COLLCN / SP DUMPING SITE / 100 % COVERAGE	633 / 930 / 2 / 1 (INDUSTRIAL COMMERCIAL ROAD LIGHT OTHERS) / 97.83 % COVERAGE	1 / 0 (COM-HALL, UDPFI)	1 POLICE STN / SAFE TOWN

Table 5-5: Infrastructure data of Dabhoi (M)

*Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS*

Strength:

- Availability of land for devlopment
- Presence of heritage (fort, jain temples,scriptures) & eco-tourism (wetlands, migratory birds, wildlife sanctury)
- Presence of state bus-depot & main railway junction

Weakness:

- Poor economic oppurtunities- high female illeterates
- High tribal population - declining culture
- Poor infrastructure & community development
- Out migration to bigger cities for better wages

5.2.3 – Evaluation of Class III –Karjan (M) town

The demographic scenario of Karjan (M) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (30,405-2011) is rising. Various reseaons are availability of basic social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education , etc. The density (19.35, 2011) is rising by 2.57 in 2001-11 but very low then required (75) as per URDPFI guidelines. The growth rate is falling from 19.32 (1991) to 15.35 (2011). The growth rate is lower than district and state. The sex-ratio (941 in 2011) is higher than the district (934 in 2011) and is gradually rising (915 in 2001). The literacy rate is lower (85.99) than the district rate (89.74). The gap between male-female literacy rate (10.47) is more than the district (7.5). The town composition (2011) is 90.82% NI, 4.32% SC and 4.86% ST. The occupation structure (2011) is 87% other workers, 7% agricultural labourers, 3% cultivators and 3% house-hold industries. For employment scenario (2011), 63% are not employed, 34% are usually employed and 3% are casually employed. The slums population (2011) is 37% of the total population. The major industries are Cotton and Railway parts. In terms of banking facility (2011), there are 2 Cooperative banks, 1 Private Commercial banks and 2 Nationalised banks along with 1 Agriculture credit societies and 4 Non-Agriculture societies.

- **30,405** Population [2011] – *Census*
- **15.71 km²** Area
- **1,935/km²** Population Density [2011]
- **1.4%** Annual Population Change [2001 → 2011]
- Postal code: 391240

5.2.3 – Evaluation of Class III –Karjan (M) town

In terms of Social and Physical Infrastructure, Karjan (M) town has good provisions. For Health sector, the town has 1 general hospital (0 required, URDPFI), 1 Nursing home, Maternity Home and Child welfare center (0 required, URDPFI), 0 family welfare center (0 required URDPFI), 1 Vaternity center (4 required, URDPFI), 1 dispensary (0 required, URDPFI). The town has 20 beds per 10,000 population (district – 24 beds per 10,000 population). For Education facilities, there are 0 colleges (0 required, URDPFI), 8 Senior Secondary schools (4 required, URDPFI), 11 Primary schools (6, required, URDPFI). In terms of road condition, 18% is pucca road, 15% is kaccha road and 67% is mixed (primary survey). For transport, town has a Railway Junction and State Bus station. For recreation, there are 6 big parks . For Social interactions, there are 2 Community rooms (6 required, URDPFI), 1 public libraries and 0 stadiums. The drinking water source is treated tap water. The storage is in Over-head tank and provision of Fire-safety is avaivalbe. The water supply is 651 LPCD (70 required, URDPFI). The Drainage type is Closed drainage. The town has 80.14% toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 97.17% coverage. There are 87 industrial connections, 1594 commercial connections, 1260 road light conections and 10 other connections. The town has 7 community halls (2 required, URDPFI). For safety, there is 1 police station.
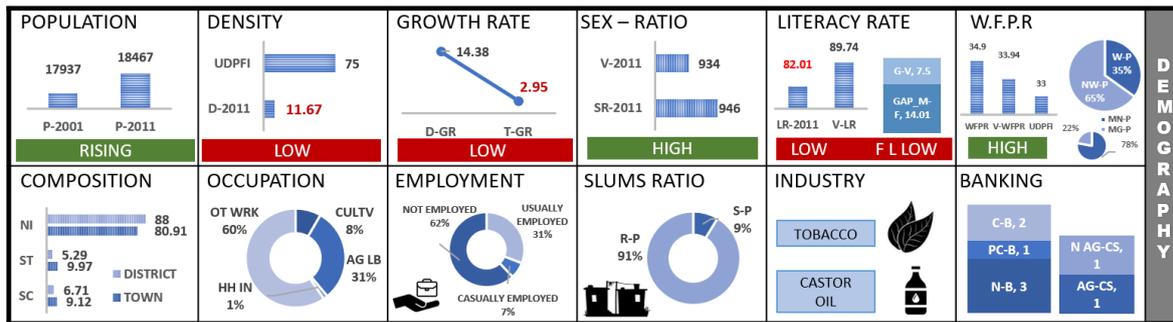
DEMOGRAPHY

POPULATION
18432 26358 30405
P-1991 P-2001 P-2011
RISING

DENSITY
UDPFI 75
D-2011 19.35
D-2001 16.78
FALLING - LOW

GROWTH RATE
43
19.32 15.35
GR-1991 GR-2001 GR2011
FALLING - LOW

SEX – RATIO
V-2011 934
SR-2011 941
SR-2001 915
RISING LOW

LITERACY RATE
89.74
85.99
G-V, 7.5
GAP_M-F, 10.47
LR-2011 V-LR
LOW F L LOW

W.F.P.R
33.94
33.1 33
WFPR V-WFPR UDPFI
HIGH
W-P 33%
NW-P 67%
MN-P
MG-P
9% 91%

COMPOSITION
NI 88 90.82
ST 5.29 4.32
SC 6.71 4.86
DISTRICT
TOWN

OCCUPATION
CULTV 3% AG LB 7%
OT WRK 87% HH IN 3%

EMPLOYMENT
NOT EMPLOYED 63% USUALLY EMPLOYED 34%
CASUALLY EMPLOYED 3%

SLUMS RATIO
S-P 37%
R-P 63%

INDUSTRY
COTTON

BANKING
C-B, 2
PC-B, 1
N-B, 2
N AG-CS, 4
AG-CS, 1

Table 5-6: Demographic data of Karjan (M)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

INFRASTRUCTURE

HEALTH
DISPNR 2
VETNR
FAM WLF
MAT,CHL,MAT
GEN H

EDUCATION
UDPFI 0
COLLEGE 0
UDPFI 4
SS-S 8
UDPFI 6
P-S 11

ROAD
KACCHA 15% PUCCA 18%
MIXED 67%
37 KM

TRANSPORT
RAILWAY S
ST B DEPOT

RECREATION
UDPFI, 3
PARK, 6

SOCIAL PLACES
2
(6)
1
0
COM RM PUB LIB STDM

WATER
651
70
T-LPCD UDPFI
SOURCE-TT
TANK- OHT
FIRE S- YES

DRAINAGE
CLOSED DRAINAGE
80.14 % TOILET COVERAGE

SOLID WASTE
DAILY D-D COLLCN
SP DUMPING SITE
100 % COVERAGE

ELECTRICITY
1594 1260
87 10
INDUSTRIAL COMMERCIAL ROAD LIGHT OTHERS
97.17 % COVERAGE

COMMUNITY HALL
7
2
COM-HALL UDPFI

SAFETY
1 POLICE STN
SAFE TOWN

Table 5-7: Infrastructure data of Karjan (M)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

Strength:

- Rising manufacturing industrial sector
- Agriculture & hh industry boost scope
- Presence of state bus-depot & main railway junction
- Availability of land for development

Weakness:

- Very poor economic oppurtunities – low literacy rate
- High slums population
- Poor infrastructure & community development
- Out migration to bigger cities for better wages

5.2.4 – Evaluation of Class IV – Savli (M) town

The demographic scenario of Savli (M) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (18,467-2011) is rising. Various reseaons are availability of great social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education , etc. The density (11.67, 2011) is lower then required (75) as per URDPFI guidelines. The growth rate is falling from 14.48 (2001) to 2.95 (2011). The growth rate is lower than district and state. The sex-ratio (946 in 2011) is higher than the district (934 in 2011). The literacy rate is lower (82.01) than the district rate (89.74). The gap between male-female literacy rate (14.01) is more than the district (7.5). The town composition (2011) is 80.91% NI, 9.97% ST and 9.12% ST. The occupation structure (2011) is 60% other workers, 31% agricultural labourers, 8% cultivators and 1% house-hold industries. For employment scenario (2011), 62% are not employed, 31% are usually employed and 7% are casually employed. The slums population (2011) is 9% of the total population. The major industries are Tobacco and Castor oil. In terms of banking facility (2011), there are 2 Cooperative banks, 1 Private Commercial banks and 3 Nationalised banks along with 1 Agriculture credit societies and 1 Non-Agriculture societies.
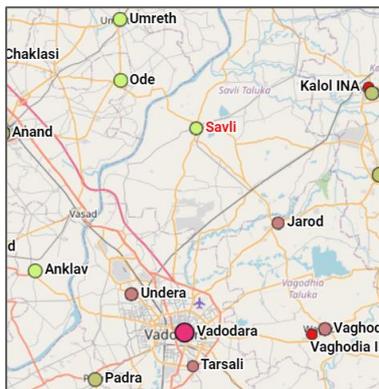
- **18,467** Population [2011] – *Census*
- **15.82 km²** Area
- **1,167/km²** Population Density [2011]
- **0.29%** Annual Population Change [2001 → 2011]

