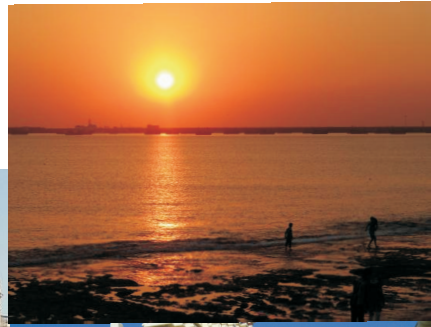




District Human Development Report

PORBANDAR

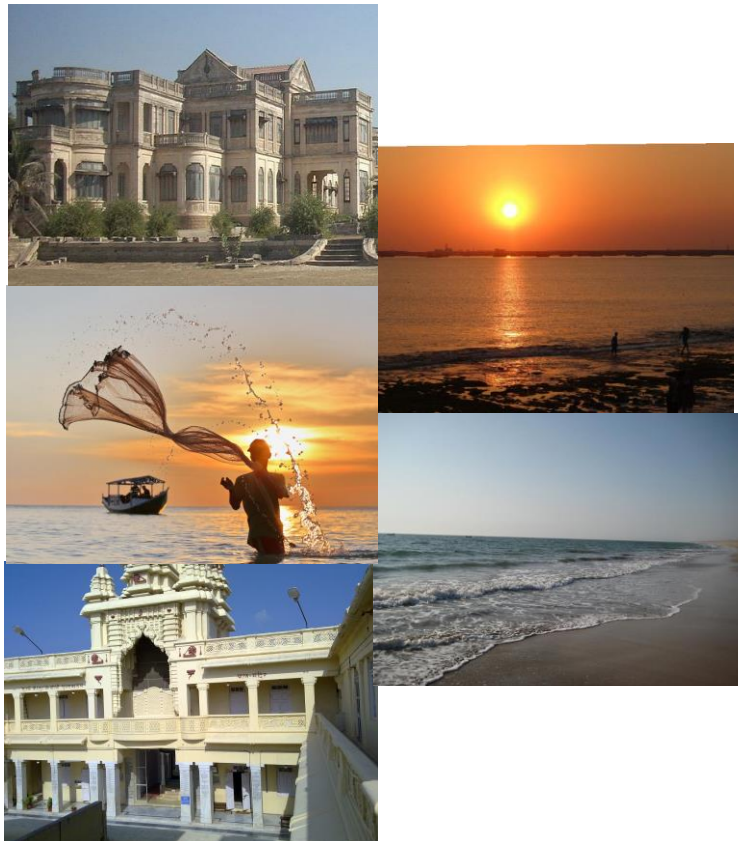


Gujarat Social Infrastructure Development Society (GSIDS)
General Administration Department (Planning)
Government of Gujarat
Gandhinagar



District Human Development Report

Porbandar



GUJARAT SOCIAL INFRASTRUCTURE DEVELOPMENT SOCIETY (GSIDS)
GENERAL ADMINISTRATION DEPARTMENT (PLANNING)
GOVERNMENT OF GUJARAT
SECTOR-18, GANDHINAGAR

DISTRICT HUMAN DEVELOPMENT REPORT: PORBANDAR

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Designed

By

Tejal Parmar, SPAC, GSIDS

The report is prepared by Shri Jairambhai Patel Institute of Business Management, Gandhinagar under a tripartite MoU between Member Secretary, the Gujarat Social Infrastructure Development Society (GSIDS), District Collector, Porbandar and Shri Jairambhai Patel Institute of Business Management (formerly known as NICM) (Post Graduate Center of Gujarat Technological University), Gandhinagar.



Gujarat Social Infrastructure Development Society (GSIDS)
General Administration Department (Planning)
Government of Gujarat



JAYANTIBHAI KAVADIYA



No.MOS/P.R.H.R.D./VIP/247 / 2016

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10 MAY 2016



MESSAGE

Gujarat enjoys the reputation of being the most progressive and well-administered State in the country. The State Government is aware that although progress has been achieved in various sectors since the State's inception much remains to be done in many fields. The Government is, therefore, making strenuous efforts to provide basic minimum services to the people, including drinking water, housing, health, education, livelihood opportunities, etc. The issues like securing peoples participation, poverty alleviation, social protection to the poor, removal of regional imbalances, good governance are also high priority areas of focus on the agenda of the Government. We are committed to the cause of Human Development.

I compliment the United Nations Development Programme under Planning Commission for collaborating with the State Government in preparation of the District Human Development Report, which provides an objective, in-depth analysis of the present status of various aspects of human welfare in the district. I also compliment the GSIDS, General Administrative Department (Planning) for undertaking this project.

I am sure, the comprehensive document, so meticulously prepared, providing a realistic assessment of the current status of the district and will serve as a guide for future planning in various fields which leads towards inclusive development of the people of the district.

I appreciate the endeavor.

(Jayantibhai Kavadiya)

MESSAGE

Human Development is a development paradigm which is beyond mere rise or fall of national incomes. It is about creating an environment where people can develop their full potential and lead productive, creative lives in accordance with their needs and interests. People are the real wealth of nation. Development is thus about expanding the choices people have to lead lives that they value.

The District Human Development Report is a Document which gives the present status of Human Development in different talukas of the District. Human Development requires focus on the basic as well as crucial indicators of Human Development. Thus this report has highlighted three important pillars which are: Education, Health and Livelihood. The data provided by the district & department offices has been used. The district authorities may update the data as required.

I commend the efforts put in by stakeholders in preparing this publication and hope that this will be useful to all the state & district level officials, policy makers and planners in working towards improving Human Development scenario of the District.

(S. Aparna)
Principal Secretary (Planning) and
Chairperson, GSIDS

Dinesh Patel
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PREFACE Date :


It is imperative that 'people' be at the center of the development of the nation. It is inappropriate to presume that economic growth directly results in overall development of the nation and its people. Such an approach assumes that trickle down power of the market forces will lead to the spread of economic benefits equally at the bottom of the pyramid and end poverty. More often it is observed that there is hardly any direct correlation between increased GDP and enhanced standard of living of the common man. The core of democratization is in people-centered models. The ultimate objective of any Government is to promote an environment, which supports the development of people; so that they can lead productive and creative lives and make informed choices according to their needs and interests. This is commonly understood as the concept of Human Development.

Since 1990 UNDP has been publishing Human Development Report (HDR) with people centric themes. The purpose is bringing about development of the people, by the people, and for the people, and emphasizing that the goals of development are choices and freedoms. Each Report focuses on a highly topical theme in the current development debate, providing pathbreaking analysis and policy recommendations. By the year November 2010, over the world, more than 600 regional, national and sub-national reports have been published so far in over 140 countries. This demonstrates that the Reports' messages and the tools to implement them have been embraced by people around the world.

Sequentially Gujarat Social Infrastructure Development Society (GSIDS) was established in 2007 with a more specific objective of raising Human Development Index of the State. These interventions have been highly successful in advocating and bringing focus on human development. In its effort to integrate human development throughout the Planning process, a special department has been created in 2007, which is one of its kind in the country. However, as it is important to catch the picture of human development at micro level, the preparation of DHDR's has become a vital exercise. Hence in 2008 under SSPHD, Gujarat initiated preparation of DHDR's.

Last few years, the state is making an attempt to increase the Human Development Index by increasing the provision of social sectors like Health, Education, Water Supply, Sanitation, Housing, Women and Child Development, Welfare of Backward class etc and started new schemes/programs. The DHDR addresses the issue of strategy formulation to bring about human development at district and taluka level and marks the beginning of the process of human development. The Porbandar DHDR tries to see the status of human development attainment and key human development challenges faced with a special focus on efficiency of delivery systems. The Porbandar DHDR is hoped to become an important reference document for integrated district planning in future. The report mainly focuses on Education, Health, Livelihood and Poverty. It is expected to effectively assist district planning committees and Government line departments in directing adequate public resources towards priority areas and sectors of persisting backwardness within district through a further preparation of District Human Development Plan.

April 2016
Porbandar


Dinesh Patel
District Collector
Porbandar



FOREWORD

The Human Development approach arose in part as a result of growing criticism to the leading development approach, which presumed a close link between national economic growth and the expansion of individual human choices. As of 1990, the human development concept was applied to a systematic study of global themes, as published in the yearly Global Human Development Reports under the auspice of the UNDP.

The Human Development story of India is unique in its kind. India initiated Human Development issues during 8th Five Year Plan (1992-97). In order to integrate Human Development into state planning in India the preparation of reports at state level has been started. Now-a-days the Gujarat State is on the fast track of development. Planning Commission-Government of India and UNDP had partnered Strengthening State Plan for Human Development (SSPHD) Programme, under which the Government of Gujarat had initiated the process of integrating Human Development in planning and policy documents.

Human Development is increasingly becoming an area of concern and priority is given to development a strategy which conceptually goes beyond per capita incomes as a measure of development. The preparation of DHDR (District Human Development Report) marks the beginning of the process whereby people are mobilized and actively participate in the developmental process.

The DHDR is expected to be an important document for formulating the District Human Development Plan. The report has incorporated the status of Human Development in different talukas of Porbandar District. The report depicts the present status of the district with available information for various indicators of Education, Health, Nutrition and Livelihood.

I hope this report will form a milestone in the overall planning and development of the district. DHDR will also be very useful to concerned District level Officials, policy makers, decision makers and NGOs.

C.P. Nema,
District Development Officer,
Porbandar

ACKNOWLEDGEMENTS

The Porbandar DHDR is prepared under the guidance of Gujarat Social Infrastructure Development Society (GSIDS) and General Administration Department (Planning), Government of Gujarat, which provided Shri Jairambhai Patel Institute of Business Management, Gandhinagar, an opportunity to carry out the comprehensive project. We heartily express our deep sense of gratitude to the Ms. S. Aparna, Principal Secretary (planning) and Chairperson –GSIDS, General Administration Department (Planning), Government of Gujarat and Shri K.D. Vashi, Director and Member Secretary, Gujarat Social Infrastructure Development Society (GSIDS) for assigning us and our organization such an important project.

We are highly indebted to Shri D.G. Patel, Hon'ble Collector of Porbandar and his office staff for the support and guidance. We are thankful to Shri C.P.Nema, District Development Officer and his entire team for providing us necessary input support.

We candidly acknowledge the timely assistance received from the officers of line departments of Porbandar district administration, executives of Directorate of Human Development and Directorate of Economics and Statistics and representatives of other departments of Government of Gujarat.

We are extremely expressing our appreciation to Shri J.A.Nanavati, District Planning Officer, SPAC & SPA at district and Ms. Tejal, Parmar, SPAC – GSIDS, who have always been provided us with necessary support round the clock, without their helping hand, this report would not have seen the light of the day.

We wish this sincere effort will contribute towards insights into the 'human development' in Porbandar district and facilitate in strategic planning for further development of the district.

Dr. S. O. Junare
**(Director-SJPI-
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EXECUTIVE SUMMARY

Introduction

The concept of the Human Development was adopted for the first time by UNDP in 1990. Since then, countries all over the World have significantly improved their Human Development status. The state Government has also given high priority to attain satisfactory levels of Human Development along with the Economic Growth. With the aim to rise the Human Development Index (HDI), the State Government has taken into account numerous problems faced by the people residing in different geographical areas across the State and is working towards addressing their deprived condition.

Porbandar district has been doing comparatively well when compared with few other districts. In the year 2011, it had overall literacy rate of 76.65% and had been ranked at 15th district when compared to other districts of Gujarat state. It is one of the only districts in the state in which the sex ratio has increased in the year 2011 when compared to 2001. It has been ranked 9th in the sex ratio. In case of child sex ratio it has been ranked 13th when compared to other districts of the state.

Literacy and Education

Status of literacy in Porbandar district has increased in 2011 when compared to 2001. The gender gap and the regional gap both have been reduced in the district. In all the 3 talukas of the district the rural-urban literacy gap has reduced in 2011 when compared to 2001. Over the last 4 years the percentage of females who are clearing the Neo-literate examination in the district is high when compared to men.

With respect to school education and infrastructure, there has been an increase in the number of schools over the last 5 years. Majority of the class room are in good condition and the amenities like electricity, computer lab, playground, Girls toilet, water facility are properly available at majority of the schools in the district.

The number of teachers in the schools has increased and the female ratios of teachers are on the higher side when compared to male counterparts. The percentage of postgraduate teachers in the schools has increased over the last few years. The total enrollment of boys and girls in

the district has reduced. Over the last 6 years the transition rate has increased marginally and thus the retention rate has also increased very marginally.

There are various schemes which have been specially provided to the students of socially and financially backward family so that systematic education can be provided to all the classes of the society.

Health

In the year 2011, it was noted that number of SC, PHCs and CHCs were more than the required benchmark rate. Populations served per allopathic institutions were more in urban areas compared to rural areas. Hospital infrastructure with adequate number of beds provided healthcare services to the residents of Porbandar. Removal of dearth of Medical and Paramedical staff would assist in providing quality services. Porbandar has been declared 'Falaria free' because of round the clock effort of Health department. Cases of Chikungunya and Dengue are now under control. Porbandar district outperforms in terms of more than 99% institutional deliveries cases. Routine immunization of children at district level is carried out regularly. System of school health programme has boosted, which helps in indentifying critical diseases, its treatment, referral and super specialty treatment if any, at early stage. More than 90% children are of normal weight in Porbandar district. District may be equipped with Ayurvedic and Homeopathic hospitals for providing diversified healthcare facilities. Ankur project which fights against the fatal problems of malnourishment or undernourishment may be continued further. Awareness regarding cleanliness of surroundings will help the district to bring the cases of Dengue and Chikungunya to zero level. Children may be taught the lessons of importance of personal hygiene, cleanliness and balanced diet and incorporating milk as complete food in the diet, so that problems of skin disease and nourishment can be addressed before it props up.

Livelihood

Based on the latest data taluka-wise, the net cropped area is more than 30%. 70% land holding is more than 2 hectares. Cropping intensity is more than 200% for Porbandar taulka. Majority of the population is occupied in primary sector. Fish production has increased at a CAGR of 8.41% as the fishermen are involved in full-time fishing activity. Yield of Jowar, Bajara, Wheat, Gram, Groundnut, Palm, Mango, Chicku, Onion and Tomato are higher than State's yield. District is blessed with chemical and chlorine mineral deposits. Medium enterprises are

capable to generate 6.05 times of total investment. District has lot of potential to boost agro-processing units. There lies a huge scope in exports of value-added agro-products. Fishing sector and value-added, ancilliary fishing units may be encouraged. Encouragement of animal husbandry and milk cooperative societies will bring about a revolution in the dairy sector. Port facilities have huge scope for development, which will help the industries to improvise their supply chain management, by adopting proper cost cutting measures. Prawns farming have good potential. Tourism can be developed on a larger scale by promoting 'Porbandar district' for its unique festivals under the campaign of "Kushboo Gujarat Ki". Tourism development will spin multiple jobs such as hotels, guides, handicrafts, art and craft etc.

Poverty

In the year 2011-2012 Porbandar district was ranked 18th in the state on the factor of poverty. In the year 2014-2015 the percentage of BPL families in the district are 13% and 11% in very poor and poor families respectively. 18% of the BPL families average monthly income is less than 500. Around 6% of the BPL families in the district are houseless. 24% of the BPL families are staying in porbandar district without sanitation facility. On the grounds of food security, only 7% of BPL families are able to get enough food for the year.

In case of vulnerability the district has been affected by cyclone in 10 years. Thus various Disaster Risk Management programs and training has been continuously imparted by the concern department of the district.

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CHAPTER 1

INTRODUCTION



Chapter 1 Introduction

1.1 Background

There is no direct relation between Economic Growth Rate and Inclusive Growth of the Society as well as distribution of Per Capita Income cannot give real picture of variation existing between poor and rich. Therefore all the attempts are made to convert Economic Growth into Human Development. United Nations Development Program (UNDP) tries to remain ahead in forming aim-oriented policy of wide Human Welfare through Global Human Development Reports (HDRs). UNDP is a Global Development structure of United Nations. UNDP is a pioneer in preparing Human Development Reports. The Human Development Report published in 1990 can be first time considered, as a milestone for giving priority sequence to the countries.

As per the Human Development Index value shown in the report of the global Human Development Report -2014 (HDR) published by UNDP, total 187 countries have been given ranking; accordingly India is at the Rank of 135th position.

In this reference, social sector of the state like Health, Education, Women and Child Development, Sanitation etc are key sectors for Human Development. Human Development Index is a consolidated index of 3 indicators consisting of

1. Life Expectancy at Birth
2. Literacy Rate
3. Per Capita Income,

Equal weightage has been given to all the 3 indicators

India Human Development Report – 2011 published by Planning Commission of the Government of India shows that, during last decade there is 21 percent increase in Human Development Index of India. As per the India Human Development Report published by the planning commission, Government of India, while comparing Human development Index value of 10 bigger states of India with Gujarat, state has been ranked at 6th during the years 1991, 2001 and 2011.

In order to strengthen the Human Development approach Gujarat Government carried out the work of preparing Human Development Report of District having the different diversities.

1.2 Objectives

The basic objectives of District Human Development Report – Porbandar is

1. To understand the present state of human development through major indicators at the district level and at the inter-taluka level.

2. To study the major challenges regarding human development in the district through SWOC analysis.
3. Discover the gaps between the developed and undeveloped talukas of the district.
4. Identify the constraints faced in translating the developmental programs into action plans.
5. To suggest appropriate road map for development of district.

1.3 Methodology

Given the availability of secondary data required for analyzing the human development in Porbandar, the inter taluka comparisons of socio-economic variables has been applied. The situation of human development across talukas (wherever possible) has been studied with reference to socioeconomic variables. The preparation of DHDR Porbandar done in a participatory manner involving concerned line departments of district administration, NGOs, academia, women's groups and people's representatives. The DHDR Porbandar is based on various data sources. The governmental as well as nongovernmental data sources have been consulted. The governmental sources include the departments such as agriculture, animal husbandry, irrigation, health, education, rural development, and so on. The data were also collected from the concerned branches of District Panchayat and Taluka Panchayats. The published as well as unpublished data and reports of Directorate of Economics and Statistics have been used. The nongovernmental database includes concerned research reports and information from NGOs. District Statistical Outline was a major source of comprehending taluka specific details. Exploratory design of research was adopted in the study.

1.4 Structure of the Report

For better understanding the report has been divided into five chapters as under

Chapter 1 Introduction

It consists of the basic overview of Porbandar District including the history, physical characteristics, administrative setup and demographic features. Basically the introduction chapter focuses on the demographic features like population, SC and ST population, drinking water resources, lightning facilities, sanitary facilities etc.,

Chapter 2 Literacy and Education

This chapter focuses on the literacy rate of female and male in Gujarat and in district. It further focuses on the education system of the district with various dimensions like number of school,

number of teachers, enrollment of various standards for boys and girls, drop out rate, qualification of teachers and the amenities provided at the schools.

Chapter 3 Health

This chapter deals with the health care scenario in Porbandar District. It studies various infrastructures under the health like number of Sub Centers, Primary Health Centers, Community Health Centers, various collages etc. It tries to study various other parameters related to health like Crude birth rate, Crude death rate, patients treated in hospitals, number of doctors and nurses, performance of ANC registration, institutional delivery etc.

Chapter 4 Livelihood

This chapter mainly focuses on the agricultural data, livestock and the data from small and medium enterprise. This chapter focuses on various factors like land use classification, cropping intensity, operational holders accordingly to size and social groups, production and yield of fruits, vegetables and food crops, work participation rate, Total livestock and poultry, investment and employment in SMEs, employment in fishing industry, employment in tourism industry etc.

Chapter 5 Poverty, Food security and Vulnerability

Analyse the aspects of social welfare services, crime statistics, rural development and co-operation, transportation, banking, public finance etc.

1.5 Historical Overview

Porbandar, the birthplace of Mahatma Gandhi is situated at the end of Saurashtra (Gujarat State) and is a picturesque seaport on the Arabian Sea. To commemorate the birth of Gandhiji a 79 ft high imposing building has been built in the lane where Bapu (as Gandhiji is known) was born in 1869. The prime attraction is the Kirti Mandir. It is a three storied ancestral house of Gandhiji where in the exact place where Putlibai, Gandhiji's mother, had given birth to Gandhi, is marked with a 'swastik'. A narrow wooden staircase leads the visitor to the upper storey, in particular Gandhiji's reading room

Behind Kirti Mandir is Navi Khadi, where Kasturba, Gandhiji's wife was born. The new building adjoining Kirti Mandir, houses a Gandhian Library, a prayer hall, a nursery and a steeple decorated with episodes from Gandhiji's life.

The name Porbandar itself conjures a picture of massive port, a city connected with the two names – **Sudama**, the childhood friend of Lord Krishna and **Mahatma Gandhi**, the father of Nation. This impressive city was first called as Sudamapuri with Sanskrit name of PAURVELAKUL. The Port City dates back to AD 1045 and records state that the city was founded on Shravan Poornima (Raksha Bandhan). Till to date the Kharvas (Fishermen Community) first offers their prayers to their reigning deity, Paurva Mataji (The Port Goddess) before beginning their fishing in New Year from Raksha Bandhan day. The present port of Porbandar which is more than thousand years old is one of the oldest ports in Western India, The actual habited area was called Sudamapuri, while PAURVELAKUL was the port established by for trading with South Africa, Middle East and other places. The name of Sudamapuri was used along with Porbandar by the Indian Railways for the Railway Station of Porbandar till as late as 1960.

Sudamapuri, as most of the Rajasthanis call this City, is very important in the life of the Kshatriyas of Rajasthan who believe that Sudama and Mirabai were of the same clan and so even today most Rajasthanis come to take the blessing of Sudama after their marriage.

Sudamapuri or Porbandar is situated at a distance of 105 km. from Junagadh. “Pare” means small population. The population settled on Oceanside is also known as pare Porbandar is famous as birth place of Gandhiji and Sudama. Sudama was special friend of lord Krishna. They both stayed together at sandipni ashram. Sudamam had taken “Ayachalavarat” under which he will not ask for anything from anybody. So he has never asked for anything from lord Krishna.