In terms of Social and Physical Infrastructure, Savli (M) town has good provisions. For Health sector, the town has 2 general hospitals, 3 Nursing homes, Maternity Homes and Child welfare, 1 family welfare center, 0 Vaternity centers, 1 dispensary . The town has 27 beds per 10,000 population(district – 24 beds per 10,000 population). For Education facilities, there are 5 colleges (0 required, URDPFI), 1 Senior Secondary schools (2 required, URDPFI), 4 Primary schools (3 required, URDPFI). In terms of road condition, 46% is pucca road, 16% is kaccha road and 38% is mixed (primary survey). For transport, town has Railway Junction and State Bus station. For recreation, there is big park (3 required, URDPFI). For Social interactions, there is 1 Community room (3 required, URDPFI), 1 public library and 0 stadiums. The drinking water source is hand-pump. The storage is in Over-head tank and provision of Fire-safety is not avaivalbe. The water supply is 33 LPCD (70 required, URDPFI). The Drainage facility is not available. The town has 89.00% toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 97.83% coverage. There are 2 industrial connections, 633 commercial connections, 930 road light conections and 1 other connection. The town has 0 community halls (1 required, URDPFI). For safety, there is 1 police station.
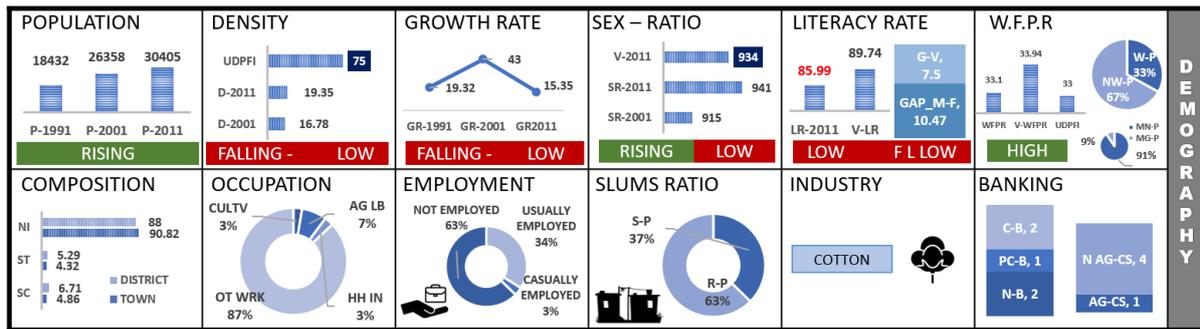
POPULATION	DENSITY	GROWTH RATE	SEX – RATIO	LITERACY RATE	W.F.P.R	D
17937 18467 P-2001 P-2011 **RISING**	UDPFI 75 D-2011 **11.67** **LOW**	14.38 **2.95** D-GR T-GR **LOW**	V-2011 934 SR-2011 946 **HIGH**	89.74 82.01 G-V, 7.5 GAP_M-F, 14.01 LR-2011 V-LR **LOW** **F L LOW**	34.9 33.94 33 W-P 35% NW-P 65% MN-P MG-P 22% 78% WFPR V-WFPR UDPFI **HIGH**	E M O G R A P H Y
COMPOSITION	OCCUPATION	EMPLOYMENT	SLUMS RATIO	INDUSTRY	BANKING	
NI 88 80.91 ST 5.29 9.97 SC 6.71 9.12 DISTRICT TOWN	OT WRK 60% CULTV 8% AG LB 31% HH IN 1%	NOT EMPLOYED 62% USUALLY EMPLOYED 31% CASUALLY EMPLOYED 7%	S-P 9% R-P 91%	TOBACCO CASTOR OIL	C-B, 2 PC-B, 1 N AG-CS, 1 N-B, 3 AG-CS, 1	

Table 5-8: Demographic data of Savli (M)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

HEALTH	EDUCATION	ROAD	TRANSPORT	RECREATION	SOCIAL PLACES	I
DISPN 1 FAM WLF 1 NUR,CHL,MAT 3 GEN H 2	UDPFI 0 COLLEGE 5 UDPFI 2 SS-S 1 UDPFI 3 P-S 4	KACCHA 16% MIXED 38% PUCCA 46% **23.5 KM**	**RAILWAY S** **ST BUS STN**	UDPFI, 3 PARK, 1	1 (3) 1 0 COM RM PUB LIB STDM	N F R A S T R U C T U R E
WATER	DRAINAGE	SOLID WASTE	ELECTRICITY	COMMUNITY HALL	SAFETY	
SOURCE-HP TANK- OHT FIRE S- NO	NOT AVAILABLE **89.00 % TOILET COVERAGE**	DAILY D-D COLLCN SP DUMPING SITE **100 % COVERAGE**	633 930 2 1 INDUSTRIAL COMMERCIAL ROAD LIGHT OTHERS **97.83 % COVERAGE**	1 0 COM-HALL UDPFI	1 POLICE STN SAFE TOWN	

Table 5-9: Infrastructure data of Savli (M)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

Strength:

- In DMIC route , location for export promotion indusrial park
- GIDC near
- Educational hub for context
- Agriculture & HH industry boost scope

Weakness:

- High female illeterates
- Growth rate falling inspite of economic opppurtunities
- Poor water & drainage infrasturcture
- Pollution due to industries

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5.2.5 – Evaluation of Class V – Karachiya (CT) town

The demographic scenario of Karachiya (CT) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (7,103-2011) is falling. Various reseaons are non-availability of great social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education, etc. The density (73.99, 2011) is falling by 6.59 in 2001-11 and lower then required (80.58) as per URDPFI guidelines. The growth rate is falling from -3.96 (2001) to -8.18 (2011). The growth rate is lower than district and state. The sex-ratio (818 in 2011) is lower than the district (934 in 2011) and is gradually rising (800 in 2001). The literacy rate is lower (80.27) than the district rate (89.74). The gap between male-female literacy rate (18.2) is higher than the district (7.5). The town composition (2011) is 78.94% NI, 7.46% ST and 13.6% ST. The occupation structure (2011) is 89% other workers, 8% agricultural labourers, 2% cultivators and 1% house-hold industries. For employment scenario (2011), 56% are not employed, 38% are usually employed and 6% are casually employed. The slums population (2011) is 23% of the total population. The major three industries are Fertilizer, Urea, Sulphate, Gypsum, Chemical and Petrol, Diesel, Kerosene. In terms of banking facility (2011), there are 0 Cooperative banks, 1 Private Commercial banks and 0 Nationalised banks along with 0 Agriculture credit societies and 0 Non-Agriculture societies.

- **7,103** Population [2011] – *Census*
- **0.9600 km²** Area
- **7,399/km²** Population Density [2011]
- **-0.85%** Annual Population Change [2001 → 2011]
- Postal code: 391310

In terms of Social and Physical Infrastructure, Karachiya (CT) town has good provisions. For Health sector, the town has 4 general hospitals , 0 Nursing homes, Maternity Homes and Child welfare centers, 0 family welfare centers, 4 Vaternity centers, 0 dispensaries . The town has 0 beds per 10,000 population (district – 24 beds per 10,000 population). For Education facilities, there are 0 colleges (0 required, URDPFI), 0 Senior Secondary schools (1 required, URDPFI), 1 Primary schools (1 required, URDPFI). In terms of road condition, 14% is pucca road, 43% is kaccha road and 43% is mixed (primary survey). For transport, town has a Bus stop For recreation, there are 0 big park (3 required, URDPFI). For Social interactions, there are 0 Community rooms (1 required, URDPFI), 0 public libraries and 0 stadiums. The drinking water source is treated tap water. The storage is in Over-head tank and provision of Fire-safety is not avaivalbe. The water supply is 14 LPCD (70 required, URDPFI). The Drainage type is Closed drainage. The town has 95.84 % toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 91.05% coverage. There are 4 industrial connections, 25 commercial connections, 90 road light conections and 4 other connections. The town has 1 community hall (0 required, URDPFI). For safety, there is no police post.

Table 5-10: Demographic data of Karachiya (CT)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

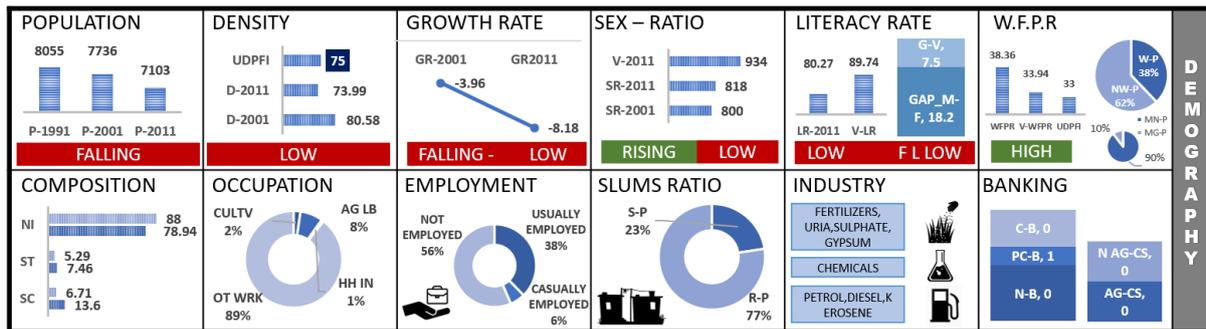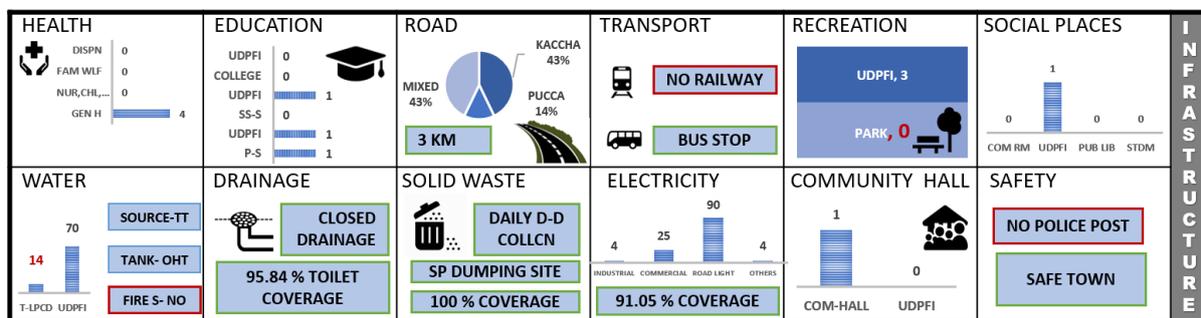*Table 5-11: Infrastructure data of Karachiyai (CT)*

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

Strength:

- GSFC & industrial zone
- Connectivity to NH 48
- Economic opportunities
- High WFPR

Weakness:

- Air pollution zone
- High slum ratio due to labour migrants
- Poor health & water facilities
- High female illeterates – high tribal population

5.2.6 – Evaluation of Class VI – Tarsali (CT) town

The demographic scenario of Tarsali (CT) town is being studied through various resources and inferences and gaps are being derived by comparing with guidelines. The population of the town (4,929-2011) is falling at a high scale due to out-migration. Various reseaons are non-availability of great social and physical infrastructure, employement oppurtunities, modern lifestyle, better wages, marriage, higher education, etc. The density (27.08, 2011) is falling by 16.70 in 2001-11 and lower then required (75) as per URDPFI guidelines. The growth rate is falling from 34.38 (1991) to -81.54 (2011). The growth rate is lower than district and state. The sex-ratio (906 in 2011) is lower than the district (934 in 2011) and is gradually rising (880 in 2001). The literacy rate is lower (82.06) than the district rate (89.74). The gap between male-female literacy rate (11.81) is more than the district (7.5). The town composition (2011) is 77.81% NI, 17.24% ST and 4.95% ST. The occupation structure (2011) is 69% other workers, 25% agricultural labourers, 1% cultivators and 5% house-hold industries. For employment scenario (2011), 56% are not employed, 39% are usually employed and 5% are casually employed. The slums population (2011) is 28% of the total population. The major industry is Cotton. In terms of banking facility (2011), there are 0 Cooperative banks, 1 Private Commercial banks and 1 Nationalised banks along with 0 Agriculture credit societies and 0 Non-Agriculture societies.

- **4,929** Population [2011] – *Census*
- **1.820 km²** Area
- **2,708/km²** Population Density [2011]
- **-16%** Annual Population Change [2001 → 2011]
- Postal code: 390009

In terms of Social and Physical Infrastructure, Tarsali (CT) town has good provisions. For Health sector, the town has 3 general hospitals , 0 Nursing homes, Maternity Homes and Child welfare centers , 0 family welfare centers, 0 Vaternity centers, 0 dispensaries. The town has 0 beds per 10,000 population (district – 24 beds per 10,000 population). For Education facilities, there are 0 colleges (0 required, URDPFI), 0 Senior Secondary schools (1 required, URDPFI),5 Primary schools (1 required, URDPFI). In terms of road condition, 36% is pucca road, 9% is kaccha road and 55% is mixed (primary survey). For transport, town has Bus stop. For recreation, there are 2 big parks. For Social interactions, there are 0 Community rooms (1 required, URDPFI), 0 public libraries and 0 stadiums. The drinking water source is treated tap water. The storage is in Over-head tank and provision of Fire-safety is not avaivalbe. The water supply is 365 LPCD (70 required, URDPFI). The Drainage type is Open/Closed drainage. The town has 89.54% toilet coverage. The solid waste collection is Daily Door to Door Collection. Special Dumping site is available. The Electricity of the town has 98.98% coverage. There are 45 industrial connections, 364 commercial connections, 62 road light conections and 0 other connections. The town has 0 community halls. For safety, there is 1 police post.
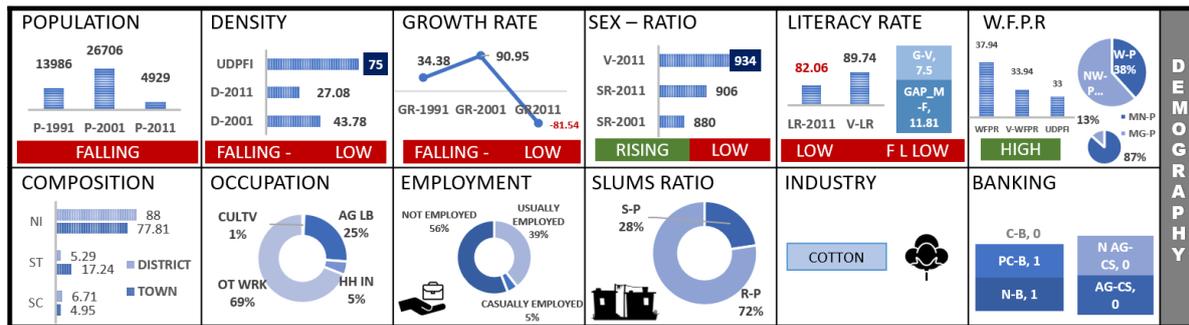
Table 5-12: Demographic data of Tarsali (CT)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS
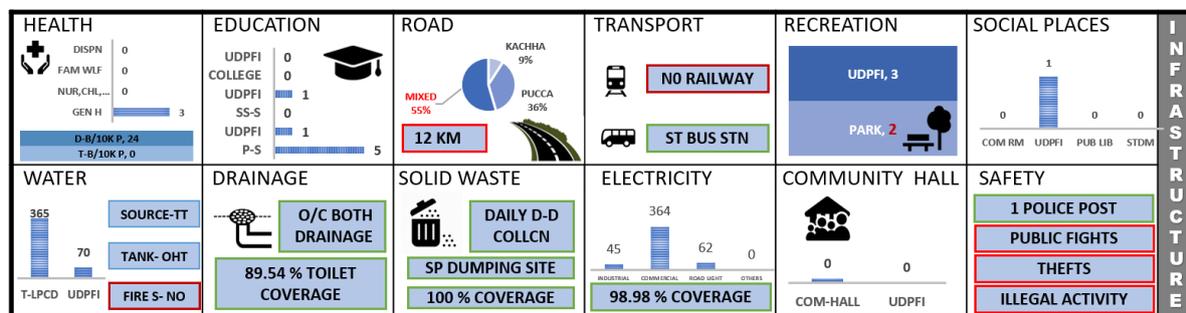
Table 5-13: Infrastructure data of Tarsali (CT)

Source: DCHB , VADODARA , UDPFI , CPHEEO , PRIMARY SURVEY, SERVICE LEVEL BENCHMARKS ,PAS

Strength:

- NH-48 passes – an exit to city
- Agriculture & HH industry boost scope
- High WFPR
- Rising real estate

Weakness:

- Poor water quality & supply & regular power cut
- Major land occupied by defence & govt bodies
- High crime ratio & illegal activities
- Less economic opportunities

5.3 – Comparative Analysis (Service level benchmarks)

After the detailed study of demographic scenario and provisions of amenities, 18 prime indicators are selected to derive an overall brief of each town respectively. The indicators are Population, Growth rate, Density, Sex-ratio, Literacy, WFPR, Slum, Employment, Health, Education, Water, Drainage, Transport, Community development, Electricity, Safety, Road and Recreation. Each indicator is allotted as good or bad as per its situation. Then, the service level benchmarks are compared in a table. Here, we find that as we go sequentially from large town to medium to small towns, the indicators are showing bad situations. Hence, this comparative analysis clearly proves, SMSTs are deprived of basic amenities in contrast to mega-cities.