1.6 Location

It is Located at Latitude-21.6, Longitude-69.6. Porbandar District is sharing border with Jamnagar District to the North, Junagadh District to the East. This district forms a part of Kathiawar peninsula located in the western part of Gujarat. The terrain of the district is flat level plain except for a small hilly tract in the North-Eastern part covering Ranavav and Kutiyana talukas. The slope gradient of the district is from north-west to south-west in which direction all rivers flows. The elevation varies between 5 meters to 630 meters from mean sea level. Among the hill ranges, Barda hill is the prominent one and attains the maximum altitude of 630 meters. It is a coastal district and is sharing border with Arabian sea. Bhadhar, Ojat, Minsor and Vartu are the main rivers of the district.

The transportation network in this district is well developed. Towns of the district are interlinked with each other and other parts of the district by national and state highways, other roads and railways. Porbandar is an intermediate port, handling foreign trade. Porbandar district is connected by roads through National Highway (NH) 8B and 8E (EXT) with Rajkot (187 KM) and Jamnagar (275 Km). This district is connected with Rajkot, Surat, Vadodra, Surendranagar, Jamnagar, Ahmedabad, Mumbai and Delhi by western railway. Four broad gauge rail lines are present in Ranavav, Rana Bordi, Sakhpur and Tarsi. The district has a 106 Km long maritime border facing the Arabian Sea with an all weather port at porbandar.

Map 1.1 Showing Porbandar Location



1.7 Administrative Set up

Gujarat panchayat act is in force in Gujarat subject to 73rd amendment in the constitution of India, under which management and control of panchyati raj is done.

District Panchayat

Control over activities of district panchayats, taluka panchayats and gram panchayats, to provide assistance. Management and control on activities transferred from revenue, education cooperation, irrigation, cattle breeding, agriculture by state government.

Porbandar district is divided into 3 talukas viz. Porbandar, Ranavav and Kutiyana. Table 1.1 and table 1.2 shows the basic units of administration and number of villages in each taluka respectively

Table 1.1 Units of Administration

Sr. No.	Heads	Nos.
1	Area (Sq. Kms.)	2316
2	No. of Talukas	3
3	Prants	2
4	Municipal Corporations	-
5	Municipal Towns	6
6	Panchayats	153
6.1	<i>Taluka Panchayats</i>	3
6.2	<i>Gram Panchayats</i>	150
7	Villages	192
7.1	Inhabited	192
7.2	Unhabited	-

(Source – Registrar General of India)

The district of Porbandar is divided into 3 talukas namely Porbandar, Ranavav and Kutiyana. The district has 6 Municipal towns and total 192 villages under 3 talukas. These villages have 150 Gram Panchayats.

Table 1.2 Number of Villages in each taluka

Taluka	Villages	Village panchayat
Porbandar	79	73
Ranavav	64	30
Kutiyana	49	46

(Source - District Statistical Report 2013-2014, IG Directory)

These 3 talukas consist of 192 villages and 179 Village panchayats and 6 municipal towns. Porbandar taluka has the highest number of villages compared to other two talukas

1.8 Climate and Physical Characteristics

The geology of Porbandar district is mainly composed of alluvium, brown sand etc, deccan traps, Inter-trappean beds. The alluvium soil found in the plain areas of the district is known as 'Ghed' and these are fertile soil which supports good crops of the district. The black soil is also found in Kutiyana and Ranavav talukas. The district has good deposits of limestone and chalk clay. Some patches of forests are found in the district.

The district has a total of 9.68% of total wetland areas. Total 226 wetlands are mapped including 95 small wetlands (< 2.25 ha) with 22199 ha area. Inland wetlands contribute 27.3% of the total wetland area and coastal wetlands contribute 72.7% of the total wetland area. Major wetland categories of the district are Lagoons, Rivers/ streams, Reservoirs and Sand/beach.

1.9 Basic Demographics

Demographics focus on the total population, SC population, ST population, child population. All these 4 parameters are seen from decadal change as per 2011 census and sex ratio.

Table 1.3 Various Demographic Factors with District Ranking

Demographic Features	Porbandar 2001	Rank 2001	Porbandar 2011	Rank 2011
Population density per sq km	234	16	255	17
Percent to total population of state	1.06	24	0.97	25
Over all Literacy Rate	68.62	12	76.63	15
Male Literacy	78.36	-	84.56	16
Female Literacy	58.42	-	68.32	13
Sex Ratio	946	09	947	09
Child Sex Ratio	898	13	984	13

(Source - Census Gujarat, Salient features of census 2011)

Above table tries to show the ranking of Porbandar district in various demographic factors compared to other district in 2001 and in 2011 census. The rank of Porbandar district in the year 2001 for population density per sq km was 16 which reduced to 17 in the year 2011. The rank of the district regarding overall literacy was 12 in the year 2001 which reduced to 15 in the year 2011. The literacy rate has increased from 68.62% to 76.63% from year 2001 to 2011 respectively. Though the literacy rate has increased but the rank for overall literacy rate has also reduced. Regarding the sex ratio and child sex ratio in both the years Porbandar district was able to maintain a consistent rank of 9 and 13 respectively with the minor changes in both the parameters.

1.9.1 Total Population

The total population of the state, district and taluka has been shown in the table below.

Table 1.4 Total Population by Residence and Gender

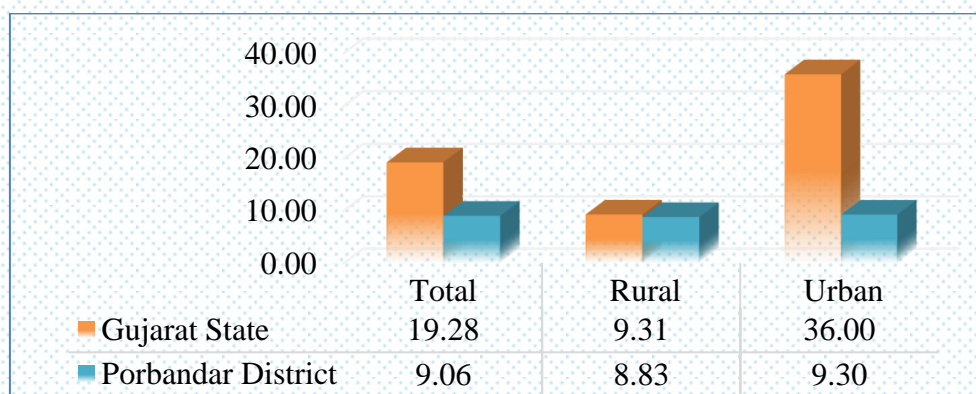
State/ District/ Taluka	P/M/F	Total Population						Sex Ratio	
		Total		Rural		Urban		2001	2011
		2001	2011	2001	2011	2001	2011		
State	P	50671017	60439692	31740767	34694609	18930250	25745083	920	919
	M	26385577	31491260	16317771	17799159	10067806	13692101		
	F	24285140	28948432	15422996	16895450	8862444	12052982		
District	P	536835	585449	275460	299775	261375	285674	946	947
	M	275821	300209	141068	153260	134753	146989		
	F	261014	285240	134392	146515	126622	138725		
Porbandar	P	350322	384660	152940	167457	197382	217203	947	943
	M	179973	197622	78149	85688	101824	111934		
	F	170349	187038	74791	81769	95558	105269		
Ranavav	P	103770	114568	56887	62678	46883	51890	945	957
	M	53346	58475	29192	31911	24154	26564		
	F	50424	56093	27695	30767	22729	25326		
Kutiyana	P	82743	86221	65633	69640	17110	16581	947	953
	M	42502	44112	33727	35661	8775	8451		
	F	40241	42109	31906	33979	8335	8130		

(Source - Registrar General of India)

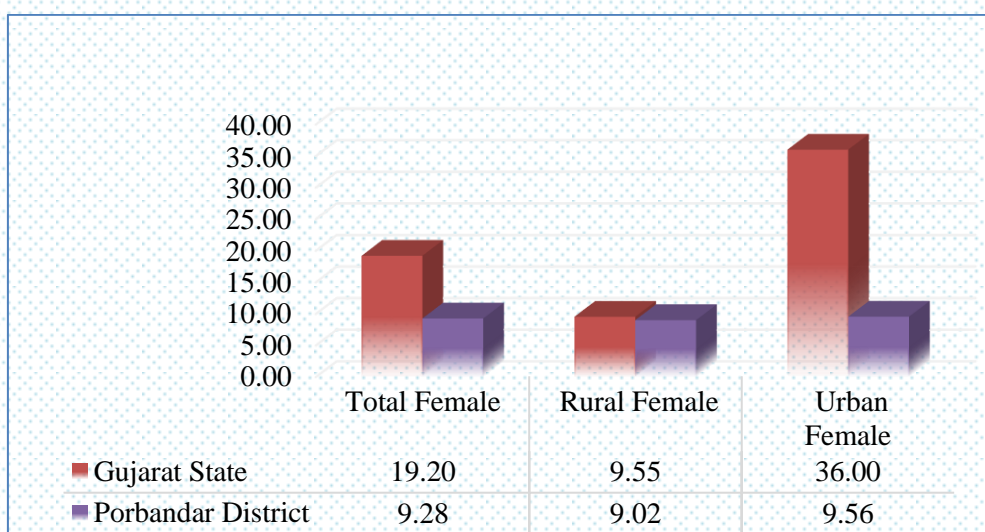
Porbandar district was ranked at 25th state according to percent to total population of the state in the year 2011 (0.97%). In the previous census i.e. in 2001 the district was at 24th position with 1.06 % of the total population of the state. The change in total population in terms of CAGR is highest in Gujarat state. It is at 1.78 CAGR and on the second position it is the population of Ranavav at 0.99% CAGR. For the district of Porbandar it is 0.87% CAGR.

The decadal change of the population from 2001 to 2011 census has been reflected in the chart below. It tries to compare the decadal change in Gujarat with that of Porbandar District

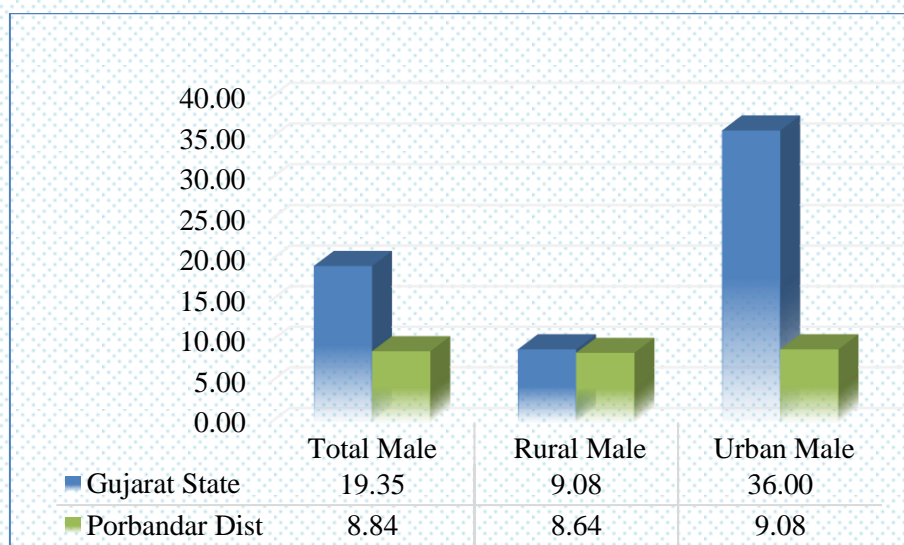
Figure 1.1 Decadal change (in Percentage) in Total Population



(Source - Registrar General of India)

Figure 1.2 Decadal change (In percentage) in Female Population

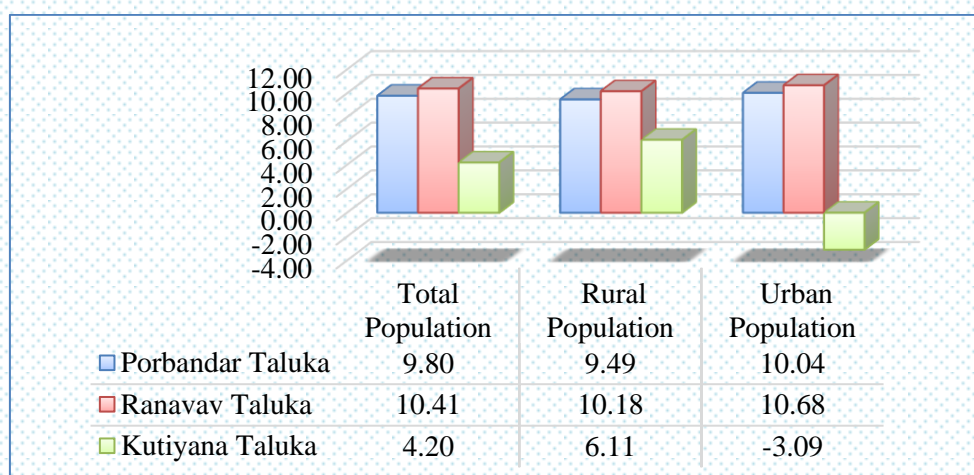
(Source - Registrar General of India)

Figure 1.3 Decadal change (In percentage) in Male Population

(Source - Registrar General of India)

The decadal change in the urban area of Porbandar district is low when compared to decadal change of Gujarat state. The same is reflected in the male and female population decadal change. There is no drastic difference in the rural total population between the state and district. Over the decadal change in the total rural population in the state was 9.31% and in the district was 8.83% which is less than the state. The same type of scenario is seen in the female and male population of the district and the state

The below figure mentions of the decadal change in various talukas of the Porbandar district.

Figure 1.4 Talukawise decadal change in Percentage

(Source - Registrar General of India)

There is a positive decadal change in Porbandar and Ranavav taluka but a negative urban decadal change in the Kutiyana taluka. In Porbandar taluka the urban decadal change is high when compared to rural decadal change. In urban it is 10.04% and in rural it is 9.49%. In Ranavav taluka the decadal change in urban and rural is almost same. Urban decadal change is 10.68% and in rural it is 10.18% which is marginally low when compared to urban decadal change. In Kutiyana taluka there is a positive decadal change in rural area but in urban area it is in negative. Thus there has been reduction in the urban population of Kutiyana taluka

The below table shows the sex ratio of state, district and 3 talukas of porbandar district.

Table 1.5 Sex Ratio of State/District/Taluka

Sr No	State/District/Taluka	Sex Ratio	
		2001	2011
1	Gujarat	920	919
2	Porbandar District	946	947
3	Porbandar Taluka	947	943
4	Ranavav Taluka	945	957
5	Kutiyana Taluka	947	953

(Source - Registrar General of India)

District sex ratio is on the higher side when compared to the state. There is an increase in the sex ratio of 2011 when compared to 2001 in Ranavav and Kutiyana talukas by 1.27% and 0.63% respectively. There is a marginal decrease in the sex ratio of Porbandar taluka. Porbandar district has a very minor change in the sex ratio over the decade. Porbandar district has been ranked 9th in 2001 and in 2011 when compared with other district of the states under the parameter of sex ratio.

The below table shows the urbanization (number of people staying in urban areas) in terms of percentage.

Table 1.6 Urbanization in Percentage of the Total Population

Sr No	State/District/Taluka	Urbanization in % of total population	
		2001	2011
1	Gujarat	37.36	42.6
2	Porbandar District	48.69	48.8
3	Porbandar Taluka	56.34	56.47
4	Ranavav Taluka	45.18	45.29
5	Kutiyana Taluka	20.68	19.23

(Source - Registrar General of India)

There is a marginal increase in the urban population of porbandar district. Porbandar district has higher rate of urbanization as compared to Gujarat state. In Kutiyana taluka there is a marginal decrease of urban population. In Porbandar and Ranavav taluka there is a marginal increase in urbanization over the decade.

1.9.2 Child Population

Table 1.7 Child Population (0-6 years) by Residence and Gender

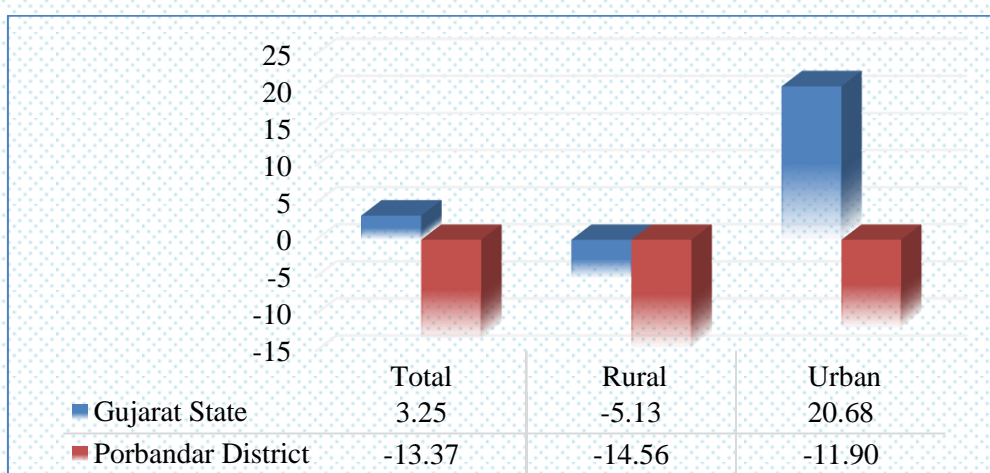
State/District/ Taluka	P/M/F	Child Population (0-6 years)					
		Total		Rural		Urban	
		2001	2011	2001	2011	2001	2011
State	P	7532404	7777262	5085941	4824903	2446463	2952359
	M	4000148	4115384	2668527	2521455	1331621	1593929
	F	3532256	3661878	2417414	2303448	1114842	1358430
District	P	76099	65926	41886	35786	34213	30140
	M	40102	34648	21992	18750	18110	15898
	F	35997	31278	19894	17036	16103	14242
Porbandar	P	48105	41916	23499	19952	24606	21964
	M	25299	22090	12202	10445	13097	11645
	F	22806	19826	11297	9507	11509	10139
Ranavav	P	16204	14288	8915	7935	7289	6353
	M	8573	7505	4744	4190	3829	3315
	F	7631	6783	4171	3745	3460	3038
Kutiyana	P	11790	9722	9472	7899	2318	1823
	M	6230	5053	5046	4115	1184	938
	F	5560	4669	4426	3784	1134	885

(Source - Registrar General of India)

The growth of the population in the age of 0-6 year is positive in Gujarat state. The total population of Porbandar District and its talukas is reducing in the age of 0-6 years. The male and female population of child is also reducing in all the 3 talukas of the district. The reducing trend is seen in the urban and rural areas. Male and Female population in the rural area of the state is reducing and in the urban area it is increasing.

Child population between the ages of 0-6 years is considered by census. Below mentioned chart shows the percentage of decadal change in child population in Gujarat state and in Porbandar district.

Figure 1.5 Decadal Changes (In Percentage) in Child Population



(Source - Registrar General of India)

There is a positive change by 3.25% in the total child population and by 20% in the urban areas of Gujarat state. The rural area of Gujarat state has a negative change i.e. decrease in the child population. In the last decade, child population has decreased in Porbandar district.

Below table show a change in the sex ratio in the state, district and in various talukas.

Table 1.8 Sex ratio of Child Population (0-6 years)

Sr No	State/District/Taluka	Sex Ratio	
		2001	2011
1	Gujarat	883	890
2	Porbandar District	898	894
3	Porbandar Taluka	901	898
4	Ranavav Taluka	890	904
5	Kutiyana Taluka	892	924

(Source - Registrar General of India)

The change in the sex ratio from 2001 to 2011 census in the Gujarat state has been positive. There is a marginal decrease in the sex ratio in the district. The rank of the district was 13 in 2011 when compared with other districts on the factor of the sex ratio of 0-6 years. In the year 2001 the district was at the same rank. It has not seen any change in the ranking over the decade. There is a marginal decrease in the sex ratio in Porbandar taluka and a phenomenal increase in the sex ratio in Kutiyana taluka from 892 to 924. For increasing the sex ratio the girl child should be given importance and some incentives should be given to the family with the girl child and there has to be some amount given from the ancestral land or money to the girl child.

1.9.3 SC population

Table 1.9 SC population by Residence and Gender

State/ District/ Taluka	P/M/F	Scheduled Caste Population					
		Total		Rural		Urban	
		2001	2011	2001	2011	2001	2011
State	P	3592715	4074447	2180441	2281573	1412274	1792874
	M	1866283	2110331	1127423	1176107	738860	924224
	F	1726432	1964116	1053018	1105466	673414	858650
District	P	48233	51830	26673	29068	21560	22762
	M	24825	26607	13731	14955	11094	11652
	F	23408	25223	12942	14113	10466	11110
Porbandar	P	27863	30492	14094	15533	13769	14959
	M	14236	15623	7222	8029	7014	7594
	F	13627	14869	6872	7504	6755	7365
Ranavav	P	10233	10696	4041	4639	6192	6057
	M	5346	5529	2102	2367	3244	3162
	F	4887	5167	1939	2272	2948	2895
Kutiyana	P	10137	10642	8538	8896	1599	1746
	M	5243	5455	4407	4559	836	896
	F	4894	5187	4131	4337	763	850

(Source - Registrar General of India)

The above table just shows talukawise and genderwise SC population. The same is converted to percentage of decadal change and percentage of SC population to total population so that proper interpretation can be done.

The below table shows the percentage of decadal change and percentage of SC population to total population. The information is for state, district and talukas.

Table 1.10 SC population in Percentage of decadal change and Percentage of SC Population in Total Population

Sr No	State/District/Taluka	% of decadal change			% of SC pop to total pop		
		Total	Rural	Urban	Total	Rural	Urban
1	Gujarat	13.41	4.60	26.90	6.74	6.58	6.96
2	Porbandar District	7.46	8.98	5.58	8.85	9.70	7.97
3	Porbandar Taluka	9.44	10.21	8.64	7.93	9.28	6.89
4	Ranavav Taluka	4.52	14.80	-2.18	9.43	7.40	11.67
5	Kutiyana Taluka	4.98	4.19	9.19	12.34	12.77	10.53

(Source - Registrar General of India)

The percentage of SC population in the district is higher than the percentage in Gujarat state. The decadal change in SC population is higher in the Gujarat state when compared to Porbandar district but the percentage of SC population in Porbandar district (8.85%) is higher than the Gujarat State (6.74 %).

The below mentioned table shows sex ratio of SC population.

Table 1.11 Sex ratio of SC population

Sr. No	State/District/Taluka	Sex Ratio
1	Gujarat	931
2	Porbandar District	948
3	Porbandar Taluka	952
4	Ranavav Taluka	935
5	Kutiyana Taluka	951

(Source - Registrar General of India)

The sex ratio of Porbandar district and its talukas is higher than the sex ratio of Gujarat as per the census 2011.

1.9.4 ST Population

Table 1.12 ST Population by Residence and Gender

State/ District/ Taluka	P/M/F	Scheduled Tribe Population					
		Total		Rural		Urban	
		2001	2011	2001	2011	2001	2011
State	P	7481160	8917174	6866637	8021848	614523	895326
	M	3790117	4501389	3471002	4042691	319115	458698
	F	3691043	4415785	3395635	3979157	295408	436628
District	P	6456	13039	5133	9945	1323	3094
	M	3380	6730	2684	5146	696	1584
	F	3076	6309	2449	4799	627	1510
Porbandar	P	2040	6483	862	4405	1178	2078
	M	1069	3369	464	2310	605	1059
	F	971	3114	398	2095	573	1019
Ranavav	P	4303	6118	4186	5132	117	986
	M	2253	3132	2176	2625	77	507
	F	2050	2986	2010	2507	40	479
Kutiyana	P	113	438	85	408	28	30
	M	58	229	44	211	14	18
	F	55	209	41	197	14	12

(Source - Registrar General of India)

The above table just shows talukawise and genderwise ST population. In the next table the same is converted to percentage of decadal change and percentage of SC population to total population so that proper interpretation can be done.

Below mentioned table shows the percentage of decadal change and % of ST population to Total population. The said information is for state, district and various talukas of porbandar district.

Table 1.13 Percentage of ST Population in decadal change and Percentage of ST Population to Total Population

Sr No	State/District/Taluka	% of decadal change			% of ST pop to total pop		
		Total	Rural	Urban	Total	Rural	Urban
1	Gujarat	19.2	16.8	45.70	14.75	23.12	3.48
2	Porbandar District	101.97	93.75	133.90	2.23	3.32	1.08
3	Porbandar Taluka	217.79	411.00	76.40	1.69	2.63	0.96
4	Ranavav Taluka	42.18	22.6	665.80	5.34	8.19	1.90
5	Kutiyana Taluka	287.61	380.00	7.14	0.51	0.59	0.18

(Source - Registrar General of India)

The decadal change in the ST population of Gujarat state is comparatively low with that of Porbandar district but the percentage of ST population to total population is low in the district when compared to Gujarat state. The percentage of ST population with respect to total population in the Porbandar district is between 1-3%.

The table shows the sex ratio of Gujarat state, Porbandar district and 3 talukas

Table 1.14 Sex ratio of ST population

Sr. No	State/District/Taluka	Sex Ratio
1	Gujarat	981
2	Porbandar District	937
3	Porbandar Taluka	924
4	Ranavav Taluka	953
5	Kutiyana Taluka	913

(Source - Registrar General of India)

The sex ratio of ST population is less in the Porbandar district and in its talukas when compared to Gujarat state. The sex ratio of the district is at 937 and of the state is 981 and in the taluka the least is in Kutiyana followed by Porbandar and Ranavav has the highest sex ratio with 953

1.9.5 Electrification of Households

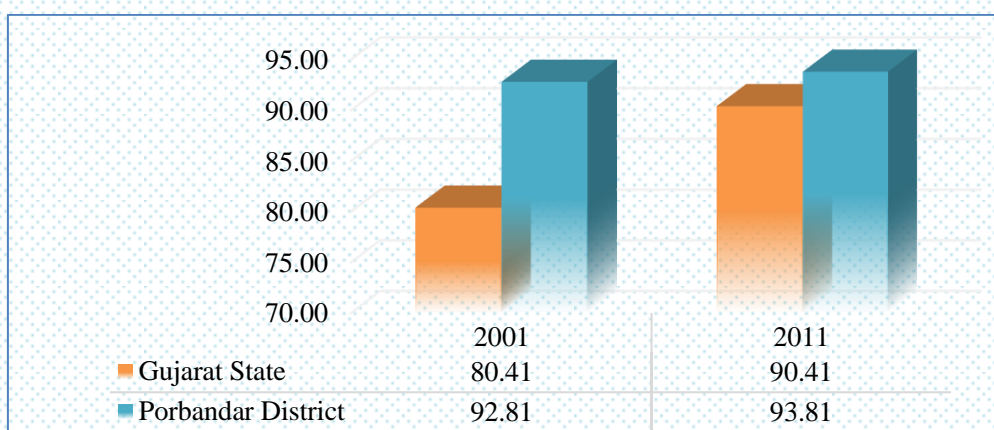
Table 1.15 Various Lighting Facilities (Percentage of HH)

Sr. No.	Source of Lighting	Porbandar (2001)	Gujarat (2001)	Porbandar (2011)	Gujarat (2011)
1	Electricity	92.81	80.41	93.81	90.41
2	Kerosen	6.43	18.10	5.18	8.08
3	Solar	0.34	0.24	0.34	0.13
4	Other Oil	0.06	0.15	0.13	0.21
5	Any Other Source	0.04	0.25	0.17	0.21
6	No Lighting	0.32	0.86	0.38	0.96

(Source- Registrar General of India)

The above table shows various sources of lighting. It is in percentage of Households (HH). The percentage of HH without lighting is less (0.06%) in the district when compared to Gujarat State (0.10%)

The below mentioned graph shows the percentage of electrification of households in 2001 and in 2011. The said data is of Gujarat state and of Porbandar district.

Figure 1.6 Electrification of HH in percentage

(Source- Registrar General of India)

The increase in electrification of HH in Gujarat state in a decade is almost by 10 %. The increase of electrified houses in the porbandar district is very negligible (1.00%) when compared to increase in the state. The percentage of electrification of HH in Porbandar district is higher when compared to Gujarat state. In district 93.81% of the HH are electrified and in the state it is 90.41%. Thus, the HH which are electrified in the district is higher by 3% when compared to Gujarat state.

1.9.6 Sources of Drinking water

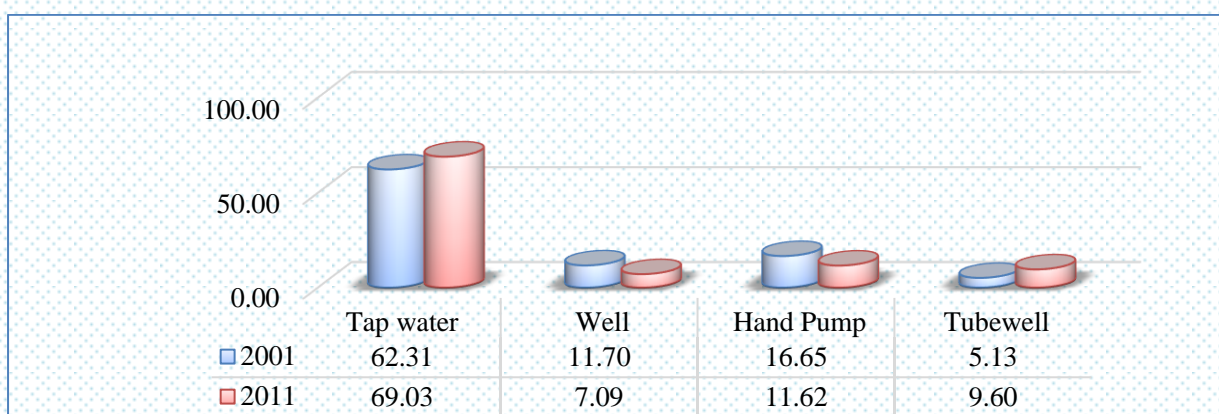
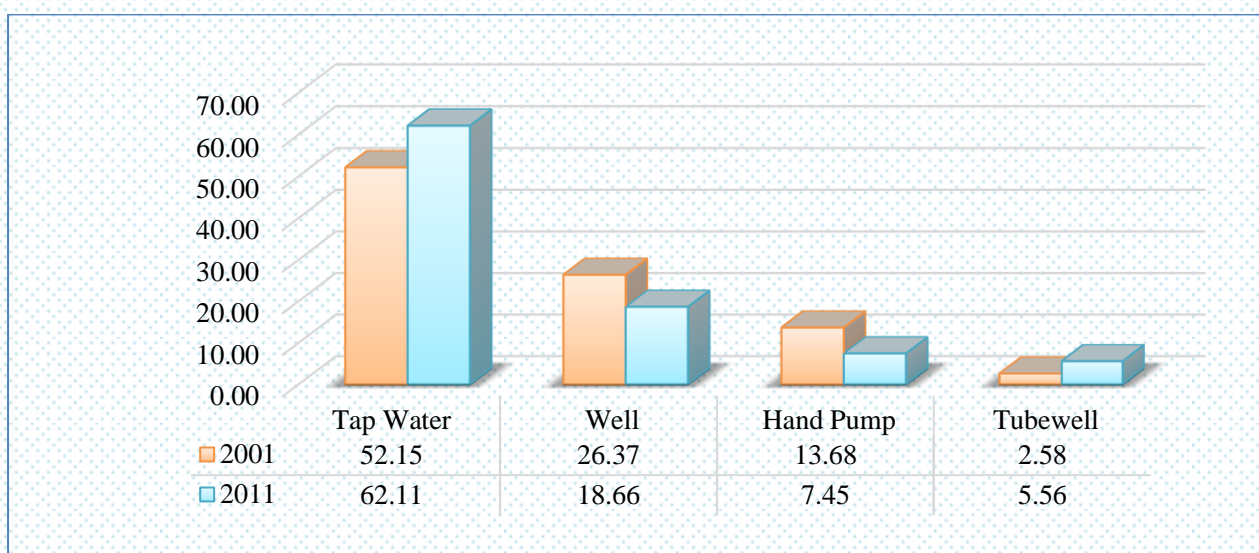
The major sources of drinking water are Tapwater, Well, Handpump and Tubewell. The below mentioned graphs shows the percentage of HH with these facilities in Gujarat state and Porbandar district.

Table 1.16 Percentage of HH with Various Sources of Drinking Water

Sr No.	Source of Drinking Water	Gujarat (2001)	Porbandar (2001)	Gujarat (2011)	Porbandar (2011)
1	Tap water	62.31	52.15	69.03	62.11
2	Well	11.70	26.37	7.09	18.66
3	Handpump	16.65	13.68	11.62	7.45
4	Tubewell/Borewell	5.13	2.58	9.60	5.56
5	Spring	0.18	0.02	0.09	0.02
6	River/Cannal	0.43	0.03	0.34	0.10
7	Tank/Pond/Lake	0.35	2.01	0.22	1.89
8	Other Sources	3.25	3.15	2.00	4.20

(Source- Registrar General of India)

The above table shows a positive trend in the major sources of Drinking water. There is an increase in the tapwater and decrease in other sources of drinking water which shows a positive effect of the government activities.

Figure 1.7 Sources of drinking water in Gujarat State (in Percentage)*(Source- Registrar General of India)***Figure 1.8 Sources of Drinking water in Porbandar District (In Percentage)***(Source- Registrar General of India)*

There is an increase of tapwater in the Household in Gujarat and Porbandar district. A substantial increase in the HH using tap water is seen in district (10%) when compared to Gujarat state (7%). In Porbandar district the percentage of HH having tap water in 2011 is less when compared to Gujarat state. Well as a source of drinking water in the district is 18.66% which when compared to the state is just 7.09% in the year 2011.

Below mentioned table shows the sources of drinking water talukawise.

Table 1.17 Talukawise Percentage of Household with Various Sources of Drinking Water

Sr. No	Sources of Drinking Water	Porbandar Taluka	Ranavav Taluka	Kutiyana Taluka	Porbandar Taluka	Ranavav Taluka	Kutiyana Taluka
		2001			2011		
1	Tap Water	73	80	97	90	80	100
2	Well	27	10	3	10	10	
3	Hand Pump		10			10	

(Source – Executive Engineer, PH works division, Porbandar)

In the above table Porbandar taluka has seen the highest positive change. In the year 2001 73% of households were having tap water facility which increased to 90% in the year 2011. Ranavav taluka had no changes in the decade. Kutiyana taluka in the year 2011 has 100% households with tap water facility.

1.9.7 Availability of bathroom and latrine within the house

Below mentioned table shows percentage of households having latrine facility in 2011

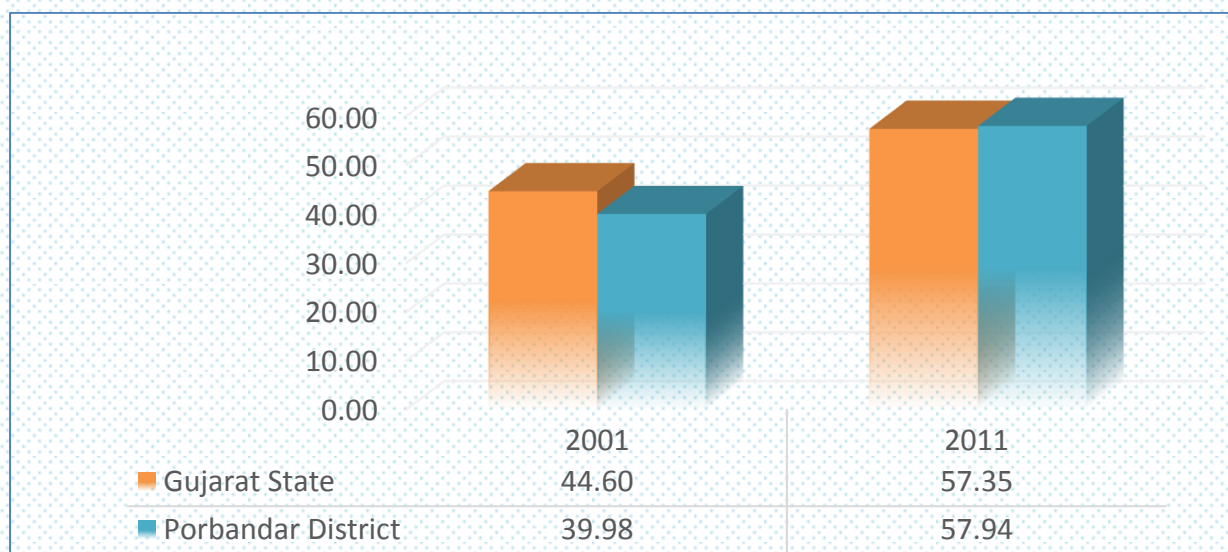
Table 1.18 Percentage of Households Having Latrine Facilities in the House

Area Name	T/R/U	% of HH having facility in the house	Pit Latrine		Flush/pour latrine connected to			Service Latrine	Night soil disposed into open drain	Num of HH not having latrine within Premises
			With Slab	Without slab	Piped Sewer	Septic tank	Other system			
Gujarat	Total	57.35	4.18	0.29	28.98	22.80	0.82	0.06	0.21	42.65
	Rural	33.04	5.92	0.40	3.85	21.65	1.05	0.06	0.11	66.96
	Urban	87.70	2.00	0.14	60.38	24.25	0.54	0.06	0.33	12.30
Porbandar	Total	57.94	14.27	0.24	5.85	36.56	0.68	0.04	0.30	42.06
	Rural	*76.00	20.24	0.39	1.18	16.48	0.79	0.03	0.04	60.85
	Urban	77.44	8.07	0.08	10.70	57.41	0.58	0.05	0.57	22.56

(Source – Registrar General of India)[=Till November 2015]*

In the above table the percentage of HH having latrine facility in the house in the district and the state is the same. 57% of the total population in the state and district has latrine facility within the house. In the district pit latrine with slab are 14% where as in the state it is only 4.18%. In Gujarat state piped sewer system is 28.98% of HH and in the district it is only 5.85%

The below mentioned chart shows the percentage of HH having the bathroom and latrine facility within the premises for Gujarat and Porbandar district. It tries to explain the increase over the decade.

Figure 1.9 Percentage of HH Having Bathroom and Latrine Facility Within Premises

(Source- Registrar General of India)

The number of HH with bathroom and latrine within the premises are almost equivalent in terms of percentage in Gujarat and Porbandar district in 2011. There is a phenomenal change in percentage of HH having these facilities in Porbandar district (17.96%) when compared to Gujarat state (12.75%).

1.10 SWOC Analysis

Strength

- The district is connected by roads, with the major cities of the state.
- Four broad gauge railway lines are present in the Porbandar District.
- The district is connected with the Arabian sea with an all weather port.
- The district has good deposits of limestone and chalk clay. Over 90% of the chalk is produced in the district.
- The sex ratio in the district is quite high (947) when compared with Gujarat state (919).
- The population of over the decade in the age group of 0-6 years has reduced in the Porbandar District and thus it indicates proper family planning by the population of the district.
- The electrification of households in percentage to total HH in the district is high when compared to the state.
- Porbandar is linked with Rajkot, Surendranagar and Jamnagar by 132 KV Line for power transmission.

Weakness

- The district has a total of only 9.68% of wetland areas.
- The sex ratio over the last decade in the age group of 0-6 years has reduced in the Porbandar taluka of the district.

Opportunities

- Percentage of Households having Latrine facility in the premises is 76% in the rural area.
- Porbandar is located on the banks of Arabian Sea thus it has a coastal advantage for trade. Export and Import opportunities are there for the industries of the area.

Threats

- The decadal change of the porbandar district of the rural area is less when compared to state rural.
- The decadal change in the urban population of Kutiyana taluka is in negative.



CHAPTER 2

EDUCATION



Chapter 2 Education

2.1 Introduction

It is necessary to lay emphasis on education for improving standard of living of the people of any nation. Due to education, other sectors like health, employment, child development, women's development etc are also developed. In view of multiple benefits of the education, the investment made in this sector, are having capacity of giving manifold compensation. Education not only improves the standard of living of people but also provides opportunities for progress. Individual opportunities of individual development and progress are not available to illiterate persons, as being available to literate persons.

Education is such infallible weapon which also transforms the world. Keeping the importance of education, the Gujarat Government has given priority to primary Education. Primary Education is the foundation of pyramid of education. It is the state government who gives free and compulsory education to all the children of 6 to 14 years age group. More emphasis is given on admission and retention schemes of Primary Education. In 2002-2003, a Vidya Laxmi Bond Scheme was started, for girls, initially in rural areas, but also extended to urban BPL (Below Poverty Line) families.

Apart from this, there have been improvements in physical infrastructure. The construction of classrooms has picked up, after having flagged in the second half of the 1990s. Under the total sanitation programme and a school sanitation programme, toilets have been constructed in upper primary schools, with a focus on girls. Several vidyasahayakas have been recruited, under the scheme having been introduced in 1998.

Only 5% of the Indian labour force in the age category of 20-24 has vocational skills. The National Sample Survey (NSS) 61st Round results show that among persons of age 15-29 years, only about 2 % are reported to have received formal vocational training and another 8 % reported to have received non-formal vocational training indicating that very few young person's actually enter the world of work with any kind of formal vocational training. Among the youth, most of those with formal training are in Kerala, Marashtra, Tamil Nadu, Himachal Pradesh and Gujarat.

While there is no denying these positives, including the idea of the knowledge consortium of Gujarat for higher education , for technical and higher education, one cannot avoid the sense that there is greater scope for the government to step back. Including agricultural universities, there are 21 state universities in Gujarat, 3 Central universities, 16 private universities and 6

institutes of national importance. The increase in enrolment in the school education imply that the demand for change will come, perhaps 10 years down the line, and drive a clear focus in government delivery, away from technical and higher education, towards school education. Subsidizing the poor and the disadvantaged through government financing is a different proposition altogether.

Key Points in Gujarat Education

- The number of enrollments in all the categories of the schools increased to 27,02,555 in the year 2013-2014.
- The total number of schools has reached to 10,537 including all the categories in the year 2013-2014, from which 6768 are in rural area and 3769 are in urban area.
- To meet the needs of the newly created schools, around 78,581 teachers are giving their services to the schools and students.
- Kanya Kelavani state-wide girl child education campaign has been launched to increase enrollment ratio and decrease drop out rates.
- Vidya Laxmi Yojana has been undertaken to achieve 100 per cent enrollment and retention of girls at the primary school level.
- Around 6,99,000 girls have been given Vidya Laxmi Bond in last five years.

The chapter tries to focus on literacy in Porbandar district, school infrastructure and amenities, staffing pattern, enrollment and transition rate, schemes and programmes in education, success stories and status of talukas pertaining to education.

2.2 Status of Literacy

The below mentioned table shows the status of literacy in percentage in Porbandar district.

Table 2.1 Status of Literacy (Percentage) in Porbandar District

P/M/F	2001				2011			
	Total	Rural	Urban	Regional Gap	Total	Rural	Urban	Regional Gap
Person	68.62	60.11	77.38	17.27	75.78	69.39	82.37	12.98
Male	78.36	71.31	85.56	14.25	83.45	78.61	88.43	9.82
Female	58.42	48.45	68.74	20.29	67.75	59.82	76	16.18
Gender Gap	19.94	22.86	16.82	-	16.24	19.33	12.94	-

(Source – Registrar General of India)

Table 2.2 Status of Literacy (Percentage) in Gujarat State

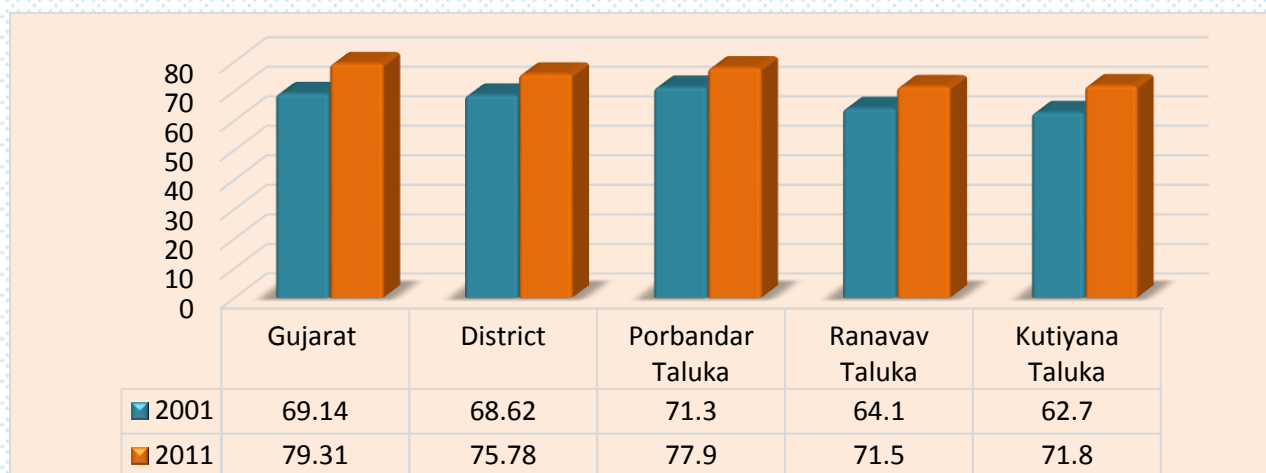
P/M/F	2001				2011			
	Total	Rural	Urban	Regional Gap	Total	Rural	Urban	Regional Gap
Person	69.14	61.29	81.84	20.55	78.03	71.71	86.31	14.60
Male	79.66	74.11	88.34	14.23	85.75	81.61	90.98	9.37
Female	57.80	47.84	74.50	26.66	69.68	61.36	81.03	19.67
Gender Gap	21.86	26.27	13.84	-	16.07	20.25	9.95	-

(Source - Registrar General of India)

The overall literacy in Porbandar was 68.62 in 2001 which rose to 75.78 in the year 2011. The regional gap in the year 2001 was 17.27 which reduced to 12.98 in the year 2011. The gender gap for male and female has also reduced over the decade. The literacy rate of male has increased from 78.36 to 83.45 from 2001 to 2011. The increase in the female is higher when compared to male. The female literacy has increased from 58.42 to 67.75 over the decade. In the year 2015 (till November) it has increased marginally to 68%. The gender gap was 19.94 in the year 2001 which reduced to 16.24 in the year 2011 and in the year 2015 (till November) it has further reduced to 15%. This is because of increase in the female literacy rate in rural area. In the year 2011 it was 59.82% which increased to 69.02% till Nov 2015. The same quantum of reduction is seen in the rural area but a higher quantity of change is seen in the urban gender gap (from 16.82 in 2001 to 12.94 in 2011).