INDICATORS	CLASS I VADODARA (M.CP+OG)	CLASS II DABHOI (M)	CLASS III KARJAN (M)	CLASS IV SAVLI (CT)	CLASS V KARACHIYA (CT)	CLASS VI TARSALI (CT)
POPULATION`	Good	Poor	Good	Good	Poor	Poor
GROWTH RATE	Poor	Poor	Poor	Poor	Poor	Poor
DENSITY	Poor	Poor	Poor	Poor	Poor	Poor
SEX RATIO	Poor	Good	Good	Good	Good	Poor
LITERACY	Good	Poor	Poor	Poor	Poor	Poor
WFPR	Good	Good	Good	Good	Good	Good
SLUM	Good	Good	Poor	Good	Poor	Poor
EMPLOYMENT	Poor	Poor	Poor	Poor	Poor	Poor
HEALTH	Good	Poor	Poor	Poor	Poor	Poor
EDUCATION	Good	Poor	Poor	Poor	Poor	Poor
WATER	Good	Poor	Good	Good	Good	Good
DRAINAGE	Good	Good	Good	Poor	Good	Poor
TRANSPORT	Good	Good	Good	Good	Poor	Poor
COMMUNITY DVPT	Good	Poor	Poor	Poor	Poor	Poor
ELECTRICITY	Good	Good	Good	Good	Poor	Good
SAFETY	Good	Good	Good	Good	Good	Poor
ROAD	Good	Poor	Poor	Poor	Poor	Poor
RECREATION	Good	Good	Poor	Poor	Poor	Poor

Legend: Green = GOOD SERVICE, Red = POOR SERVICE

Table 5-14: Comparative analysis of towns (service-level Benchmarks)

5.4 – Funding and beneficiaries

5.4.1 – The funding structure

The funding for towns of Vadodara district is a top to bottom approach. The Gujarat Municipal Finance Board provides funds, grants and subsidies to Regional Commissionerate Municipalities, which is a state level body for urban governance. This body along with District Urban Development Authority provides funds to Municipal Corporation, Municipalities and other ULBs. For Class A town (1 lakh plus population), total amount of10 crore per annum is allotted. For Class B town (50,000 to 1 lakh population), total amount of 7 crore per annum is allotted. For Class C town (25,000 to 50,000 population), total amount of 4 crore per annum is allotted. For Class D town (15,000 to 25,000 population), total amount of 3 crore per annum is allotted. There is no specific reorganization for funding of small towns having population below 15,000. This results into fall of small towns and they face out-migration to larger towns and cities.

Figure 5-2: Funding structure for SMSTs of Gujarat

Source: Regional Commissionerate of Vadodara district

CLASS A : 1 LAKH + POP_VADODARA (M+OG)_**10** CR/YEAR

CLASS B : 50K– 1 LK POP_DABHOI (M) _____**7** CR/YEAR

CLASS C : 25K - 50K POP_KARJAN (M) _____**4** CR/YEAR

CLASS D : 15K - 25K POP_SAVLI (M) _____**3** CR/YEAR

For towns, various schemes are available at National, State, District and local level. List of available schemes / policies:

- JNNRUM- BSUP,IHSDP

- PMAY , RAY , MGY, SBM

- SJMMSVY : UDP-88, UDP-78

- 14TH , 15TH FINANCE COMMISSION GRANT

- OCTRI COMPENSATION GRANT (M.CORP, M)

- BUNIYADI MUDI PAGARBHATTA GRANT

- EDUCATION CESS GRANT

- STATE COMMON CADRE

- ENTERTAINMENT TAX GRANT

- PROFESSIONAL TAX GRANT

- LAND REVENUE & IRRIGATION CESS GRANT

- MUNICIPAL ELECTION GRANT

- NAGAR VIKAS SRINIDHI YOJANA (LOAN)

- ANGANWADI

- KALIASADHAM SCHEME

- MODEL TOWN/NAGARPALIKA YOJANA

Chapter 6 – Past Planning efforts for Small and Medium Towns in India

6.1 – Five Year Plans

1ST, 2ND & 3RD FYP didn't have concept of SMSTs

4th FYP (1969-74) – BALANCED DEVELOPMENT

- Recognized that past policies reflected concentration in cities & need balanced development

- Vision to develop smaller towns by spatial economic activities & income generation of residents.

- Scheme for Environmental improvement of Urban slums & Housing and Urban Development Corporation (HUDCO)

- 4th FYP indentified metro city conjestion & started to discuss small town problems

- Not effective as no dedicated policy

5th FYP (1974-79) – LAND PRICES IN CITIES

- Assist development projects of national importance in metropolitan cities.

- Integrated Urban development Programme (IUDP)- infrastructure to cities with 3 lakh plus population.

- A framework for SMSTs & a taskforce on Planning & Development of SMSTs (1975).

- 5TH FYP included SMSTs

6th FYP (1980-85) – DEVELOPMENT OF SMSTs

- Integrated Development of Small & Medium Towns (IDSMT) – towns with population less than 1 lakh.

- Included Central & state assistance for infrastructure & amenities.

- 231 towns selected in beginning

- 6TH FYP included SMSTs

- Not effective as scheme for 20k-50k sized towns

7th FYP (1985-90) – HOUSING CONSTRUCTION & FINANCE

- Building Material Technology Promotion Council (BMTPC) & National Housing Policy in 1988.

- Urban Poverty Alleviation Scheme known as Urban Basic Services for the Poor (UBSP) launched.

- 7TH FYP didn't focus on SMSTs development

8th FYP (1992-97) – URBAN SECTOR IN NATIONAL ECONOMY

- Plan identified the key issues in emerging urban scenario: the widening gap between demand and supply of infrastructural & basic services to poor,

- Catered housing shortages, slums & decay of urban environment.

- 8TH FYP didn't focus on SMSTs development

9th FYP (1997-2002)– ECONOMIC ENVIRONMENT OF LIBERATION & REFORMS-URBAN SECTOR

- Encouraged PPP & lifted ban on foreign investments allowing MNCs

- Urban Development Planning again in limelight due to the era of economic liberalization.

- 9th FYP didn't focus on SMSTs development

10th FYP (2002-07) – BACKDROP TO 9TH FYP WITH REFORMS

- Aim -to promote the legislative, governance & administrative structure of cities through a set of market-friendly urban reforms. NUHHP in 2007. Self-efficient ULB agenda.

- Promotion of PPP in urban infrastructure and services. JNNRUM established.

- 10th FYP didn't focus on SMSTs development

11th FYP (2007-12) – ECONOMICALLY PRODUCTIVE, EQUITABLE & RESPONSIVE CITIES

- Aims - increasing the efficiency and productivity of cities by deregulation and development of land" and "dismantling public sector monopoly over urban infrastructure and creating conducive atmosphere for the private sector to invest"

- Continuing JNNRUM directing it to improved urban services

- 11th FYP didn't focus on SMSTs

12th FYP (2012-17) – FASTER, MORE INCLUSIVE, SUSTAINABLE GROWTH IN CITIES

- Aims at multi-sectoral growth approach & decentralization of economy

- Identified that PRIs of urban local bodies lack the capacity to design, implement, and monitor programs by JNNRUM experience

- Emphasizes Self-Help Groups (SHGS) under Swarnjayanti Gram Swarojgar Yojana (SGSY)

- 12th FYP didn't focus on SMSTs

6.2 – Three Year Action Agenda – Niti Ayog (2017-28 to 2019-20)

On 1st January 2015, the National Institution for Transforming India or NITI Aayog came into existence as the government's premier think tank. Subsequently, vide Office Order PMO ID No. 360/31/C/38/2014-ES-II dated 09/05/2016 (Annexure 1), the Prime Minister's Office advised the NITI Aayog to prepare a Fifteen Year Vision, Seven Year Strategy and Three Year Action Agenda documents. Accordingly, the present document is being published to prepare policy changes and programs for action during the years 2017-18 to 2019-20, the last three years of the Fourteenth Finance Commission. A second document for the Fifteen Year Vision and Seven Year Strategy is currently under preparation at the NITI Aayog.

The Vision, Strategy and Action Agenda exercise represents a departure from the Five Year Plan process, along with a handful of discontinuities until the fiscal year 2016-17. The 12th Five Year Plan was the last of these plans. It has been felt that with an increasingly open and liberalized economy, we needed to rethink the tools and approaches to conceptualizing the development process. It is hoped that the proposed shift represents an important step in this direction. The Vision, Strategy and Action Agenda framework will allow us to better align the development strategy with the changed reality of India.

The Three Year Action Agenda offers ambitious proposals for policy changes within a relatively short period. It is understood that while some may be fully implemented during the three-year period, implementation of others would continue into the subsequent years. Where relevant, we have included possible actions by the states to complement the efforts of the Centre.

The proposed Agenda is wide-ranging and consists of seven parts and 24 individual chapters.

Part I contains three chapters devoted to outlining a tentative medium-term fiscal framework. It includes different growth scenarios for the economy and forecasts the available resources under each of them. Drawing on the baseline forecast, it then provides indicative expenditure allocations across broad sectors.

Part II highlights the economic transformation of the broad sectors of the economy. It discusses policies related to key sectors: agriculture, industry and services. In

agriculture, the focus is on early actions necessary for doubling farmers' incomes by 2022. In industry and services, the central theme is the creation of high-productivity jobs that would pay decent wages to workers.

Part III describes the elements of regional development: Urban Development, Rural Transformation and Regional Strategies. Addressing the problems specific to different regions is an important step towards achieving balanced growth.

Part IV deals with six "growth enablers." These enablers not only help agriculture, industry and services grow faster but, in many cases, also constitute vehicles of growth themselves. They include: Transport, Digital Connectivity, Public-Private Partnerships (PPP), Energy, Science and Technology, and Innovation and Entrepreneurship.

Part V considers issues related to government, which are crucial for the successful implementation of policies or reforms. The chapters in this part address matters related to governance, taxation, competition and the rule of law. The chapter on the Rule of Law throws light on critical action items necessary to improve law and order and the delivery of speedy justice. More to point, it discusses police and legal reforms, including measures to enhance the functioning of the judiciary.