When comparing Porbandar district literacy rate with Gujarat state, the total literacy rate of Gujarat state is higher when compared with Porbandar district but the regional gap in Porbandar district is less when compared with the state. The total population gender gap of Porbandar district is less when compared to Gujarat state in the year 2001 but in 2011 the gender gap is marginally higher when compared with Gujarat state. Male regional gap in case of Gujarat and district is almost the same. There is very marginal difference in the regional gap for male. For female regional gap is less in the district when compared to state. In 2001 the regional gap of female in district was 20.29 and in the state it was 26.66. In both the regions the regional gaps has reduced. In district it was 16.18 in the year 2011 and in the state it reduced to 19.67. Thus in 2011 also the regional gap of female is higher in state when compared to Porbandar district

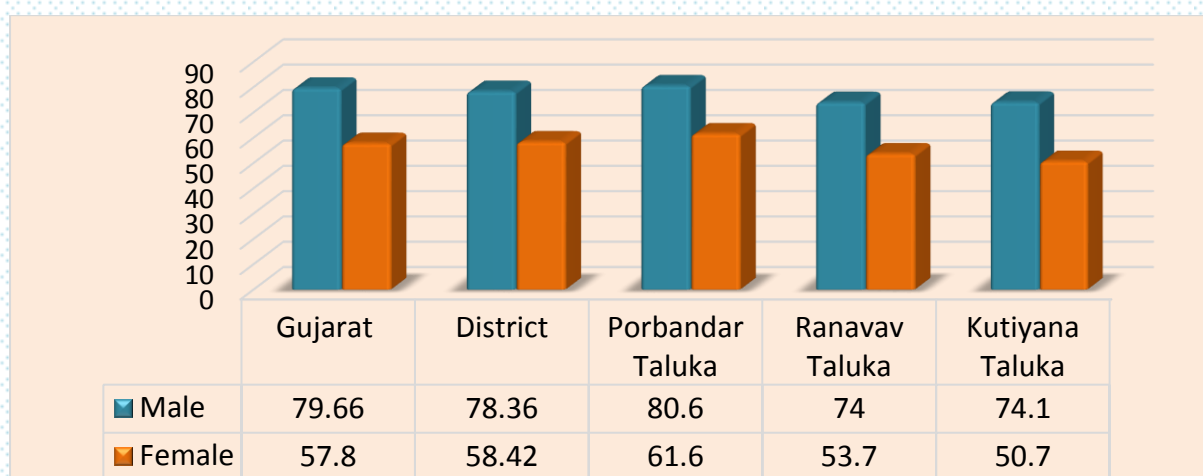
The below mentioned graph shows the overall literacy rate of the state, district and talukas.

Figure 2.1 Overall Literacy Rate

(Source - Registrar General of India)

The literacy rate in all the areas i.e. in the state, district and talukas has increased. Gujarat has seen an increase of 10 % in the decade which is not reflected in the Porbandar district and in its talukas. In the district and taluka except Porbandar taluka the literacy rate is less than the Gujarat state in the year 2001 and in 2011. Porbandar taluka has a higher literacy rate when compared to other talukas in both the years. This talukas literacy rate is higher when compared to Porbandar district in the year 2001 and year 2011. There has been increase in the literacy rate in the district and its talukas from 2011 to Nov 2015. In November 2015 Porbandar taluka had literacy rate of 76.84%. Porbandar taluka had the literacy rate of 78.53% which is higher than other talukas. Ranavav and Kutiyana had the literacy rate of 73% which is less than the district.

The below mentioned chart shows the male and female literacy rate of the census 2001

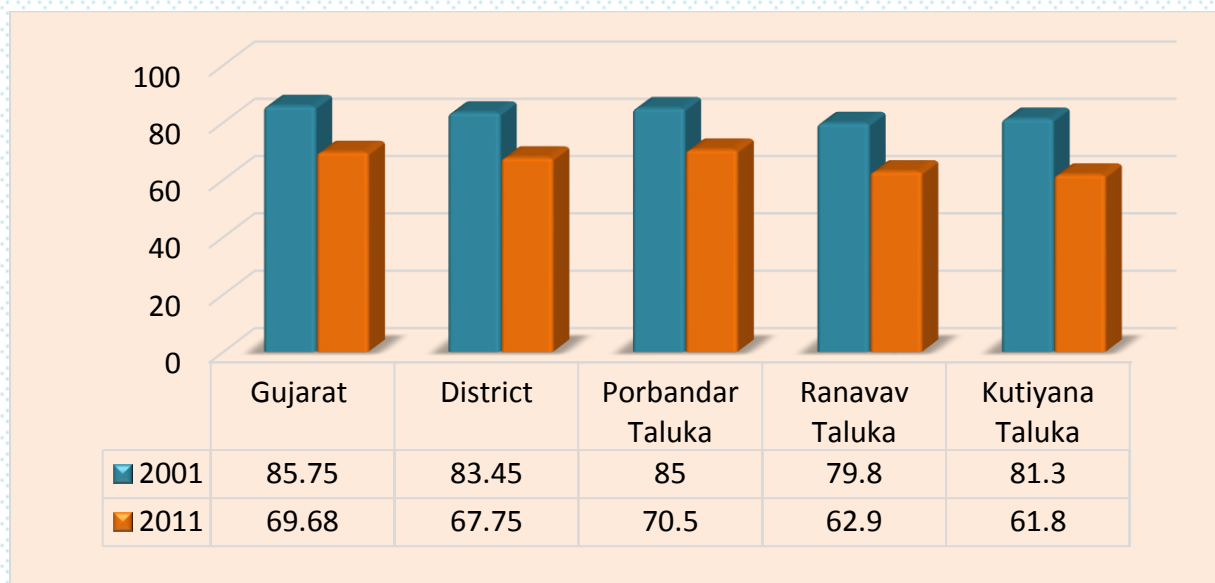
Figure 2.2 Male and Female Literacy Rate - 2001

(Source - Registrar General of India)

Literacy rate of the male is on the higher side when compared to the female literacy rate in all the regions i.e., in Gujarat state, Porbandar district and in all the three talukas. Porbandar taluka has witnessed a higher literacy rate for the male and female when compared to Gujarat and district. It is 80.6% and 61.6% for male and female respectively.

The below mentioned chart shows the male and female literacy rate in the year 2011.

Figure 2.3 Male and Female Literacy Rate



(Source - Registrar General of India)

Literacy rate of the male is on the higher side when compared to the female literacy rate in all the regions i.e., in Gujarat state, Porbandar district and in all the three talukas. Porbandar taluka has marginal higher literacy rate for the male and female when compared to Gujarat and district. It is 85.00% and 70.5% for male and female respectively.

When both the graphs are compared, the increase in the literacy rates can be found out. It is seen that the increase in the literacy rate over the decade in the male is by 4-6 % in all the regions. The increase in the female literacy rate is by 9-12 % in all the regions. Thus, it shows that increase in the female literacy rate is higher than the male literacy rate. The highest increase in the female literacy rate is in the Gujarat state (12%) followed by Kutiyana (11 %). From 2011 to November 2015 the increase in male and female literacy rate is between 1-3% in Porbandar district and its talukas.

The below mentioned table shows the literacy rate of rural-urban of all the regions i.e of Gujarat state, Porbandar District and its three talukas.

Table 2.3 Talukawise Rural-Urban Literacy Rate (Percentage)

S/D/T	2001			2011		
	Rural	Urban	GAP	Rural	Urban	GAP
Porbandar	59.6	78.1	18.5	61.94	77.31	15.37
Ranavav	61.08	67.01	5.93	60.64	65.92	5.28
Kutiyana	60.45	67.97	7.52	63.57	70.37	6.8
District	60.11	77.38	17.27	70.25	83.21	12.96
Gujarat	61.29	81.84	20.55	71.71	86.31	14.6

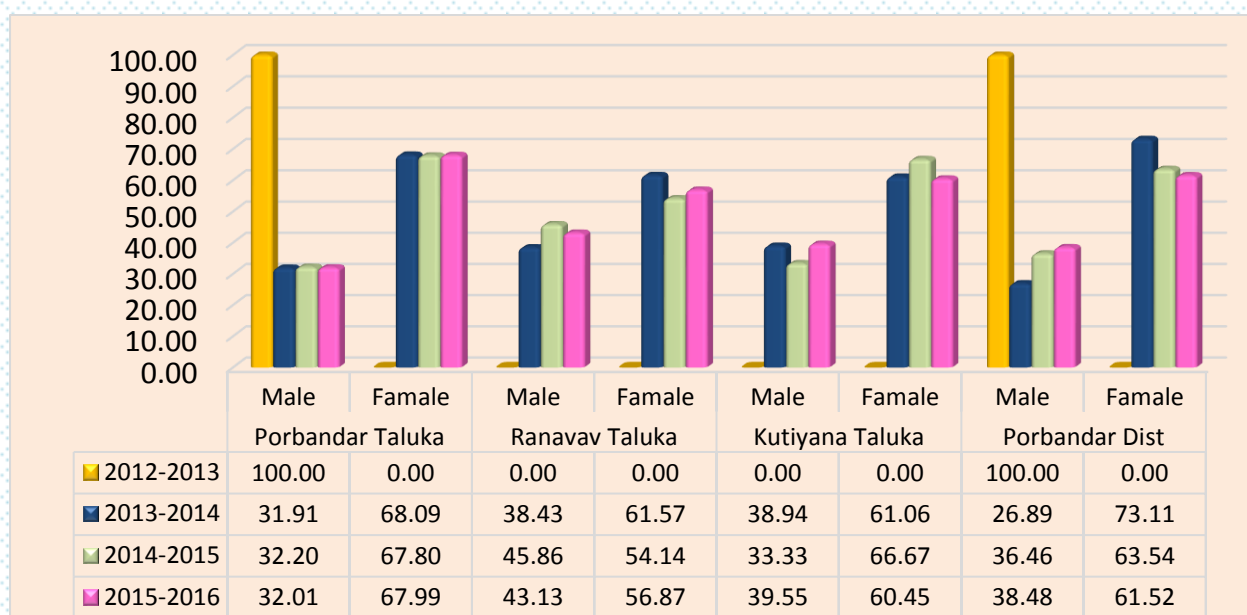
(Source - Registrar General of India)

In all the three talukas of Porbandar district there is an increase in the literacy rate over the last decade. As the literacy rate is increasing, it can be seen that in all the three talukas the gap has reduced over the last decade. In Porbandar taluka the reduction is highest when compared to other two talukas. In Porbandar taluka the gap was 18.5 in 2001 which has reduced to 15.37 in the year 2011. In Ranavav and Kutiyana taluka the reduction of gap is marginal when compared to Porbandar taluka.

In November 2015 there has been increase in the literacy rate in the rural area. In the district it has increased by 6% and in all the three talukas the increase is by more than 10%. In Porbandar taluka it has increase by 11%, Ranavav by 13% and in Kutiyana it is by 10%.

Below mentioned chart shows percentage of male and female who Passed Neo-Literate Examination (Talukawise)

Figure 2.4 Percentage of Male and Female who Passed Neo-Literate Examination

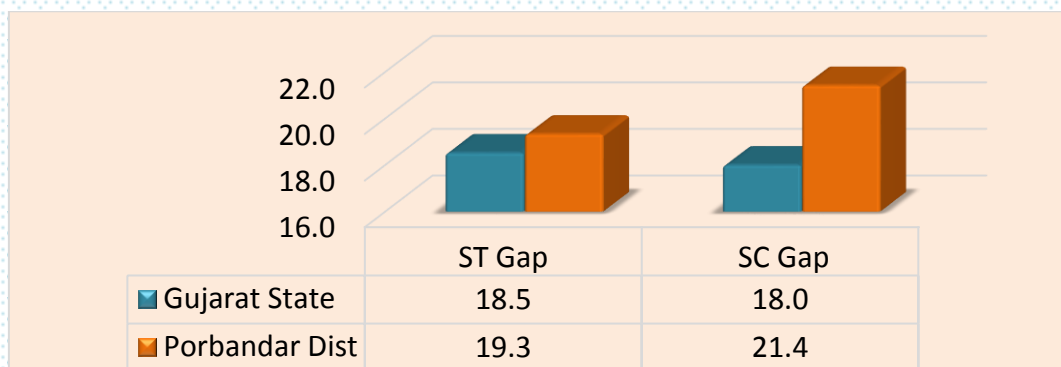


(Source – District Continue Education Department)

In all the years except 2012-2013 the percentage of female passing the neo-literate examination is on the higher side when compared to male in the district. In the four years highest female percentage is seen in 2013-2014. In various taluka the female percentage is high in Porbandar taluka followed by Kutiyana taluka.

The below mentioned chart shows the literacy gap in male and female in SC and ST population

Figure 2.5 Gender Literacy Gap in ST and SC -2011



(Source - Registrar General of India)

The literacy gap in male and female in SC and ST is more than the gap of total population. The total population gender gap in the district is 16% (As per table 2.1) which is comparatively less when compared to gender gap of ST and SC. The gender gap of ST and SC in the Porbandar district is 19.3% and 21.4 % respectively. The gender gap of the district is high when compared to the gender gap of Gujarat state.

2.3 School Infrastructure

India has made education free and compulsory for children in age group of 6–14 years. The majority of children are enrolled in government schools, especially in rural areas. But most children from elite households—the rich, the political class, government employees and the growing middle class—are sent to private schools. In many instances, boys are sent to private schools and girls to free government schools. To reduce these trends towards segregation, India passed the Right of Children to Free and Compulsory Education Act in 2009. It requires private schools to admit at least 25% of students from socially disadvantaged and low-income households. In turn, private schools are reimbursed for either their tuition charge or the expenditure per student in government schools, whichever is lower.

The productivity of labour is quite high in Gujarat and the state also has the highest proportion of the state's populace engaged in running owned businesses. The state's literacy rate stands at 78 per cent, which is higher than the national average of 73 per cent. Gujarat is home to India's leading business school, the Indian Institute of Management, Ahmedabad (IIM-A) and other important institutions such as National Institute of Design (NID), National Institute of Fashion Technology (NIFT), Entrepreneurship Development Institute of India (EDI). The state also has 25 engineering colleges, 26 management institutions and 300 technical institutes.

The State Government plans to establish a shipbuilding university in the district of Kutch, first of its kind in the country in the district of Kutch. Further, the industrial development in the state provides vast potential for setting new educational institutes in areas of marine engineering, port management, gems and jewellery design, fishery and fish processing, urban planning, disaster management and biotechnology.

The development of educational infrastructure aims to increase school attendance, motivate students' enrolment and improve academic performance of students. The basic infrastructures like buildings, class rooms, drinking water, textbooks, etc. play significant role in education. Among supportive infrastructure, sanitation facilities, mid-day meal facilities and health check-ups also acts as an important motivating factors to attend school

In the district of Porbandar, number of schools has increased over the last 5 years to provide education facilities to the required students. Table 2.2 shows the increase of number of schools in government and private schools over the last five years.

Table 2.4 Number of Schools in Porbandar District

School Category	2010-11		2011-12		2012-13		2013-14			2014-2015		
	Govt	Pvt	Govt	Pvt	Govt	Pvt	Govt	Private	Aided	Govt	Pvt	Aided
OP	38	20	34	19	43	18	42	22	-	43	20	-
P+UP	292	83	295	92	291	76	290	78	-	288	78	-
P+UP+S/HS	-	4	-	-	2	24	2	22	-	2	22	1
OUP	-	2	1	-	-	1	-	1	-	-	1	-
UP+S/HS	-	-	-	-	1	3	1	2	-	1	2	-
Sec Only	-	-	-	-	-	-	5	7	22	5	7	20
S+HS	-	-	-	-	-	-	6	12	18	6	11	21
HS Only	-	-	-	-	-	-	3	5	0	3	3	0
Sub Total	331	109	330	111	343	126	349	149	40	348	144	42
Total	440		441		469		538			534		

(Source – Sarva Shiksha Abhiyan, Gujarat State)

Majority of the schools are in the category of primary and upper primary level. Number of schools in the district has increased over the last 5 years. It has increased from 440 in the year 2010-2011 to 534 in the year 2014-2015. The increase in the schools is mainly seen in the private schools. Schools under the government have increased on a very marginal level under few categories. Private schools have increased from 109 in the year 2010-2011 to 144 in the year 2014-2015.

In the below mentioned pie chart the percentage of distribution of schools is reflected for 2 different years i.e., for 2008-2009 and 2013-2014.

Figure 2.6 Talukawise Percentage Distribution of School 2008-2009

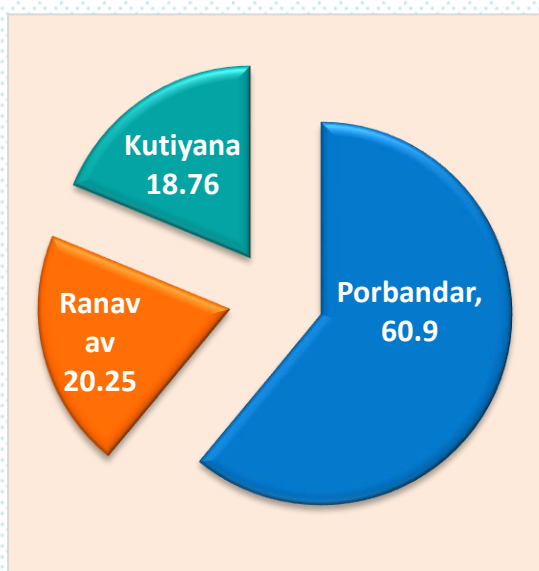
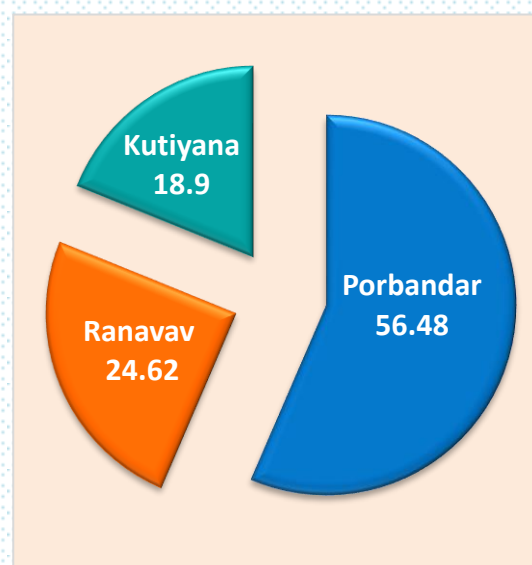


Figure 2.7 Talukawise Percentage Distribution of School 2013-2014



(Source – District Education Office)

In the above pie charts the difference or the change is shown in Porbandar and Ranavav talukas. In Porbandar taluka the distribution of schools has reduced from 60.99% to 56.48%. This shift is shown positive in Ranavav taluka and the distribution of schools has increased from 20.25% to 25.62%. In Porbandar taluka the reduction is of 4% and in Ranavav taluka the increase is of 4 %. In Kutiyana taluka there is a very minor positive shift in distribution of schools.

The below mentioned table shows the distribution of school by type and locality.