Next, Part VI turns to the Social Sectors: Health: Education and Skill Development; and Building an Inclusive Society. These areas are important not only for the well-being of the population but also for building a productive workforce critical to economic growth. Finally, Part VII deals with the overarching area of sustain ability. The two chapters in this final section focus on Environment and Forests and the Sustainable Management of Water Resources, areas critical to ensuring that growth is not at the expense of the wealth that nature has bestowed upon India.

- Main objectives are: Medium-term Revenue and Expenditure Framework, Economic Transformations in Major Sectors, Regional development, Growth enablers, Government, Social sectors and Sustainability

- Three year action agenda didn't focus on SMSTs

Conclusion:

- **After 6th FYP , since more than 3 & a half decades , there is no follow up or any special mention of small and medium towns in Indian urban planning , who in turn share 34.29 % of total urban population (2011)**

6.3 – Integrated Development of Small & Medium Towns (IDSMT)

- 74th Amendment Act in 1992 – Decentralization to improve at local level.

- In 6th FYP (1979) , IDSMT introduced under MOUA & Employment Department till 30th June, 2018.

Prime objectives:

- Improve infrastructure facilities of SMSTs
- Reduce migration to big & metropolitan cities

Coverage:

- Town selection criteria indicated but not mandatory, left for State to decide

- Criteria 1 : Towns & cities with population up to 5 lakh.

- Condition – 1/3rd of amount to towns with less than 50,000 population per year

- Criteria 2 : Scheme applicable where local elections held regularly & Elected bodies are in position

Target:

- Prime target – Towns with 20,000 to 50,000 population

- Towns with 50,000 to 5 lakh & less than 20,000 on

selective bases by State

- Suggested 'State special agency' for regulation and funding

Implementation Status :

- Delay in land acquisition, inadequate counterpart funding

by State/UTs

- Smaller local bodies were unable to avail loans from Financial Institutions

- Scheme didn't make much impact on smaller towns though objective was meant for them

NO	PLAN PERIOD	NO. OF TOWNS COVERED	CA RELEASED(IN CR.)
1	6TH PLAN	235	63.57
2	7TH PLAN	145	80.03
3	1990-91	77	19.1
4	1991-92	60	13.44
5	8TH PLAN	387	107.8
6	9TH PLAN	268	236.41
7	10TH PLAN	168	
8	2002-03	215	85.43
9	2003-04	299	102.72
10	2004-05		142
11	2005-06		112.46
	2006-07		106.95
	11TH PLAN		
	TOTAL	1854	1069.9

Table 6-1: Funds released during FYPs

Source: TCPO, India

* After the launching of the new scheme of UIDSSMT, no new towns were covered under IDSMT Scheme since 2005-06 onwards. No central grant has been allocated under IDSMT since 2007-08

6.4 – Urban Infrastructure Development Scheme for Small & Medium Towns (UIDSSMT)

- Introduced in 2005 as a JNNRUM component. Administered by Ministry Of Urban Development

Prime Objectives:

- Better Planning
- Accessible Funding
- Capacity building of Local Bodies
- Improve infrastructure & quality of service in urban area and enhance PPP. Components covered are- water supply, drainage, sewage, solid waste management, roads, preservation of water bodies & urban renewal projects.

Coverage:

All towns as per 2001 census

Financing:

- 80% Central assistance, 10% State assistance,
- 10% Implementing agencies (ULB, borrowings)

- Two State level authorities for each state:

1-State Level Sanctioning Committee (SLSC)

 - review & approval

2-State Level Nodal Agency (SLNA)

- management & funding

Implementation Status:

- JNNRUM funding – 18% only for UIDSSMT

- 70% for UIG & BSUP (for Large Cities)

- Covered just 17% of total towns
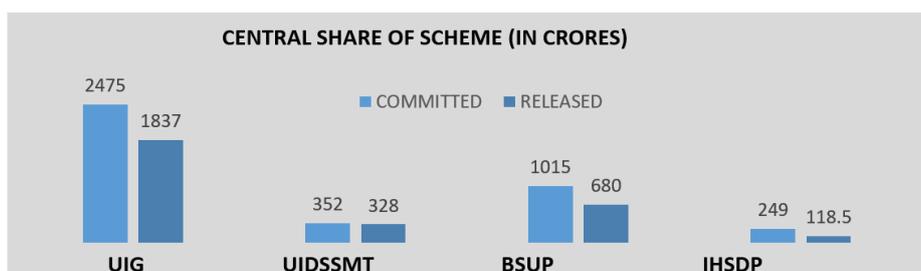
CENTRAL SHARE OF SCHEME (IN CRORES)

Figure 6-1: Central share of UIDSSMT (In crore)

Source: JNNRUM database up to March 2012

CLASS WISE DISTRIBUTION OF CENTRAL SHARE COMMITTED & RELEASED UNDER UIDSSMT

Scheme	ACA	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V	CLASS VI	TOTAL
UIDSSMT	COMMITTED	46	26	20	7	1	1	100
	RELEASED	46	26	19	7	2	1	100

SOURCE : The Other JNNRUM. (Center for Policy Research)

Table 6-2: : Class-wise distribution of Central share committed & released under UISSMT

Source: The other JNNRUM . (Centre for Policy Research)

6.5 – JNNRUM & other urban development schemes

OTHER URBAN DEVELOPMENT SCHEMES:

- AMRUT REFORMS-   500 MISSION CITIES

- UIDSST – 7 SATELLITE TOWNS OF   7 MEGA CITIES

- SUB SCHEME ON LAP AND TP SCHEMES –   25 CITIES

- URBAN MAPPING SCHEME –   53 OF 4378 UA

- SWACHH BHARAT MISSION

- URBAN TRANSPORT

- PRADHAN MANTRI AWAS YOJANA

- DEENDAYAL ANTYODAYA YOJANA NATIONAL

- URBAN LIVELIHOODS MISSION
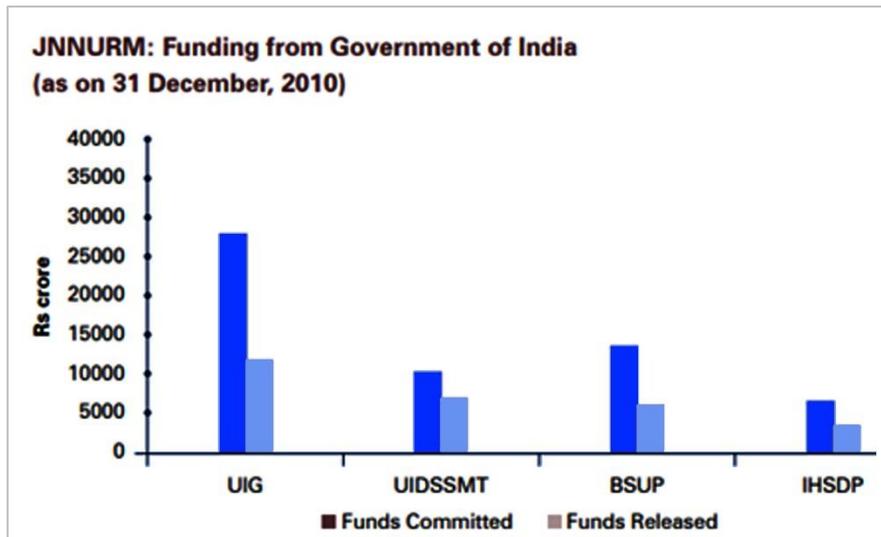
Figure 6-2: JNNRUM: Funding from Government

Source: MOUD, GOI
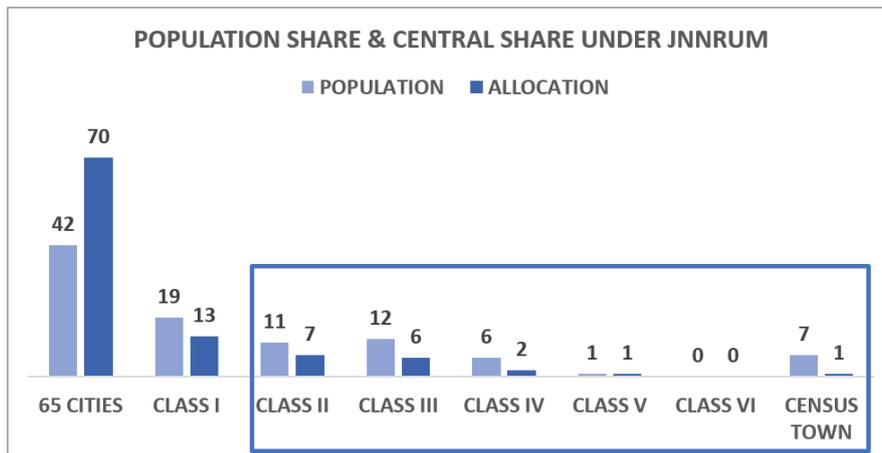
Figure 6-3: Population share & central share under JNNRUM

Source: JNNRUM database up to March 2012

6.6 – Conclusion

- In spite of establishing dedicated schemes for development of small & medium towns, no scheme focused on funding to the smaller towns.

- Maximum urban development schemes on cities or rural.

- This has resulted into poor infrastructure, economic opportunities & livability in small & medium towns, and are facing out-migration instead of attracting villagers

Chapter 7 – Inferences and identification of Problems

RESEARCH QUESTION:

What is status of small & medium towns?

FINDINGS (CONCLUSION):

- SMSTs are deprived of basic amenities & infrastructure, and their condition is further degrading

- immediate need of planning inputs in SMSTs

OBJECTIVE: To study the demography & infrastructure provision for SMSTs

INFERENCES (IDENTIFICATION OF PROBLEMS):

- Growth rate falling drastically

- Out – migration from villages/towns to direct metropolitans skipping towns

- Poor infrastructure, social & community services

- Declining cultural system of towns

- Less awareness / technical knowledge in town authorities

RECOMMENDATIONS & STRATEGIC SOLUTIONS:

1. Introduction of a 'STATE TOWN GOVERNING BODY' for SMSTs under GUDM

2. A special 'KNOWLEDGE & TRAINING CAMPAIGN' for governing authorities of all ULB under DDA

3. A 'TRADITION & CULTURE UPLIFTMENT COMMITTEE' under STGB

4. An 'URBAN HAAT' for each town managed by the committee 'TCUC'

5. 'TOWN DEVELOPMENT PLAN' & 'E-GOVERNANCE' made compulsory under NUIS & NEGP

OBJECTIVE: To study the past planning & governance efforts for SMSTs

INFERENCES (IDENTIFICATION OF PROBLEMS):

- Negligible consideration of SMSTs by Indian urban development authorities

- SMSTs deprived of beneficiaries. funding of state/center biased towards cities

- No urban status (rural governance) – depending on rural schemes & failure of existing policies

- No state governing body for urban development in towns

- Not governed by building bye-laws, potential for unplanned slum-type growth

- Weak top to bottom approach. bottom end non-existent.

- An error by government in identification of town merely on population- basis. need a method with criteria & spatial inputs

RECOMMENDATIONS & STRATEGIC SOLUTIONS:

1. Proposing a fixed 'functional definition' / criteria for SMSTs for census

2. Recommendations to 'meet the gaps' of existing policies

3. Introduction of 'new policy' dedicated to SMSTs similar to UIDSSMT under JNNRUM

4. A 'method to identify' (overlay analysis) & designate the status 'town' under URBAN MAPPING SCHEME

5. 'REGIONAL DEVELOPMENT PLANS' emphasizing the dynamics of SMSTs

Chapter 8 – Recommendations and Strategic solutions to identified problems

- UN has adopted 17 SDGS to promote global peace, prosperity & planet.
- The study recommendations achieve **13 GLOBAL GOALS OUT OF 17.**

8.1 – National level

1. PROPOSAL FOR CENSUS OF INDIA

- Special mention & inclusion
- Functional definition
- Criteria for finding census towns

2. PROPOSAL FOR TOWN PLANING & COUNTRY ORGANIZATION (TCPO) & MINISTY OF URBAN DEVELOPMENT (MOUD), INDIA

- Proposing growth center wing; method of selecting & functioning of towns eligible as growth centers

3. A NEW DEDICATED POLICY 'SIDSMTO' FOR SMSTs

8.2 – Regional / State level

1. PROPOSING GOVERNMENT OF GUJARAT TO ADD SMALL TOWNS IN COMA, GUJARAT

2. PROPOSING 'REGIONAL PLANS' MADE COMPULSORY (MAPPING SMST)

3. PROPOSING A 'STATE TOWN GOVERNING BODY'

4. PORPOSING A 'TRADITION & CULTURE UPLIFTMENT COMMITTEE'

8.3 – Local level

1. PROPOSAL FOR 'TOWN DEVELOPMENT PLANS' & E-GOVERNANCE

2. A SPECIAL 'ECONOMIC UPLIFTMENT COMMITTEE' AT EACH TOWN OFFICE

3. PROPOSING 'URBAN HAAT' FOR EACH TOWN

4. 'KNOWLEDGE TRAINING CAMPAING' FOR ULB AUTHORITIES & 'AWARNESS DRIVES' FOR SOCIETY

8.4 – Strategic solutions in detail

8.4.1 – Proposing Census of India a functional definition of SMSTS & coverage of census towns and SMSTS in AMRUT

- 74th amendment act:

-Nagar panchayat for area in R-U transition

-Municipal council for small urban area

-Municipal corporation for large urban area

- Criteria to define SMSTs left to state, results in variations and ignorance in central urban planning system.

- SMSTs are mostly under rural governance.

- **Solution:**

  The small and medium towns should have special inclusion and the census reclassification should be done by addition of table below.

Class II	Medium town 1	1 lakh to 5 lakh
Class II	Medium town 2	50,000 to 1 lakh
Class III	Small town 1	20,000 to 49,999
Class IV	Small town 2	10,000 to 19,999
Class V	Small town 3	5,000 to 9,999
Class VI	Small town 4	5,000 and below

Table 8-1: Proposed definition of SMSTs

Census definition:

All towns of class ii to vi are to termed as SMST in India.

AMRUT existing coverage:

All cities and towns with a population of over one lakh with notified municipalities as per census 2011, including cantonment boards (civilian areas).

AMRUT proposed coverage:

Proposing AMRUT a sub section: mission towns

All the census towns and SMSTS to be covered in state annual action plan and service level improvement plan

8.4.2 – Proposing a method to identify town to census (not merely on population basis)

EXISTING CENSUS TOWN SELECTION CRITERIA:

1.Population > 5000

2.Density > 400 persons /sq km

3. 75% male workforce- non-agricultural sector

CRITICS:

- No consideration of demographic character
- No consideration for social & physical infrastructure
- No urban environment found in reality
- Still under rural governance
- Prone to fall due to out-migration
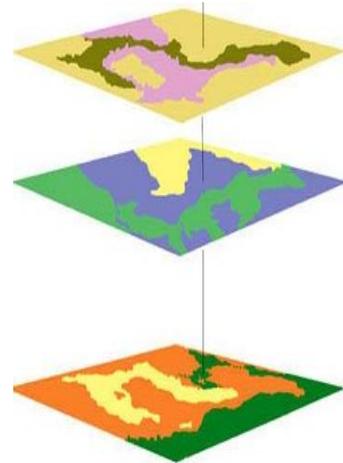
SOLUTION:

A CENSUS TOWN SHOULD BE SELECTED BASED ON FOLLOWING CRITERIA:

> **OVERLAY ANALYSIS:**
>
> **PRIME DEMOGRAPHY + INFRASTRUCTURE FACILITY + CONNECTIVITY**

PARAMETERS:

1. PRIME DEMOGRAPHY

POPULATION + DENSITY + GROWTH RATE + WFPR

2. INFRASTRUCTURE FACILITY:

HEALTH + EDUCATION + WATER SUPPLY + DRAINAGE

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3. CONNECTIVITY:

ROADS CONDITION + MAJOR ROAD / SH / NH / RAILWAY

'CENSUS SHOULD IDENTIFY A TOWN WITH PROPOSED N METHOD TO TERM IT TRULY URBAN; WHICH SUSTAIN AND ATTRACT POPULATION AS WELL'
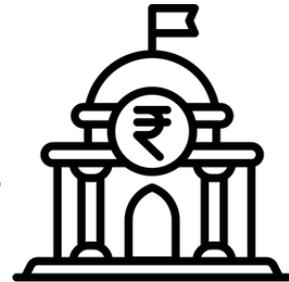
8.4.3 – Introducing A New Dedicated Scheme for SMST

A central funding scheme **– 'scheme for inclusive development of small and medium towns only'** under **'JNNRUM'.**

The scheme 'SIDSMTO' shall be a follow up of 'UIDSSMT' with focus shifting on small and medium towns from metro cities.

COVERAGE:

- All census towns, statutory towns and municipalities only.

FUNCTIONS:

SIDSMTO will ensure funding for services below:

- Fund allocation to be given as per requirements not as per class

- Improve infrastructural facilities in SMSTs

- Urban sector reforms at state & ULB level

- Enhance public-private-partnership in infrastructural development

- Promote planned integrated development of SMSTs

- Provide economic opportunities by subsidies for small-scale industries

- **CRITERIA:**

- Fund allocation to be given as per requirements not as per class

- **IMPLEMENTING AGENCY:**

- Town planning and country organization (TCPO), MOHUA, India.

Top to bottom network:

CENTRAL OFFICE

STATE MUNICIPAL FINANCE BOARD

EACH TOWN AUTHORITY

8.4.4 - Proposing Growth Center Wing

A **'Growth Center Wing'** under **Urban Mapping Scheme** should be set-up by **Town Planning and Country Organization (TCPO), India**

- **FUNCTIONS OF WING:**

- The wing identify the towns eligible to be termed 'growth center'.