Table 2.5 Talukawise Distribution of School by Type

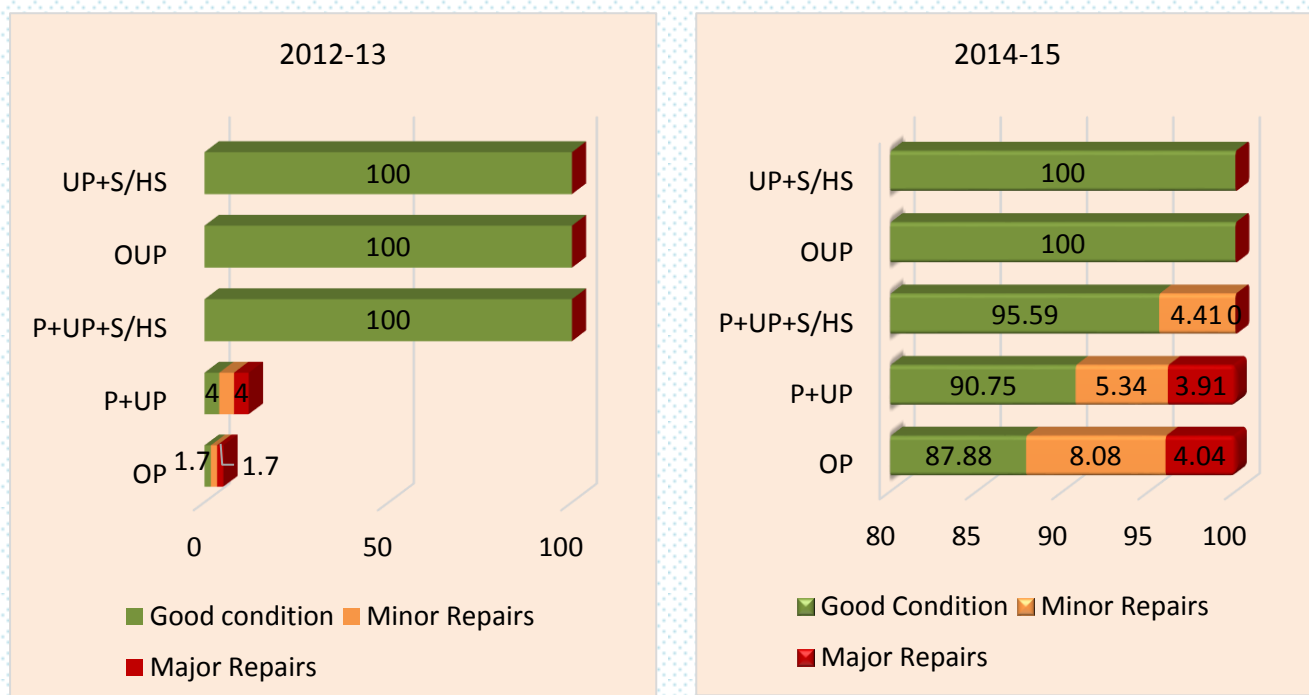
Name of taluka	Rural	In %	Urban	In %	OP	P+UP	P,UP,HS	OUP	UP, HS
Porbandar	185	71.43	74	28.57	25	212	20	0	2
Ranavav	87	76.99	26	23.00	31	77	4	0	1
Kutiyana	70	81.40	16	18.60	7	77	1	1	0

(Source – District Education Office)

In the above table majority of the schools are in rural area. In all the three talukas more than 70% of the schools are in rural area. The highest percentage of schools in rural area is in Kutiyana taluka. 81% of the schools in Kutiyana taluka are in rural area. Highest number of schools are in Porbandar taluka. Maximum number of schools is in primary plus upper primary section. There are very less schools in higher secondary section.

The conditions of the classroom play a vital role in education. Below mentioned chart shows the conditions of classroom in the year 2010-2011 and 2011-2012.

Figure 2.8 Status of Classroom in Percentage



(Source – Sarva Shiksha Abhiyan, Gujarat State)

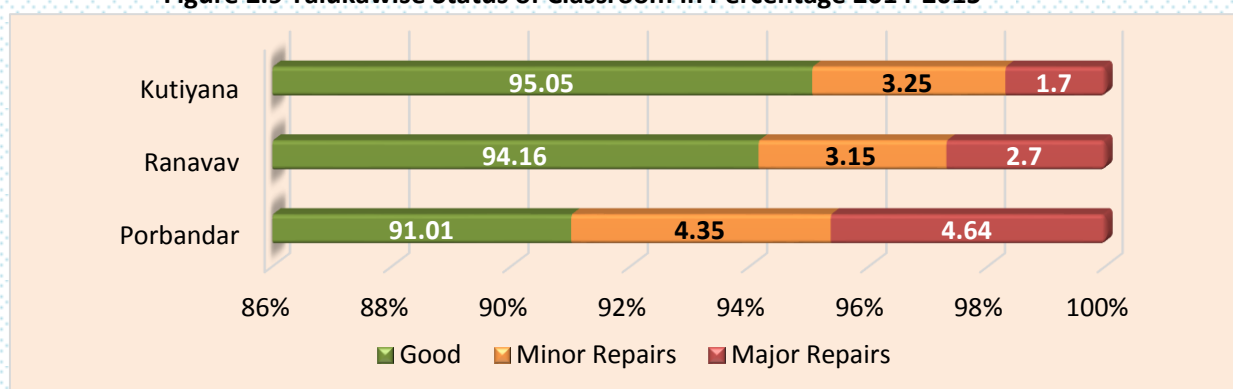
Majority of the classrooms are in good condition. There are classroom with 96 % - 100 % in good condition in the said year. There are very few classroom which require minor and major repairs.

In the year 2013-2014 majority of the classroom are in good conditions. There is a major improvement in the conditions of the classroom from the year 2012-2013. In the previous year the primary schools had 1.7% good conditions which rose to 87.88% and in primary and upper primary it was 4% which rose to 90.75 % in the year 2014-2015.

This drastic positive change is due to amount of large funds for the development of schools. There has been increase in the technical staff supervision and due to effective monitoring the infracture conditions has improved

The below mentioned chart shows the status of classroom.

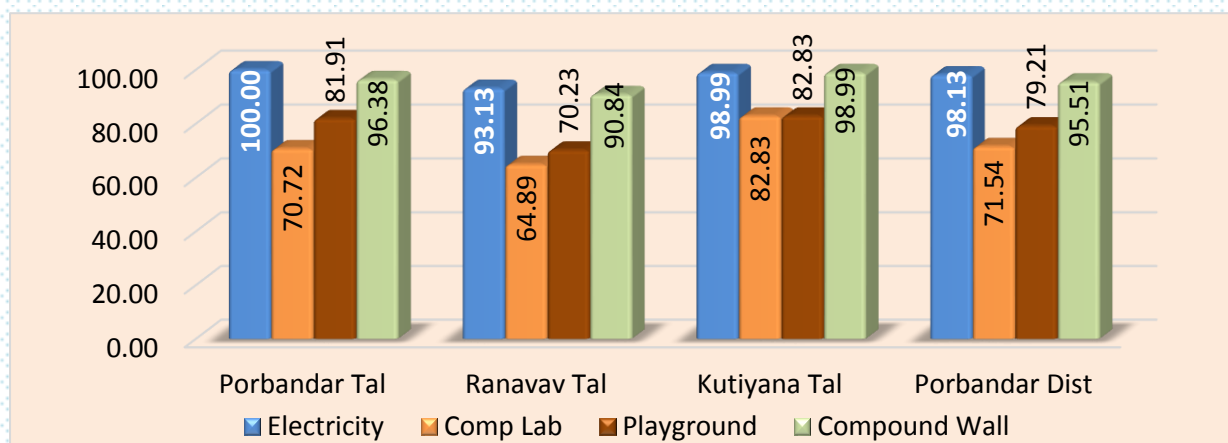
Figure 2.9 Talukawise Status of Classroom in Percentage 2014-2015



(Source – District Education Office)

In the above chart majority of the classroom are in good conditions. More than 91% of the classrooms in all the three talukas are in good conditions. The maximum numbers of classroom in good conditions are in Kutiyana taluka with 95.05% followed by Ranavav taluka with 94.16% and in Porbandar taluka it is 91.01%. 4.64% classroom of Porbandar taluka requires major repairs, whereas least major repairs were noted for classrooms of Kutiyana taluka. There are few classrooms in all the three talukas which require minor repair.

Basic infrastructure like electricity and computer lab is very much necessary for proper learning for the students. The below mentioned chart shows the percentage of schools with electricity, computer lab and playground facilities.

Figure 2.10 Percentage of Schools with Various Amenities (2014-2015)

(Source – Sarva Shiksha Abhiyan, Gujarat State)

Percentage of schools with electricity is on a higher side in all the three talukas of the district. Porbandar taluka has the highest number of schools with electricity facilities. 100% schools of Porbandar taluka are electrified. Respective 98.99% and 93.13% schools of Kutiyana and Ranavav taluka are electrified. Regarding computer lab Kutiyana taluka has the highest percentage of schools at 82.83% followed by Porbandar taluka with 70.72 % and Ranavav at 64.89 %. Percentage of schools having playground is higher in Kutiyana taluka when compared to other 2 talukas. After Kutiyana taluka next in Percentage of schools with playground is in Porbandar taluka with 81.91% followed by Ranavav taluka with 70.23%. Majority of the schools has compound wall in the district. Highest percentage of schools with compound wall is seen in Kutiyana taluka with 98.99% followed by porbandar taluka with 96.38% and Ranavav taluka at 90.84%.

Table 2.6 Percentage of schools with Electricity and Computer Lab in Porbandar District

School Category	Elect Comp Lab		Elect Comp Lab		Elect Comp Lab		Elect Comp Lab	
	2010-2011		2011-2012		2012-2013		2013-2014	
OP	75.9	-	88.7	-	83.6	-	87.5	-
P+UP	96	48.3	98.4	51.2	98.1	85	98.4	86.1
P+UP+S/HS	100	100	0	0	100	94.4	100	100
OUP	100	100	100	100	100	100	100	100
UP+S/HS	100	100	0	0	100	75	100	100

(Source – Sarva Shiksha Abhiyan, Gujarat State)

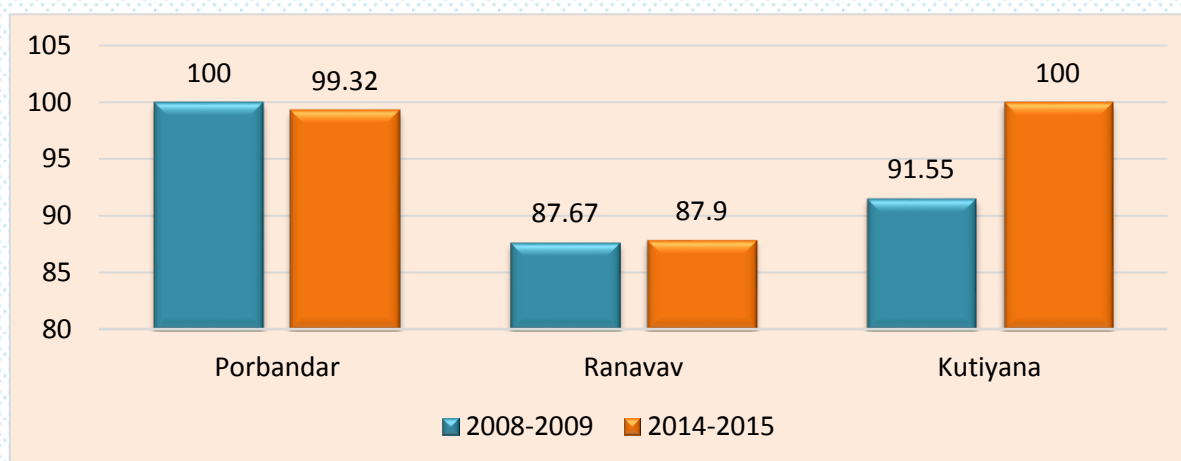
In the above table the data of computer lab is not considered for primary as the requirement of computer is only in upper primary. Over the years, there are increase in two factors; electricity and computer lab in various categories of schools. In the year 2010-2011 the electricity facility was available in 75.9 % of schools which increased to 87.5 % in the year 2013-2014 in the category of only primary. Another larger change is seen in the computer lab in the category of primary + upper primary. In the year 2010-2011 computer facility was available in 48.3 % of schools which increased to 86.1 % in the year 2013-2014.

2.4 School Amenities

School is for promoting learning and positive change among the children. For this, school amenities like hygiene, water facility, sanitary, plays a major role. If these schools amenities are not available to the children, it creates problem for them. These issues are particularly important for girls. Lack of proper, safe and private sanitation increases absenteeism among girls and thus it contributes to school dropout rates. Thus, hygiene and sanitation facility should be gender specific as girls have specific physical and cultural needs when compared to boys. Porbandar District has attained the success in terms of providing sanitation facility in the school.

The below mentioned chart shows the percentage of schools with common toilet in each talukas

Figure 2.11 Talukawise Percentage of Schools with Common Toilet



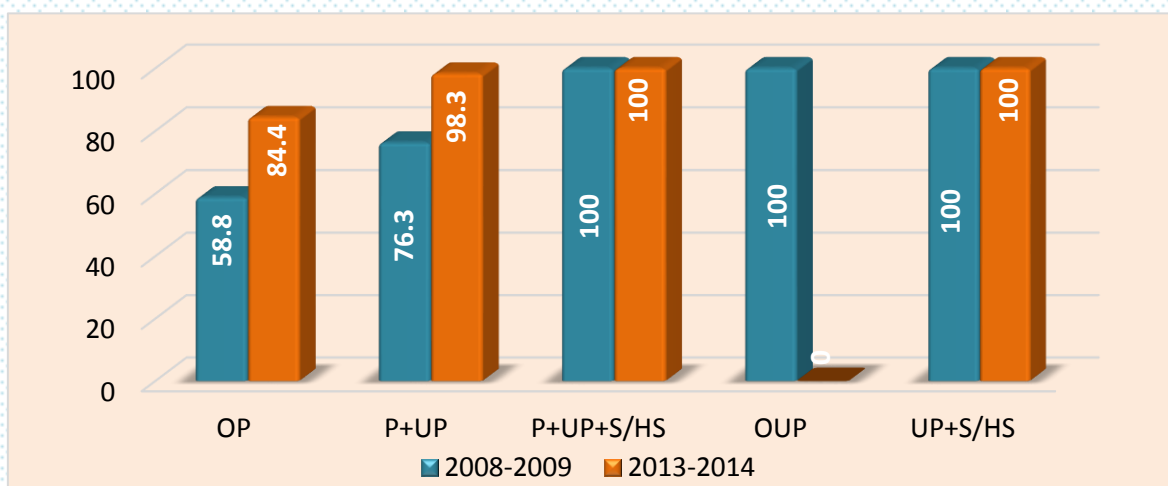
(Source – District Education Office)

In the above chart it shows that a drastic change has happened in all the three taluka regarding the hygiene facilities in the schools. In the year 2008-2009 the toilet in the schools were not on the positive side, but in the year 2013-2014 the percentage of schools with common toilet has

increased to 100 in Porbandar and Kutiyana talukas. In Ranavav taluka there has been an increase of 17% in the year 2013-2014 when compared to 2008-2009.

The schools having separate girls toilet has increased over the period of time. The below chart, shows that the percentage of schools with girl's toilet in the year 2008-2009 to 2013-14.

Figure 2.12 Percentage of Schools with Girls Toilet

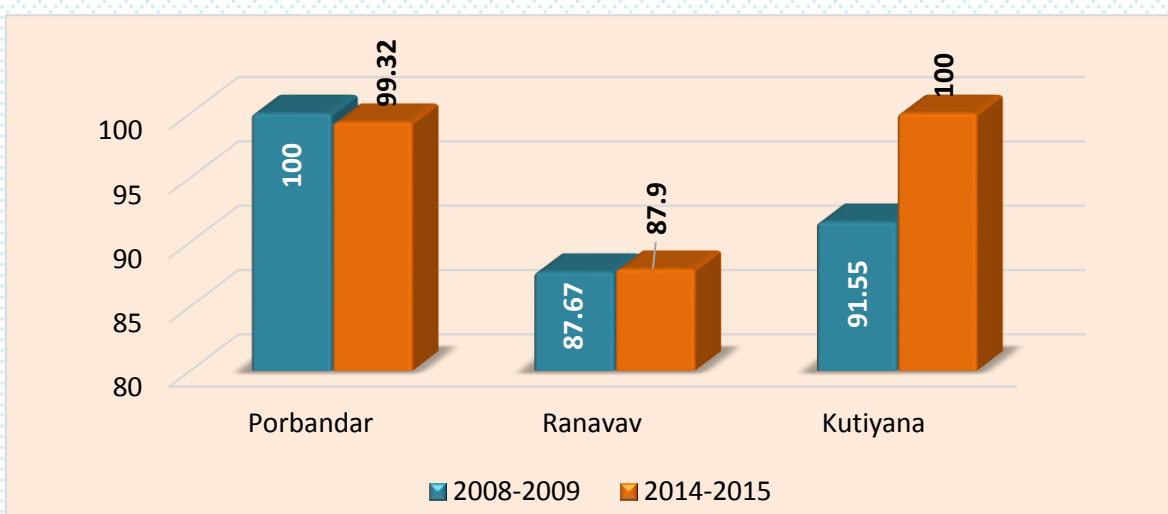


(Source – Sarva Shiksha Abhiyan, Gujarat State)

There is increase in the percentage of schools with girl's toilet. In the category of primary and upper primary schools the change is from 76.3 % to 98% in the year 2008-2009 to 2012-2013, respectively. There is an increase of 22 %. In the category of only primary the increase is of 25.6%.

Below mentioned chart shows the percentage of schools with girl's toilet in all the three talukas.

Figure 2.13 Talukawise Percentage of Schools with Girls Toilet

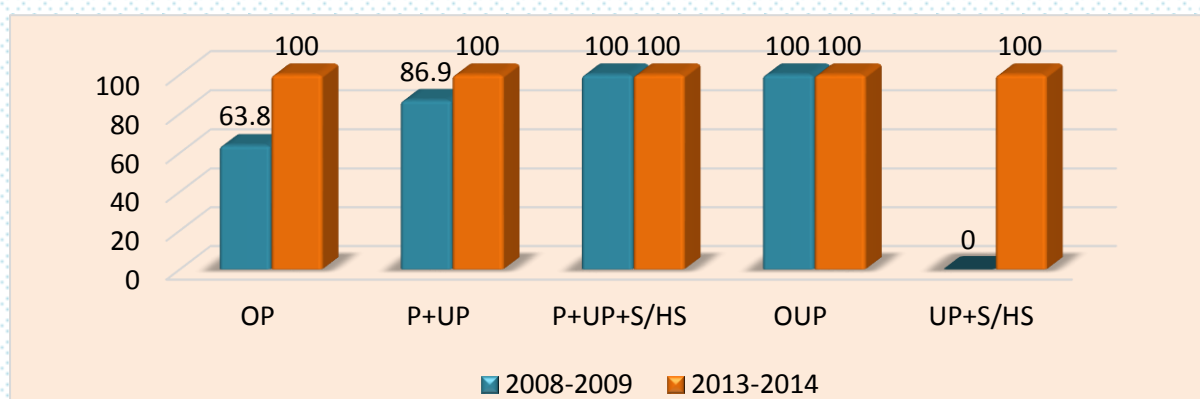


(Source – District Education Office)

Porbandar district has 100% girl's toilet in all the schools but there is a small percentage of shortage against requirement of girl's toilet. Porbandar taluka has seen a minor decrease in the percentage of schools with girl's toilet. The reason may be closure of the schools or decrease in the number of students. In Kutiyana taluka there has been an increase by 9% and the schools having girls toilet has reached to 100%. In Ranavav taluka there has been a very nominal change in percentage and is less when compared to other two talukas. The reasons of this is because Ranavav taluka has NES area

In the district of Porbandar, majority of the schools have drinking water facility. In the chart below it shows the percentage of schools with drinking water facility for the year 2008-2009 and 2011-2012. It tries to show the improvement in the percentage of schools having drinking water facility.

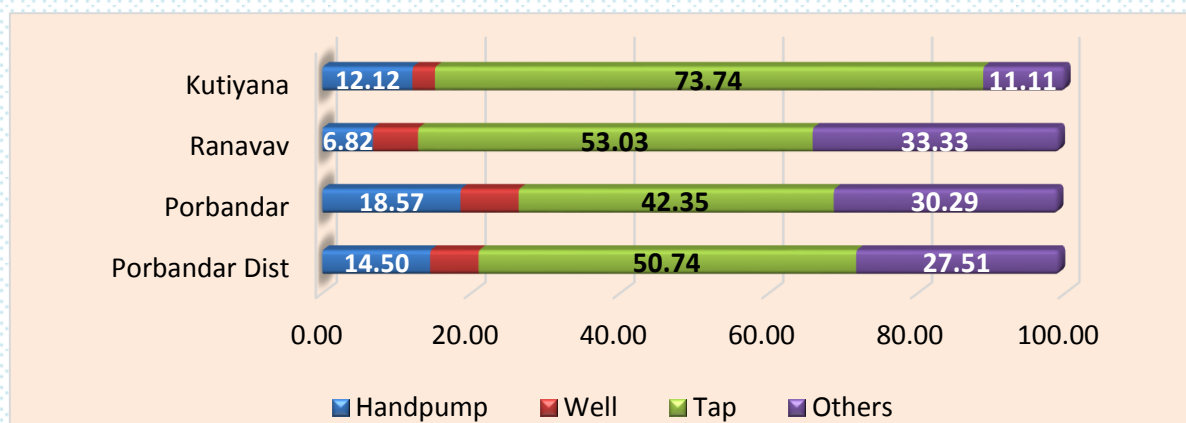
Figure 2.14 Percentage of Schools Having Drinking Water Facility



(Source – Sarva Shiksha Abhiyan, Gujarat State)

In the year 2013-2014, all the schools have the facility of drinking water. Under the category of primary only, there is an increase of 36.2 % over the period. In the year 2008-2009 the percentage of schools having drinking water facility was 63.8 % which increased to 100 % in the year 2013-2014. For the category of primary and upper primary where the maximum number of schools are there, it has the drinking water facility of 100%. In the year 2008-2009 schools having drinking water facility was at 86.9% which increased to 100% in the year 2013-2014, which indicates increase by 13.1 %. Rest of the categories of the schools has 100% facility of drinking water.

The below mentioned chart shows the percentage of schools with sources of drinking water.

Figure 2.15 Percentage of Schools by source of drinking water 2014-2015

(Source – District Education Office)

In the above chart the major sources of drinking water is tap water. In the district 50.74% of the schools have this facility. In the talukas, Porbandar taluka has the least schools with tap water facility. It is less than the district. In Ranavav and Kutiyana talukas the schools with tap water is higher than the district. In Kutiyana taluka it is highest with 73.74% followed by Ranavav with 53.03%.

2.5 School Staffing Pattern

The number of teachers in Porbandar district has increased over a period of time. The major increase of teachers is in the category of primary with upper primary schools as the number of schools under this category is on the higher side.