- The growth centers will act as pilot points to serve its hinterland

- Growth center services shall cover infrastructure, connectivity and mainy providing new economic opportunities for urban poor

- **THIS WILL GIVE IDENTITY TO SMST & PROVIDE DIRECT NATIONAL & STATE ATTENTION**

GROWTH CENTER PLANNING PROCESS FOR MUNCIPALITIES:

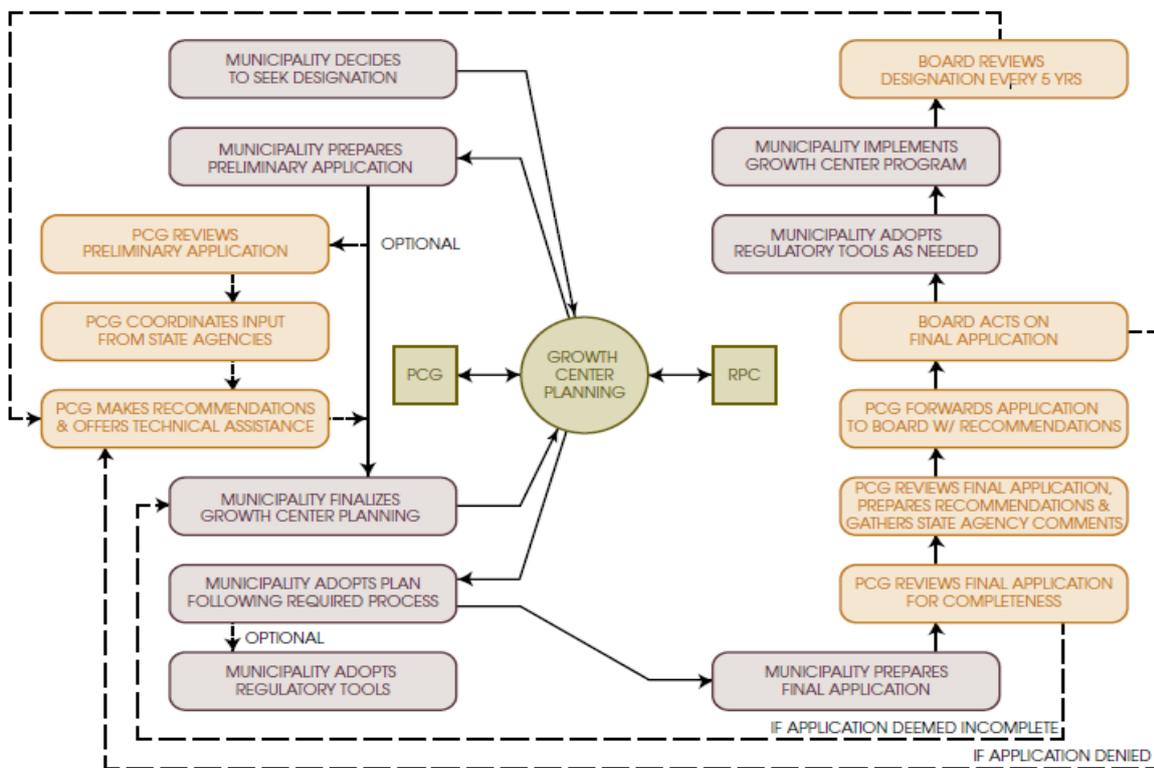*Figure 8-1: Method for Growth Centre Planning*

Source: Vermont growth center planning manual

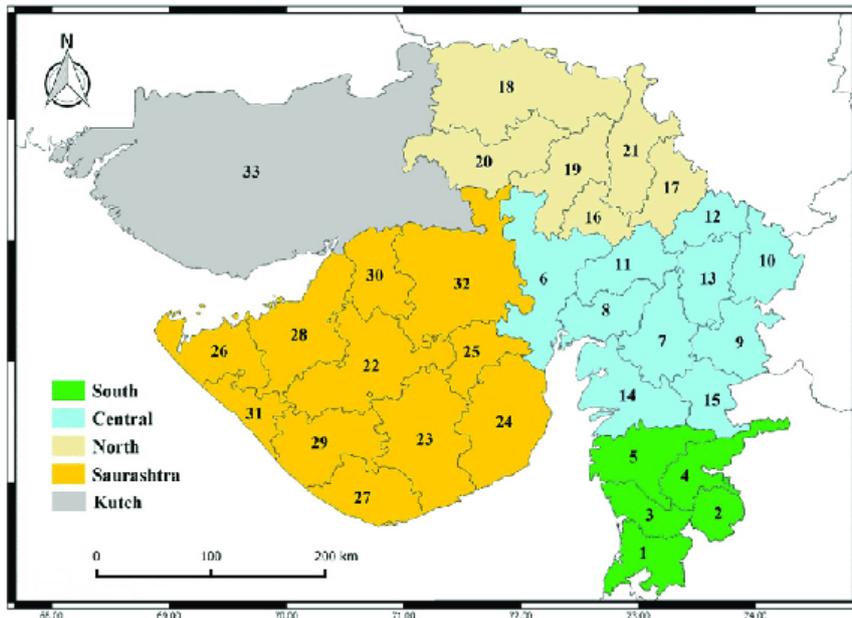## 8.4.5 – Making Regional Development Plans compulsory (mapping SMST)

Figure 8-2: Regional map of Gujarat

Source: biotaxa.org

- GUDM to make a regional development plan for each of 5 regions of Gujarat.
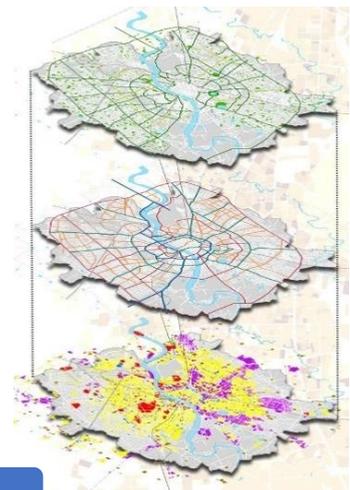

- Method to find town dynamics in GIS mapping:

Figure 8-3: Method to find a town in GIS

- The overlay analysis of each regional development plan made as per above method will reveal the dynamics of towns and will help to plan the regional, district as well as local area plans more effectively by connecting growth centres

- Connecting growth centers in the regional development plan and joining the circuit to national movement will increase the import/export ease and thereby economy

8.6.6 - Addition of 'small towns' in commissioner of municipalities, GoG

Commissioner of municipalities administration, Gandhinagar, Gujarat who shall subject to the control of the state government exercise such powers, duties and functions conferred under the provision of Gujarat municipalities act, 1963. Under the control of commissioner total six regional commissioner, municipalities (Ahmedabad, Gandhinagar, Vadodara, Surat, Rajkot & Bhavnagar) shall exercise powers and perform function and duties.

- **Revised functions -administrative, supervision and controlling authority:**

- Administration and management of municipalities and town heads

- Approval of rules under section 271 and bye laws under section 275.

- Supervision of municipalities functioning and activities.

- Vigilance and inquiry for municipalities misconduct and misbehavior.

- Monitoring of special drives declared by the state government.

CLASSIFICATION	POPULATION	TOTAL URBAN SETTLEMENTS
A-CLASS	MORE THAN 1 LAKH	22
B-CLASS	50,000 TO 1,00,000	33
C-CLASS	25,000 TO 50,000	62
D-CLASS	15,000 TO 25,000	45
E-CLASS	BELOW 15,000	284

Table 8-2: Commissioner of Municipalities classification of Urban Settlements, Gujarat

Source: COMA, Gujarat

- The CLASS E with population below 15,000 is being added for regulation in Regional Commissioner of Municipalities of Vadodara district.

- All the small and medium towns shall be directly benefited at policy and funding levels by inclusion

- A special small town regulatory body shall be formed at district level for functioning of e-class towns

8.4.7 – State SMSTs governing body

IMPLEMENTATION AGENCY:

GUJARAT URBAN DEVELOPMENT MISSION (GUDM)

A special small town regulatory body shall be formed at district level for functioning of E-CLASS towns.

This body shall be a sub-section of Regional Commissionerate of district.

MAIN ADMINISTRATIVE RESPONSIBILITIES:

- 'Technical Management Support' is to be given by the state

- The body will be responsible for funding & managing the top to bottom network

- Special attention to 'Class III to Class IV' towns

100

- Develop SMSTs as Growth Centres

- Put in place audit system and place standards for delivery of essential services

- Electronically transfer grants from centre to ULB in 5 days

COVERAGE: All Census / Statutory towns

STATE OFFICE

DISTRICT OFFICE

TOWN OFFICE
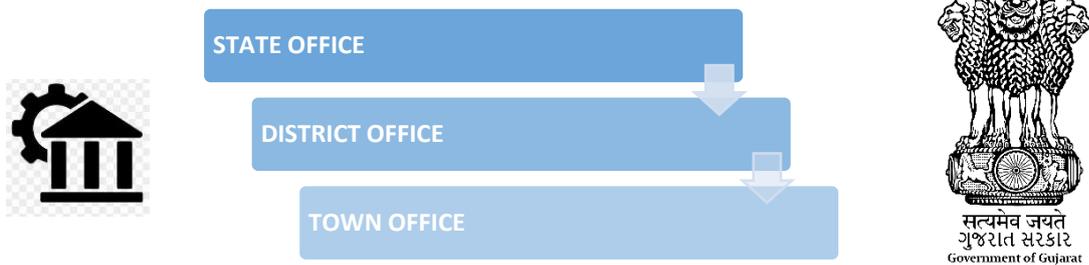
8.4.8 – Tradition & Culture upliftment committee

IMPLEMENTATION AGENCY:

STATE TOWN GOVERNING BODY & MINISTRY OF CULTURE

FUNCTIONS:

- Financial assistance for allied cultural activities will provide funding for the infrastructure

- The committee will prepare database of traditional activities, cultural events, festivals & spiritual activities of each town