Table 2.7 Number of Teachers in School

School Cat	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	Govt	Pvt	Govt	Pvt	Govt	Pvt	Govt	Pvt	Govt	Pvt
OP	83	73	73	62	84	62	83	80	83	80
P+UP	1875	902	1995	985	1888	742	1957	769	1909	785
P+UP+S/HS	-	39	-	-	54	457	54	415	73	433
OUP	-	10	19	-	-	3	-	2	-	4
UP+S/HS	21	-	-	-	27	42	19	42	19	42
Sub Total	1979	1024	2087	1047	2053	1306	2113	1308	2084	1344
Total	3003		3134		3359		3411		3428	

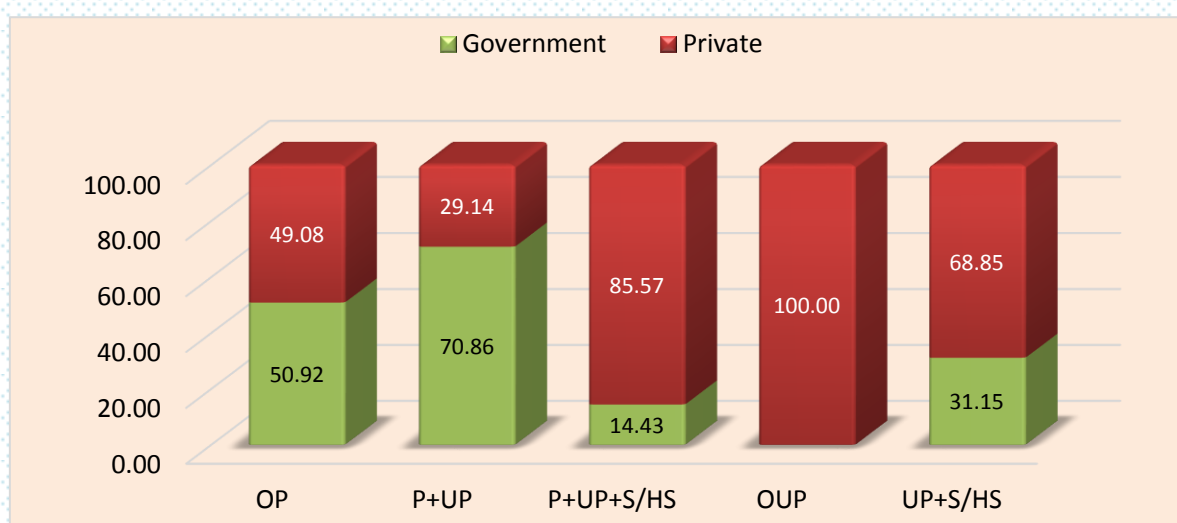
(Source – Sarva Shiksha Abhiyan, Gujarat State)

Total number of teachers in Porbandar district has increased from 3003 in the year 2010-2011 to 3428 in the year 2014-2015. The increase in the 5 years is at 2.68% CAGR. The increase is seen in the entire category of the schools and in the government and private schools. Majority

increase is in primary with upper primary as there is more number of schools in that category. In the private schools the maximum increase is seen in the category of primary with upper primary with secondary or higher secondary. New schools have been opened in this category and thus a wide increase is seen in this category. In the year 2010-2011, the number of teachers in private schools was 39 which increased to 433 in the year 2014-2015

The percentage of private schools in primary with upper primary schools is higher when compared to government school in the same category. Below is the chart which shows the percentage of schools by government and private in various categories for the year 2013-2014.

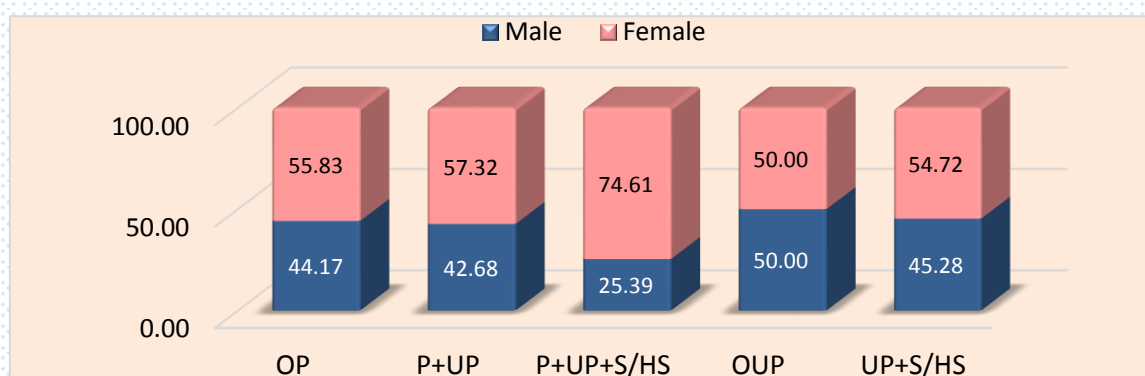
Figure 2.16 Percentage of teachers in Government/Private schools (2014-2015)



(Source – Sarva Shiksha Abhiyan, Gujarat State)

In the year 2014-2015, the percentage of private school teachers in the category of only primary is 49.08% and of the government school teachers is 50.92%. The Government school teachers have a higher percentage in the category of primary with upper primary. Government schools have 70.86% of total school teachers in the category of primary with upper primary. Private school teachers has a larger share of schools in only upper primary category with 100% as there is only one school in this category and in the category of upper primary with higher secondary the percentage of teachers in private schools is 68.85%.

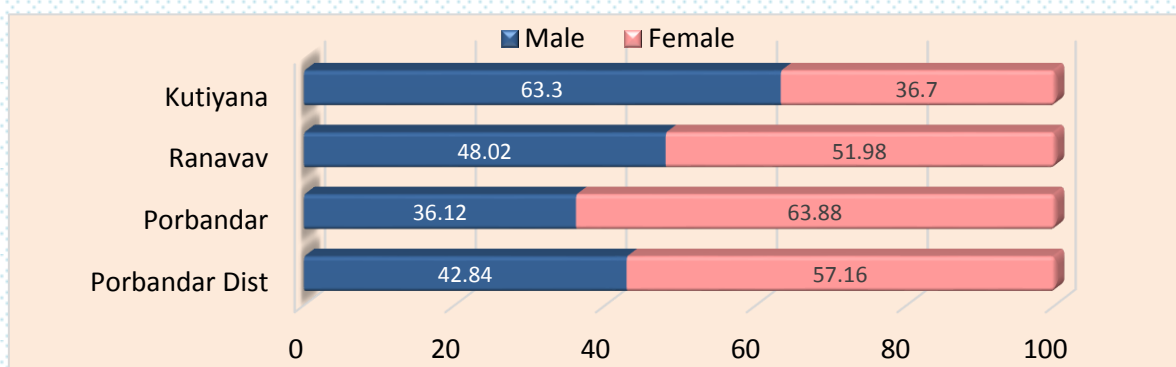
In majority of the schools of Porbandar District, female teacher's proportion is higher than the male teachers. In the year 2014-2015 there were 2052 female teachers and 1376 male teachers. Thus it shows that the proportion of female teachers in the district is higher when compared to male teachers. Below mentioned chart shows the ratio or the percentage of teachers as per gender.

Figure 2.17 Percentage of Male and Female teachers (2013-2014)

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

In majority of the categories of the schools the female ratio of teachers is higher than the male ratio. The highest female ratio of teachers is in the category of primary with upper primary with secondary or higher secondary. It is at 74.31%. In the same category the male percentage is 25.69%. Lowest percentage of female ratio of teachers is in only upper primary. It is at 50% and in the same category the percentage of male is at 50%.

The below mentioned chart shows the percentage of male female teachers in various taluka of Porbandar district.

Figure 2.18 Percentage of Male Female Teachers 2014-2015

(Source – *District Education Office*)

The female teacher's percentage is highest in Porbandar taluka with 63.88%. This is followed by Ranavav taluka with 51.98% and the least female teacher's percentage is in Kutiyana with 36.70%. As Porbandar taluka is more urban it has more number of female teachers compared to Ranavav and Kutiyana taluka. As Kutiyana taluka is more of rural it has less of female teachers.

The teachers' having proper qualification for teaching is shown in the table below. The table is as per the school category and on various qualifications.

Table 2.8 Percentage of Teachers as per Qualification

Level of education	2008-09		2014-2015	
	P	P+UP	P	P+UP
Below Secondary	4.06	3.98	11.04	3.86
Secondary	27.41	35.07	23.93	17.58
Higher Secondary	22.34	20.70	23.31	21.10
Graduate	31.47	28.23	27.61	31.76
Post Graduate	14.72	12.02	14.11	25.24
M. Phil.	-	-	-	0.25
Ph. D.	-	-	-	0.21

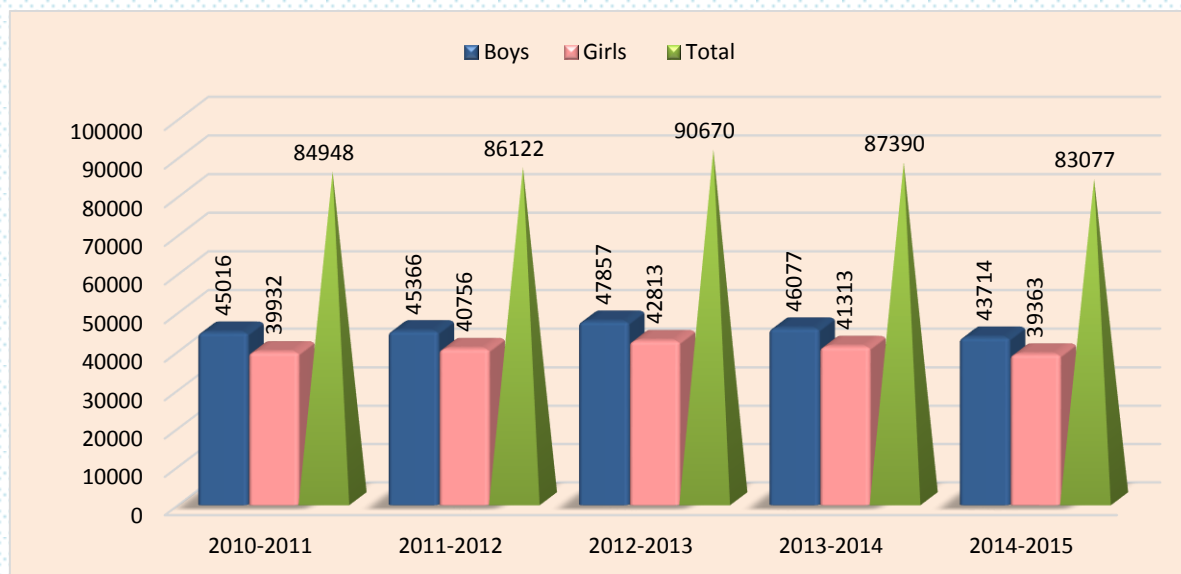
(Source – Sarva Shiksha Abhiyan, Gujarat State)

The number of teachers having graduate degree has increased over the period of time. In the year 2008-2009 there were 660 teachers with graduate degree. It has increased to 1037 for the category of primary with upper primary. The teachers with post graduate degree were 281 in the year 2008-2009 in the category of primary with upper primary. It increased to 824 in the year 2014-2015. Post graduate teachers have increased by 13% in the last 6 years. There has been increase of teachers with M.phil and Ph.D degree in the category of primary with upper primary.

2.6 Enrollment and Transition

Enrollment has shown a negative trend in Porbandar district. Below mentioned chart shows the enrollment for the last 5 years for boys and girls.

Figure 2.19 Enrollment of Boys and Girls



(Source – Sarva Shiksha Abhiyan, Gujarat State)

The enrollments of boys and girls have reduced over the year. Enrollments of boys have reduced by 0.59 CAGR over the last 5 years. The girls enrollment has reduced but the rate is lower when compared to boys. Girl's enrollment has reduced by 0.29% CAGR. It can be observed that in the last one year the girls and boys enrollment have reduced drastically and thus the CAGR have been on the negative side. Till year 2013-2014 there was a upper trend in the enrollment of boys and girls and thus the grade wise enrollment for the year ending 2013-2014 has seen a upper trend.

Enrollment of the students in various grades in Porbandar District has shown a positive trend. From the year 2004-2005 to 2011-2012 Porbandar district has increased the enrollment of the students at the primary and at upper primary level. The table below shows the enrollment in all the grades from 1 to 7 during the year 2004-2005 and 2011-2012 and its CAGR.

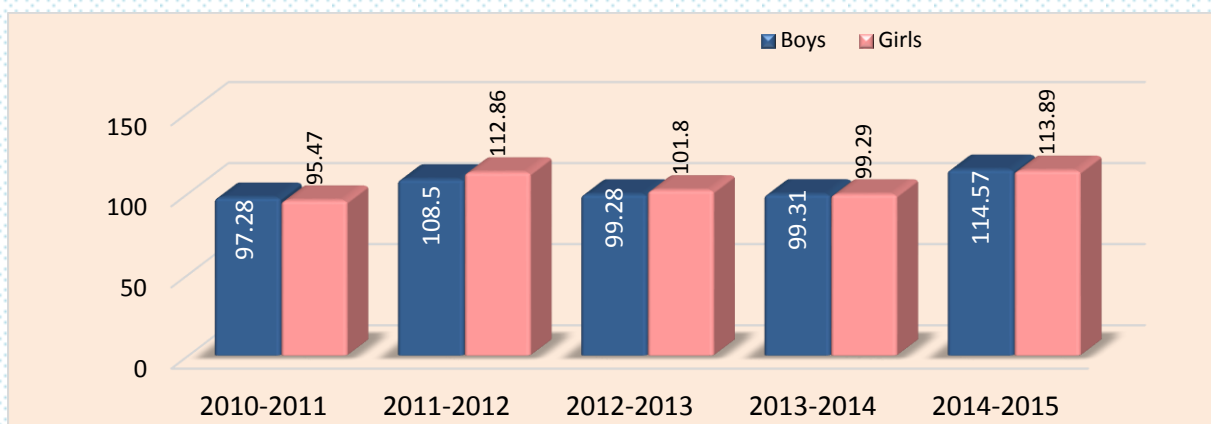
Table 2.9 Enrollment of Students According to Grades and its CAGR

Enrolment In	2004-2005	2014-2015	CAGR
Grade/Class 1	10459	8225	-2.37
Grade/Class 2	9906	9428	-0.49
Grade/Class 3	10241	10496	0.25
Grade/Class 4	9448	10615	1.17
Grade/Class 5	9371	11281	1.87
Grade/Class 6	8595	11070	2.56
Grade/Class 7	7561	11138	3.95
Primary	40054	50045	2.25
U.Primary	25527	33032	2.61

(Source – Sarva Shiksha Abhiyan, Gujarat State)

The above table is showing an increase in the enrollment of the students in all the grades except for grade 1. The reduction in grade 1 and grade 2 is due to admission in private schools and low birth rate. In the Upper primary level the increase is less when compared to primary. In the primary level the highest enrollment in 10 years is in grade 4 with 1.17% CAGR and in the upper primary level it is in grade 7 with 3.95% CAGR. Over all in the primary level the increase of the enrollment is at 2.25% CAGR and in upper primary it is 2.61% CAGR. In the above table the composite of Upper primary level includes the enrollment of grade 8.

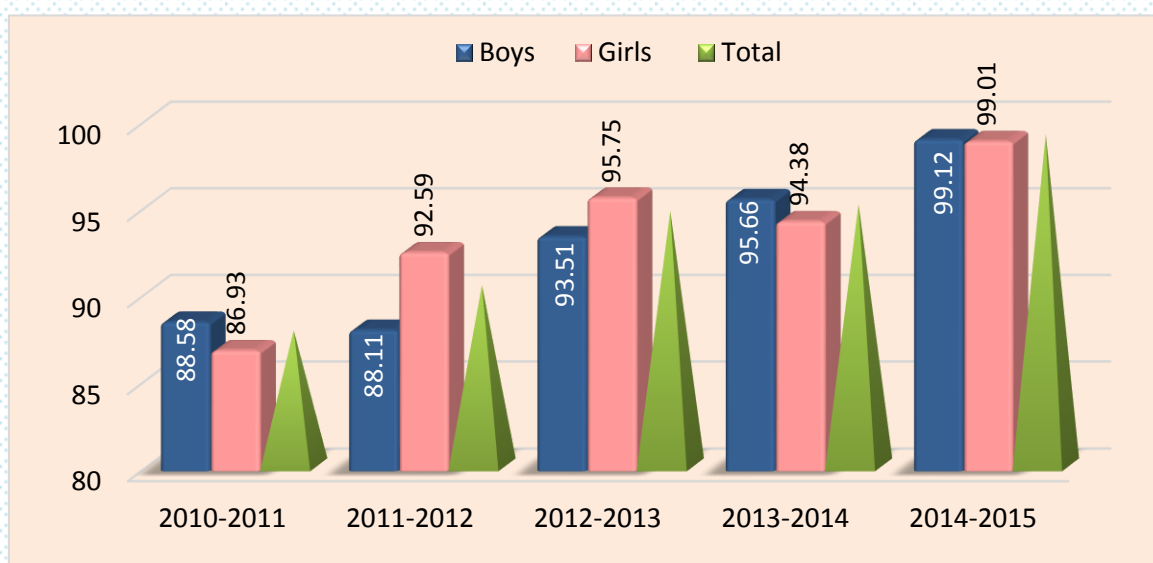
Gross Enrollment Ratio (GER) has seen an increase in the last five years. GER for boys and girls are shown in the chart below:

Figure 2.20 Gross Enrollment Ratio

(Source – Sarva Shiksha Abhiyan, Gujarat State)

GER has increased in the last five years. The increase has been noted in boys and in girls also. The proportion increase in the girls is on the higher side when compared to boys.

Net Enrollment Ratio (NER) have also increased over the last five years. The below mentioned chart shows NER for the last five years.

Figure 2.21 Net Enrollment Ratio

(Source – Sarva Shiksha Abhiyan, Gujarat State)

There has been an increase in NER. When compared between boys and girls the latter has seen a higher increase in NER.

The Gross Enrollment Ratio (GER) for the district of Porbandar has reduced in the primary category and has increased in upper primary level. Below mentioned table shows the GER and NER (Net Enrollment Rate) of primary and for upper primary level.

Table 2.10 GER and NER for Primary and Upper Primary

Particulars	2006-2007	2013-2014
GER (Primary)	109	101.4
NER (Primary)	88	85.4
GER(U.Primary)	61	95.4
NER (U.Primary)	39	70.1

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

In the primary schools the GER and NER both the components have reduced. GER have reduced from 109 in the year 2006-2007 to 101.4 in the year 2013-2014. The NER has marginally increased from 88 to 85.4. There is a positive increase in GER and NER for upper primary. A higher increase is seen in GER from 61 in the year 2006-2007 to 95.4 in 2013-2014. The NER has also increased from 39 to 70.1. It shows that the enrollment is on the higher side in upper primary when compared to primary level.

Gender wise review of enrollment in Porbandar district depicts that there is no major change in the enrollment of girls over the years. In the enrollment of boys from the year 2008-2009 to 2011-2012 has also not seen a major change. Below mentioned table shows the enrollment of students by gender for the year 2008-2009 and 2011-2012

Table 2.11 Students Enrollment in Porbandar District as per gender

Enrolment In	2008-2009			2014-2015		
	Total	Boys %	Girls %	Total	Boys %	Girls %
Grade/Class 1	11917	52.83	47.17	8225	53.24	46.76
Grade/Class 2	11562	52.18	47.82	9428	52.05	47.95
Grade/Class 3	12106	52.19	47.81	10496	52.24	47.76
Grade/Class 4	12429	51.79	48.21	10615	53.10	46.90
Grade/Class 5	11439	52.80	47.20	11281	53.49	46.51
Grade/Class 6	10701	52.29	47.71	11070	52.44	47.56
Grade/Class 7	10258	51.99	48.01	11138	52.26	47.82

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

Enrollments of girls in all the grade has reduced except for grade 2. In grade 2 there is a very marginal increase of girl enrollment from 47.82% to 47.95%. In rest of the grades there is a decrease in the enrollment of girls. The change in boy's enrollment in any of the grades is not more than 2%. Highest increase in the boys enrollment is seen for the grade 4 (1.31%) and the lowest is seen in grade 2 (0.13%).

Gender Parity Index (GPI) shows the gap between the female enrollments by male enrollment. Below mentioned table shows the GPI at primary and upper primary level for the last 5 years

Table 2.12 Gender Parity Index in Primary and Upper Primary

Sr. No.	Year	Primary	Upper Primary
1	2010-2011	0.89	0.89
2	2011-2012	0.89	0.79
3	2012-2013	0.89	0.91
4	2013-2014	0.90	0.91
5	2014-2015	0.89	0.91

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

In the primary category GPI is constant over the period of time from the year 2010- 2011 to 2013-2014, it has been 0.89.except for the year 2013-2014. In the upper primary category there has been a marginal increase in GPI and for the year 2012-2013, it has increased and has been constant for the year 2013-2014 at 0.91.

The gender gap over the last five years is shown in the below mentioned table.

Table 2.13 Gender Gap in Primary and Upper Primary

Sr. No.	Year	Primary	Upper Primary
1	2010-2011	5.94	5.98
2	2011-2012	5.60	4.86
3	2012-2013	6.09	4.68
4	2013-2014	5.52	5.34
5	2014-2015	5.66	4.59

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

During the last 5 years there has been a decrease in the gender gap in primary and upper primary sections in Porbandar district. In the year 2010-2011 in the primary category the gender gap was 5.94 which reduced to 5.66. In the upper primary the fall is higher when compared to primary. It reduced from 5.98 to 4.59 in the year 2010-2011 to 2014-2015 respectively. In the upper primary there has been a drastic increase and decrease for the year 2011-2012 and 2012-2013 respectively.

The gap of enrollment in girls and boys is increasing over the period. The table below shows the gap in percentage between the girls and boys in various grades for the year 2008-2009 and 2011-2012.

Table 2.14 Gap in Boys and Girls enrollment

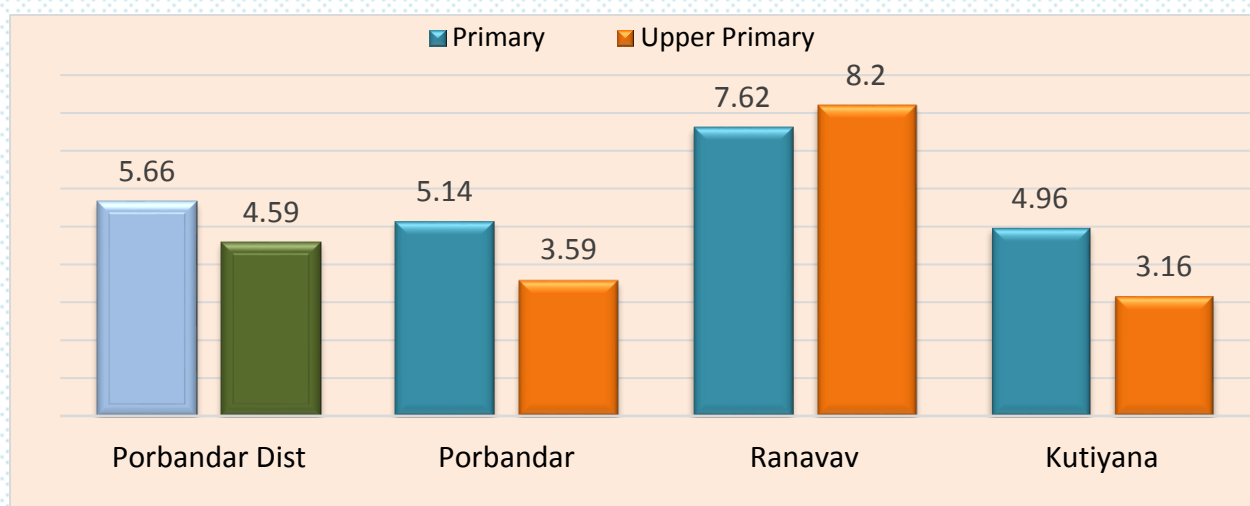
Grade	2008-2009	2012-2013
Grade/Class 1	5.66	6.48
Grade/Class 2	4.36	4.1
Grade/Class 3	4.38	4.48
Grade/Class 4	3.58	6.2
Grade/Class 5	5.60	6.98
Grade/Class 6	4.59	4.88
Grade/Class 7	3.98	4.44

(Source – *Sarva Shiksha Abhiyan, Gujarat State*)

The gap of boys and girls enrollment in the schools has increased over the year from 2008-2009 to 2013-2014. The maximum rise in the gap of boys and girls education is seen in grade 4 with 3.65. Majority of the grades has noticed an increase of the gap between the girl and boy enrollment in the district of Porbandar.

The below mentioned table shows the gap in boys and girls in primary and upper primary level.

Figure 2.22 Gaps in Boys and Girls Enrollment in District 2014-2015



(Source – District Education Office)

The gap in upper primary level is less when compared to primary level except for Ranavav taluka. In primary level the highest gap of boys and girls is in Ranavav with 7.62 followed by Porbandar and Kutiyana taluka. When compared with the district these two taluka (Porbandar and Kutiyana) have low gaps in boys and girls enrollment. The same case is in upper primary level. Porbandar and Kutiyana taluka has fewer gaps when compared to the district and the highest gap in upper primary level is in Ranavav taluka. Thus, Kasturba Gandhi Balika Vidyalaya (KGBV) has been implemented for the girls of deprived families in Ranava taluka. The girls enrollment across social categories is lower and is reduced over the years from 2008-2009 to 2011-2012. Below mentioned table shows the enrollment percentage in primary and upper primary according to the social categories.

Table 2.15 Social Category Wise percentage of Enrollment

Particularity	2008-2009		2013-2014	
	Primary	U.Primary	Primary	U.Primary
% of SC Enrollment	9	9.4	9	10.4
% of SC girls to SC enr	47.9	48.5	49.9	49
% of ST enrollment	2.2	1.8	2.5	1.7
% of ST girls to ST enr	55.3	56.6	43.4	45.4
% of OBC Enrollment	80.1	79.7	77.5	76.2
% of OBC girls to OBC enr	47.6	47.9	47.3	45.4

(Source – Sarva Shiksha Abhiyan, Gujarat State)

Over the 5 years the enrollment of girls in the social categories has reduced except for SC category. In the SC category percentage of enrollment has marginally increased from 9.4% to 10.4% in upper primary. Percentage of girls to SC enrollment has marginally increased from 48.5% to 49 %. In the ST category there is an increase in the percentage of enrollment from 2.2% to 2.5% in primary and reduced in upper primary from 1.8% to 1.7%. The girl's percentage has also reduced to 43.4 and 45.4 in primary and upper primary respectively from 55.3 and 56.6. The percentage of OBC enrollment has also reduced. For the primary and upper primary in the year 2008-2009 stands at 80.1% and 79.7% respectively. This has reduced to 77.5% and 76.2% respectively in the year 2013-2014. Percentage of girls has reduced marginally from the year 2008-2009 to year 2013-2014.

The below mentioned table shows the flow rates of Porbandar district. It has been seen that transition rate, retention rate, repetition rate and other flow rates have been fluctuating over the period of time.

Table 2.16 Trend in Flow Rates in Porbandar District (Std 1-5)

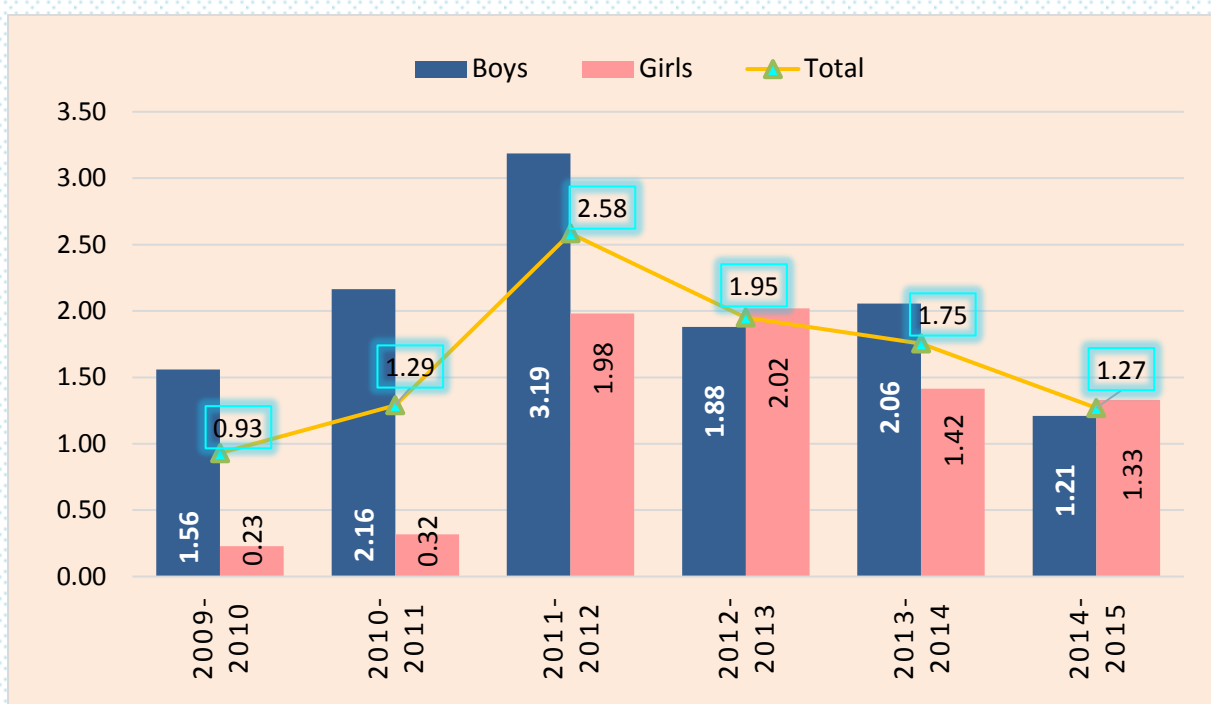
Flow Rates	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Repetition Rate	1.80	3.81	1.05	1.80	0.02	NA
Drop Out Rate	0.93	1.29	2.58	1.95	1.75	1.27
Promotion Rate	98.74	94.99	96.56	98.75	97.85	98.21
Transition Rate	94.44	97.68	100.02	96.59	96.51	96.67
Retention Rate	98.25	98.19	97.42	97.15	98.20	98.73

(Source – District Education Office)

Repetition rate has reduced drastically from 1.80% to 0.02% in the year 2009-2010 to 2013-2014 respectively. The number of students moving out of the education i.e. the dropout rate has increased over the period of time. In the year 2009-2010 the dropout rate was 0.93% which increased to 1.27% in the year 2014-2015. Students who are promoted from one grade to another have reduced marginally over a period of time. Transition rate and retention rate has remain almost constant over the period of time. Transition rate was 94.44% in the year 2009-2010 which reduced to 96.67% in year 2014-2015. The positive of the flow rates is that the promotion rate, transition rate and retention rate have been maintained above 95% over the period of time.

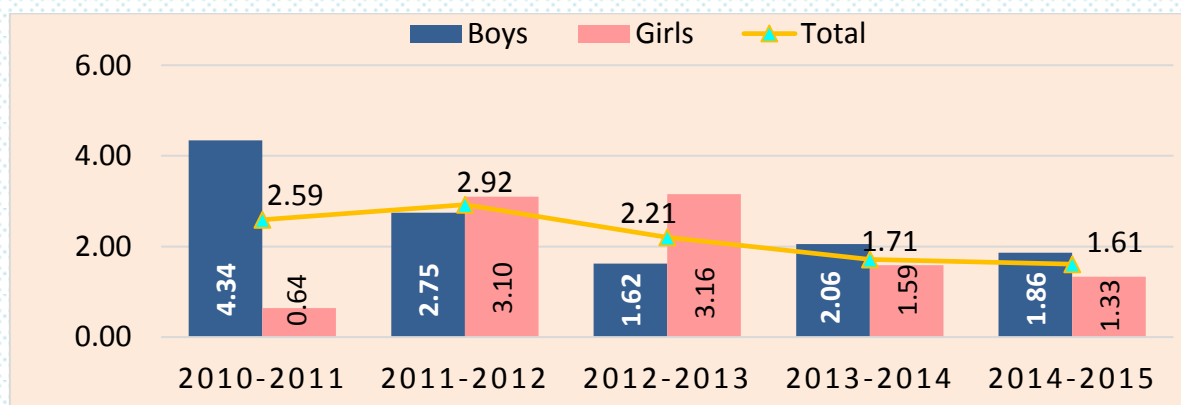
In the above table the dropout rate is highest in the year 2011-2012.

The girls and the boys drop out rate are shown in the chart below.

Figure 2.23 Dropout Rate of Girls and Boys in Standard 1-5

(Source – Sarva Shiksha Abhiyan, Gujarat State)

The girl's dropout rate is less in all the years except 2012-2013 when compared to boys. In the year 2009-2010 the dropout rate is least with 0.23% and the highest is in 2012-2013 with 2.02%. In case of boys the highest is in the year 2011-2012 with 3.19% and least is in 2009-2010 with 1.56%. During the last five years boys' dropout rate has never gone less than 1%. Below mentioned chart shows the dropout rate of girls and boys in the standard 1-7

Figure 2.24 Dropout Rate of Girls and Boys in Standard 1-7

(Source – Sarva Shiksha Abhiyan, Gujarat State)

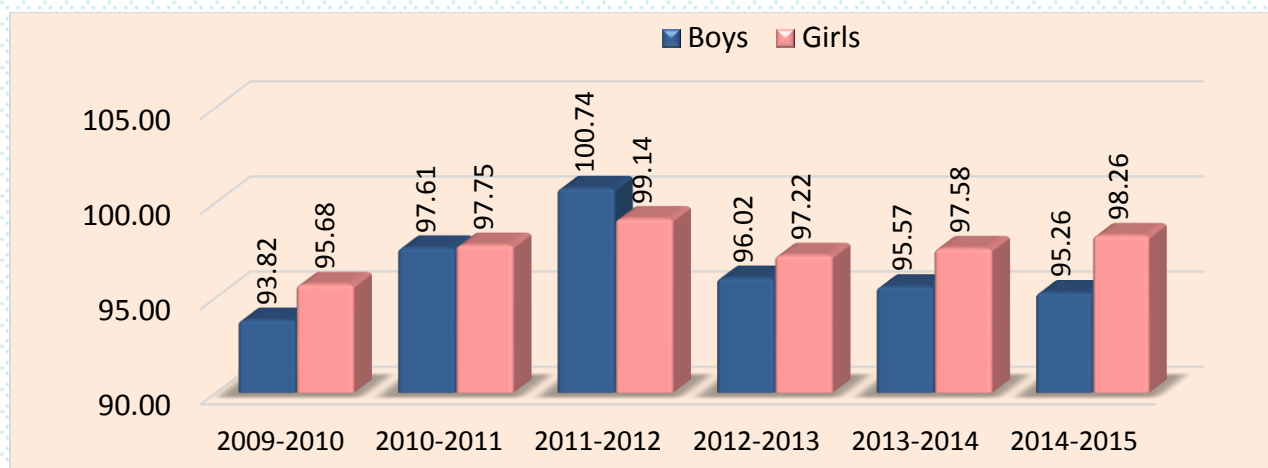
In the year 2010-2011, girl's dropout rate was the least. It was at 0.64% and the boy's dropout rate for the same year was the highest in the last five years at 4.34%. Girl's dropout rate was highest in the year 2012-2013 by 3.16% and boy's dropout rate was least in same year at 1.62

Seeing to the trend of the last five years, there has been decrease in the drop out rate of boys and girls and the gap between the boys and girls dropout rate is also reducing.

In the year 2014-2015 there has been a drastic increase in the dropout rate for boys and girls in standard 1-8. The girl's dropout rate has gone upto 5.01 from 1.59 in the year 2013-2014. Boy's dropout rate has increased to 4.47 which was 2.06 in the year 2013-2014. This drastic change in the dropout rate is due to merging of standard 8 in upper primary.

Transition rate is the number of students going from primary to upper primary. Below mentioned chart shows the transition rate for boys and girls for the last 5 years 2009-2010 to 2013-2014.

Figure 2.25 Transition Rate of Boys and Girls



(Source – Sarva Shiksha Abhiyan, Gujarat State)

The number of girls transiting from primary to upper primary is higher than boys. The transition rate of girls is more when compared to boys except for the year 2011-2012. In the year 2011-2012 the girls going from primary to upper primary is highest with 99.14 and in rest of the years it is hovering around 95-98%. In the year 2011-2012, the transition rate of the boys has reached 100.74% which is highest during the last 5 years. The basic reason for the transition rate for boys going beyond 100 is due to students previous year's poor performance in the final examination. The least transition rate is in the year 2009-2010 with 93.82%.

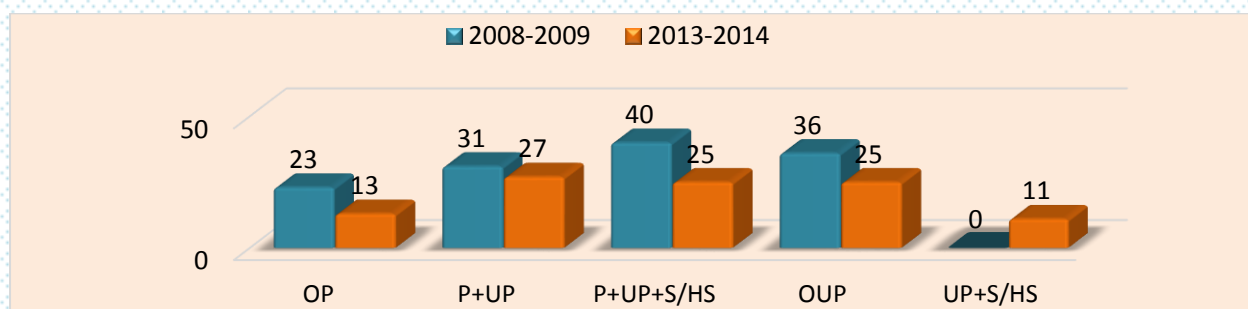
2.7 Teaching and Learning Environment

Student Classroom Ratio (SCR) and Pupil Teacher Ratio (PTR) have a direct connection with the quality of learning which is imparted by the schools in the education system. Lesser the number of students in the class, more attention can be given by the teacher and higher will be the learning by the students. Where there is a high ratio between the teacher and student, the learning by the student will be deteriorated, and the teacher cannot concentrate on the teachings

to the students. The number of teachers available for number of students is said to be PTR. Lesser the PTR more learning's for the students. Thus, it has been observed that PTR have reduced for Porbandar district. In the year 2010-2011 PTR was 30 which has reduced to 24 in the year 2014-2015. PTR and SCR may vary over the period of time but the fluctuation should not be on a very higher side.

The chart below shows PTR and SCR for the year 2008-2009 and 2011-2012 in various categories of schools

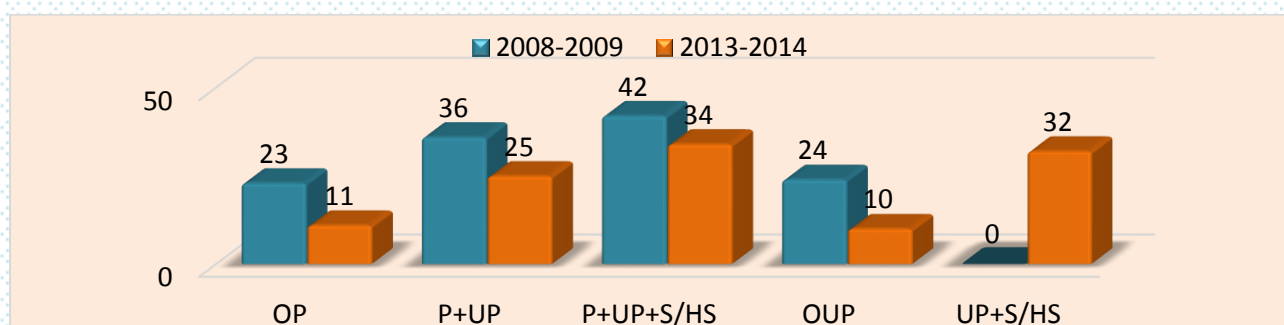
Figure 2.26 Pupil Teacher Ratio



(Source – Sarva Shiksha Abhiyan, Gujarat State)

PTR has reduced in all the categories of the schools. In the primary school PTR during the year 2008-2009 were 23 which reduced to 13 in the year 2013-2014. In the only upper primary category the PTR has been reduced to 25 in the year 2013-2014. In the year 2008-2009 the same was 36. This shows that the number of teachers required for the students has been increased. New teachers have been recruited under various categories of the schools and thus PTR has reduced. This shows a positive sign for the education in Porbandar District.

Figure 2.27 Student Classroom Ratio (School Category Wise)



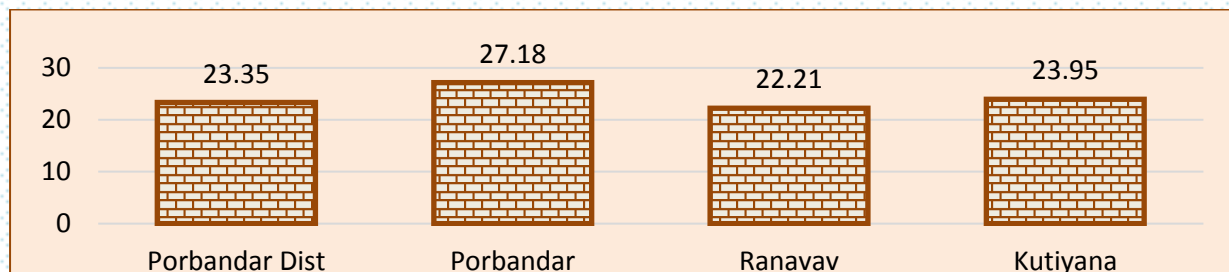
(Source – Sarva Shiksha Abhiyan, Gujarat State)

Number of student in the class can be classified by SCR. In Porbandar District it is observed that SCR has reduced over the period of time. In the year 2008-2009 in the primary category SCR was 23 which reduced to 11 in the year 2013-2014. The maximum reduction is seen in only upper primary level. In the year 2008-2009 SCR was 24 which reduced to 10 in the year

2013-2014. This shows that the number of classes have been increased, which is positive for Porbandar's education system.

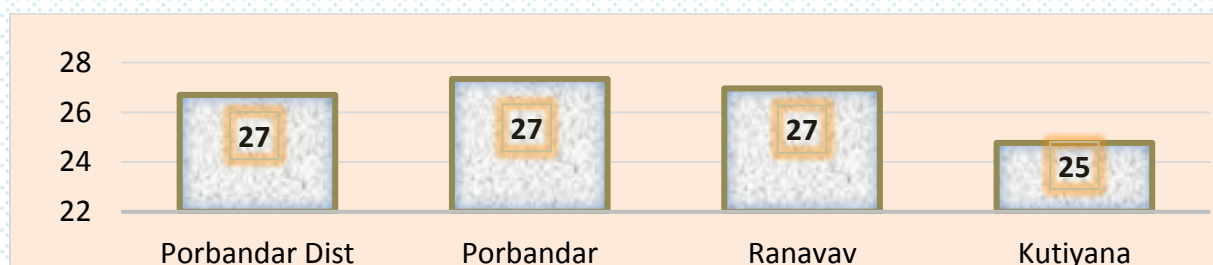
Below mentioned charts shows talukawise SCR and PTR for the year 2013-2014.

Figure 2.28 Talukawise Student Class Ratio 2013-2014



(Source – District Education Office)

Figure 2.29 Talukawise Pupil Teacher Ratio 2013-2014

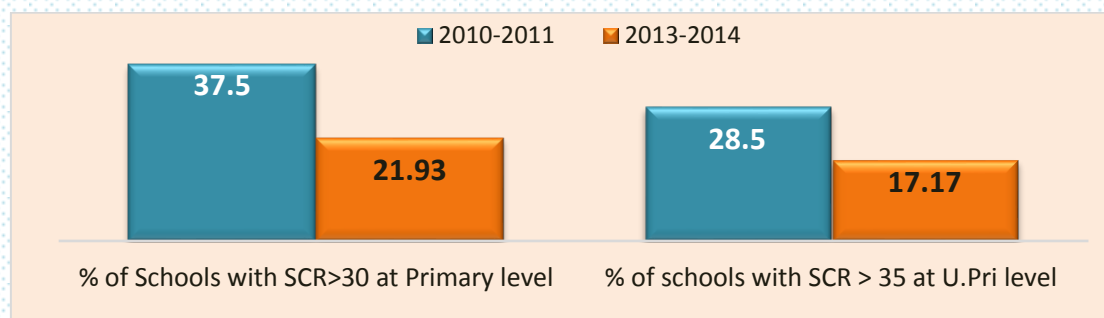


(Source – District Education Office)

SCR and PTR is highest in Porbandar taluka when compared to other two taluka and with the district. SCR is lowest in Ranavav with 22.21 which is less than the district. This is followed by Kutiyana taluka with 23.95 which is slightly more than the district SCR of 23.35. PTR is seen lowest in Kutiyana taluka with 24.77 which is less than the district PTR. This is followed by Ranavav with 26.96 which is slightly higher than the district's PTR of 26.70

Below mentioned chart shows the percentage of schools with higher SCR and PTR ratio. From both the chart it shows that over the period of time these percentage of schools with higher SCR and PTR is reducing.