- The method shall include local survey

- To prepare reports for development of infrastructure / events for spiritual upliftment

- Will be responsible for promotion & awareness

COVERAGE: All ULBs

Figure 8-4: Glimpse of Cultural events of Vadodara

8.4.9 – Knowledge & Training Program

IMPLEMENTATION AGENCY:

DISTRICT DEVELOPMENT AUTHORITY & DEPT. OF PERSONNEL & TRAINING

FUNCTIONS:

- Chief Officer should be trained for Urban Management

- Imparting training to all rungs of civil services from the lowest and cutting-edge level to the highest in policy making so as to improve the skill, knowledge and attitude of these employees

- Conducting state-wise surveys on the development problems affecting them vis-à-vis their potential for development;

- Capacity building programme for mobilizing support for civil society for various public policy initiatives

- Educate rural authority of urban towns about funding

COVERAGE: All Census / Statutory towns

8.4.10 – Urban Haat & Town Plazas

IMPLEMENTATION AGENCY:

TRADITIONAL & CULTURE UPLIFTMENT COMMITTEE

FUNCTIONS:

- The Urban Haat provides an opportunity for the artisans to develop their skills and also ensures economic benefits for them; helps conserve arts & skills and market them

INCLUDES:

- OFFICE
- STORE
- EXHIBITION HALLS

- PERMANENT SHOPS

- ART GALLERY

- TEMPORARY STALLS

- FOOD COURT

- AUDITORIUM

- OPEN AIR THEATRE

- DORMITORIES

COVERAGE: All ULBs

Figure 8-5: Reference image for Urban Haat

8.4.11 – Town Development Plans & GIS database system

IMPLEMENTATION AGENCY

NATIONAL URBAN INFORMATION SYSTEM & NATIONAL E GOVERNANCE PLAN

FUNCTIONS

- Prepare Land use plan confirming to master plan

- Circulation planning and zoning

- Create spatial & economic opportunities for new investments

- Preserve ecology and contextual connectivity

- Town development plan will identify the town potential in various sectors and will enable controlled growth

- A state body to keep a database of all towns

- To make government citizen interface more effective, efficient and transparent.

- E governance infrastructure & policies implementation

- GIS database Information System should be developed and each information should be put in GIS to prepare maps

COVERAGE: All ULBs
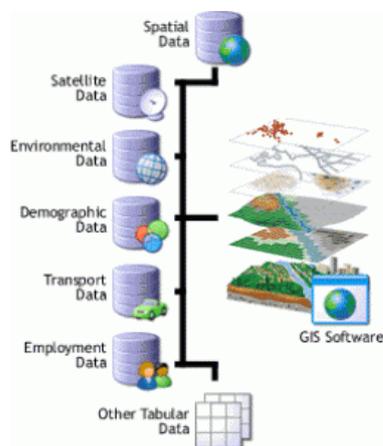
Questionnaire – Google Form for Primary Survey:

Town Name

Respected Sir / Madam,

The following is a survey conducted for Thesis of Mr. Nidhish PIthwa, Masters of Urban and Regional Planning, M.S.U, Vadodara. Survey is a set of very interesting questions to know your place of residence.

Please share your valuable few minutes, and specify your views and needs; so that we can understand about your town more precisely and recommend the needed. We assure you the data is used for study purpose and shall be confidential.

For any further queries or questions, please contact: Department of Architecture & Planning,

M. S. University.

Vadodara - 390002, Gujarat, India

Thank you,

Ar. Nidhish Pithwa, +91-9974068324

* Required

1. Name of Town or Village *

_____

2. Name of the respondent & Contact number *

_____

3. Which sector? Your post?

Mark only one oval.

◯ Government

◯ Authority Private

◯ Citizen

Other: _____

4. Duration of present residence

Mark only one oval.

◯ 5 to 10 Years

◯ 10 to 20 Years

◯ More than 20 Years

5. Where did your family (parents / grandparents) lived before? *

_____

6. Main Reason of shifting? *

Mark only one oval.

◯ Better business / employment opportunities

◯ Hometown lost its cultural values

◯ Better facilities like road, water, drainage lines, electricity, etc.

◯ Modern lifestyle

◯ Family reasons / marriage

◯ Other: _____

7. Occupation of main source of income *

Mark only one oval.

◯ Raw production - Agriculture / dairy / fishing / mining etc

◯ Goods production- Manufacturing / construction / product sale business
etc.

◯ Services - Trade / job / education / bank etc.

8. Number of working Male, Female

_____

Annual income of the family (total)

Mark only one oval.

◯ < 1 Lakh

◯ 1 to 5 Lakhs

◯ > 5 Lakhs

9. Ownership of your house

Mark only one oval.

◯ Owner On rent

◯ Own other property

◯ Here on rent

10. Celebration of festivals & spiritual activities as compared to past *

Mark only one oval.

	1	2	3	4	5
	◯	◯	◯	◯	◯

11. Name of specific festival / social gathering / religious event for which your town was famous for

_____

_____

12. What type of crime occurs more often?

Check all that apply.

☐ Theft
☐ Women harassment
☐ Public fights
☐ Gangster / Political
☐ dominance
☐ None. It`s safe
Other: _____

13. Do you want to shift to Big City like Vadodara, Abad, Surat? why?

_____

_____

Facilities from government

14. Source of drinking water

Mark only one oval.

◯ Government water line
◯ Private Bore well
◯ Public bore handpump
◯ Lake / pond

15. Availability of water from government (if available)

Mark only one oval.

- ⬭ Daily
- ⬭ Weekly
- ⬭ Not fixed

16. Quality of drinking water

Mark only one oval.

	1	2	3	
poor	⬭	⬭	⬭	good

17. Toilet connected to

Mark only one oval.

- ⬭ Open Drain
- ⬭ Septic tank
- ⬭ Sewerage
- ⬭ Soak pit

18. Drainage/sewage dumped to

Mark only one oval.

- ⬭ Underground gutter
- ⬭ Lake / pond
- ⬭ Open waste land

19. Present drainage facility

Mark only one oval.

	1	2	3	
poor	⬭	⬭	⬭	good

20. Solid waste government dumping site available?

Mark only one oval.

◯ Ye

◯ No

21. Door to door regular waste collection. If no, where do you dump?

Mark only one oval.

◯ Yes

◯ No

◯ Other: _____

22. Frequency of flooding

Mark only one oval.

◯ Every year

◯ Once in 2 Years

◯ Once in 5 Years

◯ Occasionally

23. Source of Electricity connection

Mark only one oval.

◯ Govt.Solar

◯ No electricity

◯ Other: _____

24. Electricity Power cut

◯ Rarely

◯ Daily

◯ Weekly

◯ Monthly

25. Roads condition

Mark only one oval.

◯   Kaccha

◯   Pucca

◯   MIxed

26. Public Transport / city bus available? if not using, why?

Mark only one oval.

◯   Yes

◯   No

◯   Available but not using

◯   Other:

_____

27. Cooking energy used

Mark only one oval.

◯   Pipe line

◯   Cylinder

◯   Wood

28. Recreational activity (tick all that is available)

Check all that apply.

☐   Temple

☐   Parks / Garden Mall

☐   Sports complex

☐   Community hall / gathering place

        Other: _____

29. Distance from House

Mark only one oval.

- ( ) < 2 Km
- ( ) 2 - 5 Km
- ( ) 5 - 10 Km
- ( ) > 10 Km

30. School / College. How many?

Mark only one oval.

- ( ) Private
- ( ) Govt.
- ( ) Other: _____

31. Distance from House

Mark only one oval.

- ( ) < 2 Km
- ( ) 2 - 5 Km
- ( ) 5 - 10 Km
- ( ) > 10 Km

32. How is government education facility?

Mark only one oval.

	1	2	3	
poor	( )	( )	( )	good

33. Hospitals / dispensaries. How many?

Mark only one oval.

- ◯ Private
- ◯ Govt.
- ◯ Other: _____

34. Distance from House

Mark only one oval.

- ◯ < 2 Km
- ◯ 2 - 5 Km
- ◯ 5 - 10 Km
- ◯ > 10 Km

35. Sufficient medical stores / facilities?

Mark only one oval.

- ◯ Yes
- ◯ No

36. Have any family members suffered from disease?

Mark only one oval.

- ◯ Breath (Bronchitis, Asthma)
- ◯ Typhoid, jaundice
- ◯ Malaria, Dengue, etc.
- ◯ Corona
- ◯ None
- ◯ Other: _____

37. Deaths due to any disease? which one?

_____

38. How is government healthcare facility?

Mark only one oval.

	1	2	3	
poor	◯	◯	◯	good

Other Information:

39. Do you get benefit of any scheme of government?

_____

40. Main economy / businesses of town

◯ Yes
◯ No

41. Major polluters in / near your town *

Mark only one oval.

◯ Vehicles
◯ Industries
◯ Solid waste
◯ Sewage
◯ No
◯ Other: _____

42. Do you need provisions to increase spiritual / religious activities?

Mark only one oval.

- Yes
- No
- Maybe

43. Why are people migrating from your town?

	1	2	3	4	5
	◯	◯	◯	◯	◯

44. Did you find this study informative? Thank you for your time. Means a lot

Mark only one oval.

	1	2	3	4	5
	◯	◯	◯	◯	◯

END OF THE SURVEY

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