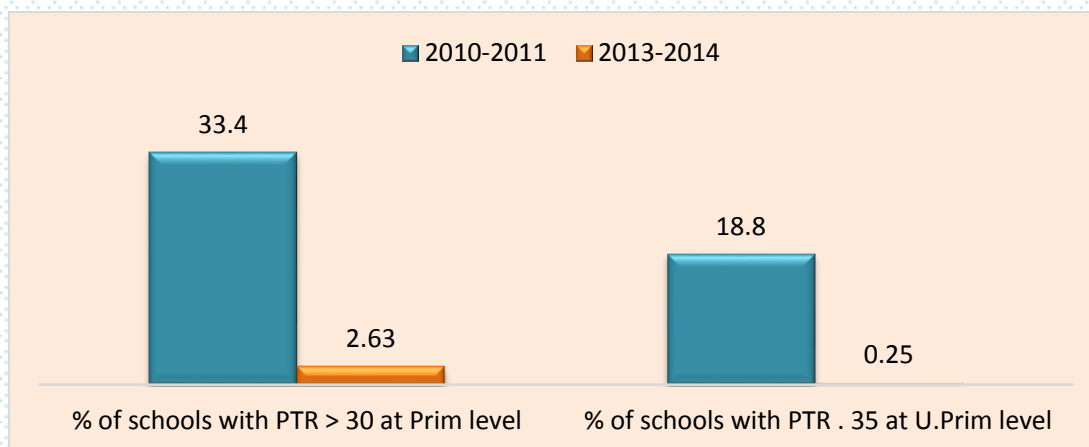
Figure 2.30 Percentage of Schools with Higher SCR



(Source – Sarva Shiksha Abhiyan, Gujarat State)

The percentage of schools with higher SCR has reduced during the year. In the primary level during the year 2010-2011 the percentage of schools with SCR more than 30, was 37.5% which reduced to 21.93%. At the upper primary level percentage of schools with SCR more than 35 were at 28.5% which reduced to 17.17%. The percentage change is higher in the primary level when compared to upper primary level.

Figure 2.31 Percentage of schools with higher PTR

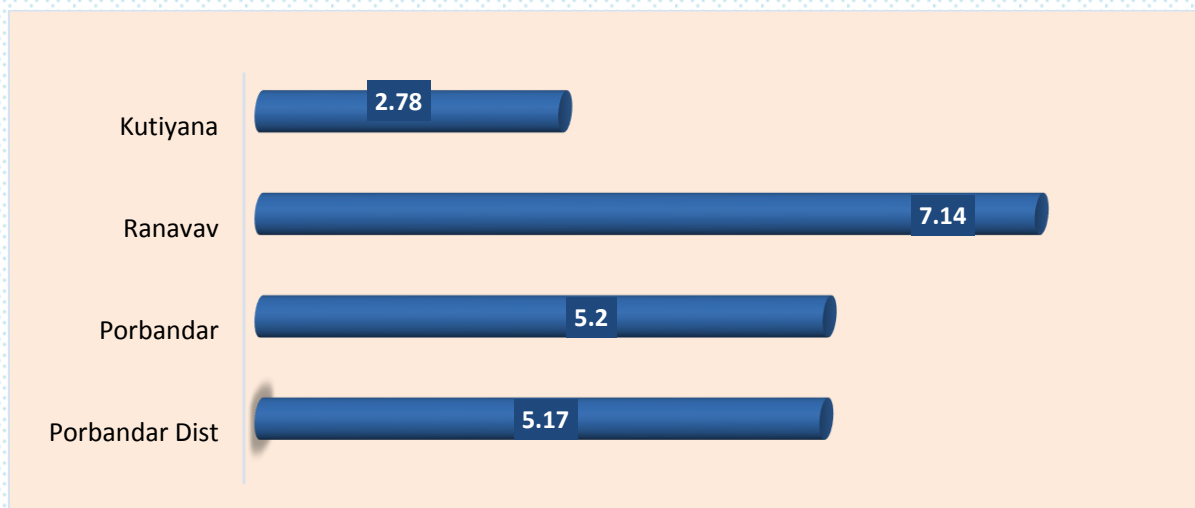


(Source – Sarva Shiksha Abhiyan, Gujarat State)

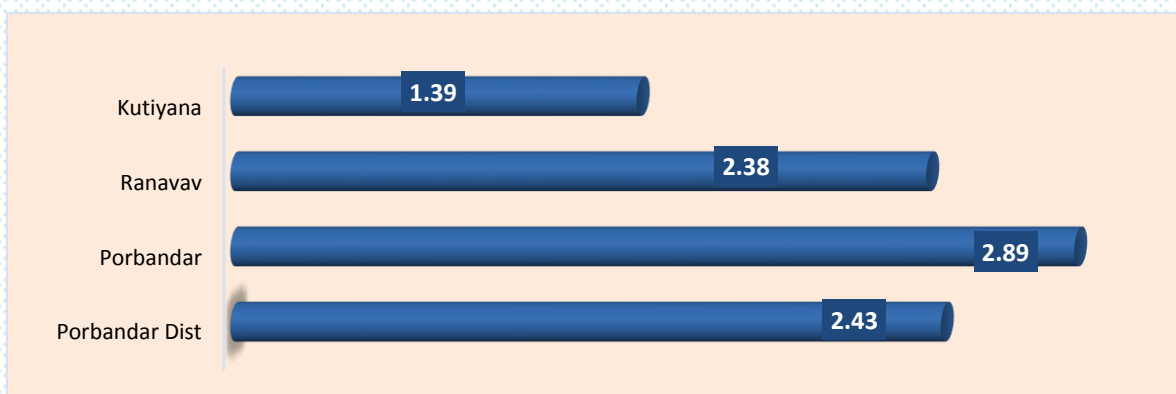
The percentage of schools with higher PTR has substantially reduced in primary and upper primary categories of schools. In the primary level it has reduced from 33.4% to 2.63% and at upper primary level reduced from 18.8% to 0.25%. The percentage change is higher at primary level when compared to upper primary level.

Below mentioned chart shows talukawise percentage of schools with SCR and PTR is higher than 40.

Figure 2.32 Percentage of Schools with SCR > 40 (2013-2014)



(Source – District Education Office)

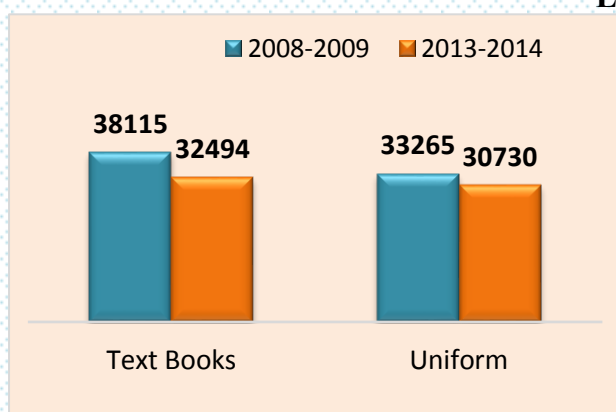
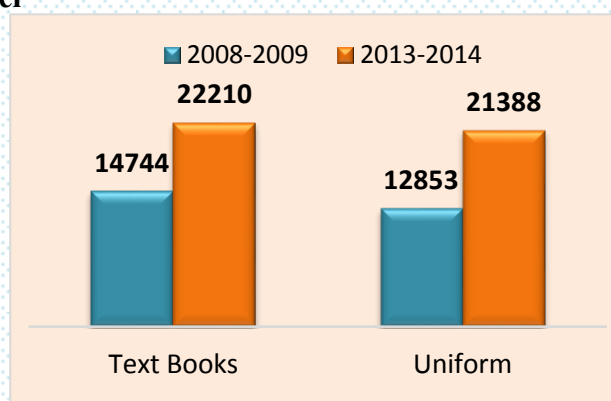
Figure 2.33 Percentage of Schools with PTR > 40 (2013-2014)

(Source – District Education Office)

If seen talukawise, percentage of schools having PTR more than 40 is highest in Ranavav. It is followed by Porbandar taluka which is slightly more than Porbandar district. Kutiyana taluka has the least percentage with 1.39%. Percentage of schools with PTR more than 40 is highest in Porbandar taluka and this is more than Porbandar district. Porbandar taluka is followed by Ranavav which is slightly less than the district percentage. The least is Kutiyana taluka with 1.39%.

2.8 Incentives for Education

The distribution of textbooks, uniform and stationery are some incentives which are given to the students. With the distribution of these incentives free of cost, it reduces the cost of education for the students and the burden of school and education is less for the students and their family. These incentives are given free of cost at primary and upper primary level to boys and girls. The below mentioned chart shows the incentives (Textbooks, uniforms, stationery) distributed at Porbandar district in primary and upper primary level.

Figure 2.34 Incentives at Primary Level**Figure 2.35 Incentives at Upper Primary Level**

Source - District Elementary Education Report 2008-2009 and 2013-2014

The distribution of incentives at the primary level has not risen. Textbook distribution has reduced from 38115 in the year 2008-2009 to 32494 in the year 2013-2014. There is a marginal decrease in the uniform distribution from 33265 to 30730.

In upper primary level the incentive distribution has seen an upward rise in textbook and uniform. Textbook distribution has increased from 14744 in the year 2008.2009 to 22210 in the year 2013-2014 with a CAGR of 8.53%. Uniform distribution has increased drastically. In the year 2008-09 it was at 12853 which increased to 21388 in the year 2013-2014.

Below mentioned table shows talukawise percentage of schools with distance from CRC.

Table 2.17 Talukawise Percentage of Schools with Distance from CRC

Name of taluka/Dist	<1 KM	1-5 KM	5-10 KM	>10 KM
Porbandar Dist	14.29	44.07	27.96	13.68
Porbandar	13.29	53.18	25.43	8.09
Ranavav	17.86	34.52	22.62	25.00
Kutiyana	12.50	33.33	40.28	13.89

(Source – District Education Office)

Majority of the schools in the district and all the 3 talukas are from 1-5 Km from CRC. Percentage of schools with less and 1 Km from CRC is highest in Ranavav taluka with 17.28% which is higher than the district for 14.29%. Percentage of schools with 1-5 Km is highest in Porbandar taluka with 53% which is higher than the district of 44%. Porbandar taluka is followed by Ranavav with 34% and Kutiyana with 33%. Percentage of schools with 5-10 KM from CRC is highest in Kutiyana with 40%. The reason for this will be less number of schools in the rural area of taluka

As specified in Right to Education Act the schools should be near so that it can facilitate the students in terms of easy access to school. Below mentioned table shows how much villages and schools are there in all the 3 talukas

Table 2.18 Talukawise Villages and Schools (2012-2013)

Taluka Name	Villages	Primary	P+UP	OUP
Porbandar	87	22	229	-
Ranavav	41	26	82	1
Kutinaya	51	5	77	-

(Source – Sarva Siksha Abhiyan)

As per the above table number in all the three talukas the number of villages is less and number of total schools are on the higher side. Thus it can be said that all the villages has the accessibility to schools. Highest numbers of villages are in Porbandar taluka and thus the numbers of schools in Porbandar taluka are also on the higher side when compared to other two talukas. Porbandar taluka has highest number of schools. It has 252 followed by Ranavav with 108 and Kutinaya with 82 schools.

2.9 Schemes and Programs for Education

Gujarat government has started with various schemes to improve literacy rates, enrollment rate, and retention rate in the primary and upper primary categories

Below mentioned table shows various schemes adopted by Porbandar district

Table 2.19 Various Schemes and their Brief Detail

No	Scheme Name	Brief Detail of Scheme
1	Sarva Shiksha Abhiyan	Sarva Shiksha Abhiyan is a nation-wide movement to ensure primary education in conformity with the Clause 86 of Constitution of India that makes education compulsorily available to all children between 6 to 14 years, free of cost.
2	Mid Day Meal Scheme	To improve the nutritional/ health standard of growing children. To reduce drop-out rate and to increase attendance and to attract poorer children to come to the school.
3	Vidyalakshmi Bond Yojana	<ul style="list-style-type: none"> ➤ Vidyalakshmi Bond Yojana is implemented with a view to encouraging education among girls in rural areas. ➤ Villages with less than 35% literacy among females are covered under Vidyalakshmi Bond Yojana. ➤ Under Vidyalakshmi Bond Yojana, on admission in class I, a girl child is given Narmada Shrinidhi Bonds of Rs.2000 and on her passing out the Class VIII, the amount together with interest is paid. ➤ In urban areas also a girl child in a BPL family, when admitted to Class I in school, is given Narmada Shrinidhi Bonds of Rs.2000 under Vidyalakshmi Bond Yojana.

4	Vidya Deep	<ul style="list-style-type: none"> ➤ The State Govt. implements this Yojana in memory of the children died in Earthquake on 26 Jan 2001. ➤ Per student assistance is raised to Rs.50000 from 2008 – 9 from Rs.25000. ➤ The objective is to help the parents of children who died. ➤ A 24 hour Insurance cover is provided to all students reading in primary schools, Ashramshala, secondary and higher secondary schools in Govt. sector or with Govt. aid. ➤ The insurance premium is paid by Govt. ➤ If the child dies, the following sum are paid to parents Rs.50000 if child was in primary school Rs.50000 if the child was student of secondary or higher secondary school
5	Pathya Pustak Yojana	Course material is provided free of cost to all students studying in Govt. primary schools.
6	Sada Pravesh Utsav	A welcome festival is organized to celebrate entry in Class I of primary schools every year.
7	Kanya Kelavani Rath Yatra	Kanya Kelavani Rath Yatra is organized to promote girl education.
8	Educational Scholarships	Students who are socially and educationally backward are given various scholarships from Rs.150 to Rs4250 from standard 1 to college level.
9	Sarkari Chatralay	The scheme has been started since December 2007 for the students who are not able to support financially their college education. One school is prepared for the girls and one for the boys and students need not to pay any amount for the stay and food.
10	Adarsh Niwas Shalas	This scheme is for the students of standard 8 to 10. Students with good academic track record are given the opportunity to study, stay without any fees. There is one Adarsh Niwas Shalas in Porbandar district.
11	Grant-In-Aid Chatralay	Schools which are run by NGO are given grant to provide the students with free hostel accommodation. In Porbandar district there are six such schools. These provides support to students of 8 to 10 standards.
12	Grant-In-Aid Ashramsada	Schools which are run by NGO are given grant to provide the students with free hostel accommodation. In Porbandar district there are 1 such schools. These are given to students of 1 to 7 standards.
13	Sarswati Sadhana Yojana	This scheme is for the girl students of standard 8. The girls who go to school by commuting from their home are paid the amount of Rs.2000 so that a cycle can be purchased. The girl student who commutes more than 2.5 Km in the village and 3.5 Km in the city are given the benefit under this scheme.

Source – District Education office

Porbandar district tries to implement the state and the national level educational schemes to provide a better learning environment for the students. The total expenditure for the 5 years (2006-2007 to 2010-2011) by the district on such educational schemes is as under.

The below mentioned table shows talukawise Gunotsav of 2014

Table 2.20 Talukawise grades for Gunotsav 2014

Name of the Taluka	A+ Grade	A Grade	B Grade	C Grade	D Grade	Grand Total
Porbandar	1	31	100	34	8	174
Ranavav	2	20	45	12	6	85
Kutiyana	-	15	44	11	3	73
Grand Total	3	66	189	57	17	332

(Source – District Education Office)

In the above table majority of the schools in the district are in B grade. Out of the total schools, Porbandar taluka has more number of schools and thus the same taluka has highest number of schools in all the grades when compared to other two talukas. It is interesting to see that A+ grade of school in Porbandar taluka is only one and in Ranavav taluka is two. In the district there are around 74 schools with C and D grades, which can be further increased to grades B and A. to improve the Gunotsav grades the schools with better grades can adopt the other schools with lesser grades in the same talukas.

Table 2.21 Total Expenditure on Educational Schemes

Year	Total Expenditure (In Lakhs)
2006-2007	258.77
2007-2008	244.75
2008-2009	259.77
2009-2010	260.24
2010-2011	268.41

(Source – District Education Office)

In the 5 years the decrease in the expenditure towards educational schemes is only seen in the year 2007-2008. In rest of the years there has been an increase of the amount spent on the district for the education. The maximum change in the 5 years is seen in the year 2008-2009. Over the years the increase is by 0.73% CAGR.

Performance of various educational programs

Mid Day Meal in Schools (MDMS)

National Programme of Mid Day Meal in Schools (MDMS) is a flagship programme of the Government of India aimed at addressing hunger in schools by serving hot cooked meal, helping children concentrate on classroom activities, providing nutritional support, encouraging poor children, belonging to disadvantaged sections, to attend school more regularly, providing nutritional support to children to drought-affected areas during summer vacation, studying in Government, Local Body and Government-aided primary and upper primary schools.

In Gujarat state under this MDMS 7684.56MT of food grains were lifted to be provided to the students for betterment. The amount which was paid by the government for this food grains was 47.5 Lakhs in the year 2010. In the year 2010-2011, there was 107% coverage for the scheme. 297 schools were covered in Porbandar district. In the same year in Porbandar the number of students who availed this scheme was 23992. In the year 2010-2011 the highest availed MDMS school in Porbandar district was Kantela with 92%. The total number of enrollment in the school was 335, attendance was 275 and the students who availed this scheme were 253. The lowest availed percentage was 46.80% in Shri Lok Pramik shala in Bhod village. The total enrollment in the school was 290, attendance was 242 and students' availing this scheme was 113.

Children and teachers were satisfied with the quantity and quality of MDM served in the schools. Quality of the food served was satisfactory in appearance and taste wise in most of the schools.

Educational Scholarships

In Porbandar district various educational scholarships are provided to the students from standard 1 to college. The following is the list of educational scholarships:-

1. Boys and girls student studying in standard 1 to 4 are provided with Rs.150.
2. Socially educationally backward/minority backward students studying from standard 1 to 7 are provided with Rs200 to purchase 2 pairs of uniform.
3. Socially educationally backward girl student is provided with Rs.900 to Rs.4250 amount of scholarship.
4. Socially backward students are provided with Rs.25 to Rs.250 for the standard 1 to 10 and for post SSC the scholarship of Rs.900 to Rs.4250 is given.

The below mentioned table shows the performance of educational scholarship over the period of 5 years from 2006-2007 to 2010-2011

Table 2.22 Talukawise Performance of Educational Scholarship

Year	Porbandar		Ranavav		Kutiyana	
	Amount (Lakhs)	Beneficiaries	Amount (Lakhs)	Beneficiaries	Amount (Lakhs)	Beneficiaries
2006-2007	174.38	83240	44.11	21335	40.27	19363
2007-2008	190.83	79748	27.08	11335	26.83	11230
2008-2009	177.01	82506	28.83	13028	28.60	12985
2009-2010	125.93	65985	31.90	22891	33.73	20115
2010-2011	126.16	52488	30.12	21901	33.07	19203

(Source – District Education Office)

In Porbandar taluka the educational scholarship is reducing over the years. In Ranavav and Kutiyana talukas the amount provided has reduced but the beneficiaries has almost remained constant. In the year 2006-2007, 44 lakhs was given in 21335 students and in the year 2010-2011 30 lakhs were given in 21901 students. Almost the same status is in Kutiyana taluka.

2.10 SWOC Analysis

Strength

- The gender gap and the regional gap in literacy in census 2011 has reduced when compared to 2001
- In previous three years percentage of females passing Neo-Literate examination is higher than the percentage of males in the district.
- Majority of the classrooms are in good conditions and various amenities like electricity, playground, and compound wall are found in majority of the schools.
- Qualification of the school teachers has increased over the last five years. Number of post graduate teachers have increased from 281 in the year 2008-2009 to 824 in the year 2014-2015 for primary with upper primary category
- The dropout rate of girls is less when compared to boys in standard 1-7.
- Transition rate for the girls is on the higher side when compared to boys.
- Female teachers in the schools are in higher proportion. There are 57% of the female teachers and 43% of teachers are male.
- PTR over the 5 years have reduced. This shows that the numbers of teacher available for the students have increased.

Weakness

- In Ranavav and Porbandar taluka the percentage of computer lab facility in the school is less when compared the the district.
- Percentage of Female literacy in the district has increased over the last decade but still it is less when compared to male literacy.
- Enrollment of the students is less in upper primary category when compared to primary. During the last 5 years increase in terms of CAGR in primary is 3.39% and in upper primary is 3.24%.

Opportunities

- Increase in number of schools is due to increase in private schools from 82 (2009-2010) to 144 (2014-2015).
- Percentage of schools with computer facility is 71% in the district which is less when compared to Kutiyana taluka (82%).
- 100% of the schools in the district have the facility of drinking water. Tap as a source of drinking water is 50.74% and there is an opportunity to increase the same.
- SCR over the last 5 years have reduced. Thus number of students per class has reduced. Thus the students can pay attention and can concentrate well.

Threats

- Urban-Rural literacy gap in Ranavav taluka is at 5.28% in the year 2011. It has reduced very marginally when compared to 2001.
- There is a wide gap between GER and NER over the last five years in the upper primary level.
- Gender gap in primary and upper primary is high in Ranavav taluka when compared to other 2 talukas and it's a challenge to reduce the same through KGBV and other

2.11 Way Ahead

The literacy gender gap in Porbandar district in rural area was less when compared to Gujarat in the year 2001. Further in the year 2011 it has reduced. For Gujarat it has reduced drastically and the literacy gender gap for rural area has been almost the same for district and Gujarat. It is 19.33% and 20.25 % respectively. The gender gap in urban area has reduced in the decade but is higher than Gujarat state. In Gujarat literacy gender gap in the urban area is 9.95 % and in the district it is 12.94 %. Thus to increase the literacy rate, backward minority communities should be contacted and literacy in the urban area can be increased. If seen talukawise, female literacy rate is low in Ranavav and Kutiyana taluka when compared to district and Porbandar taluka. In 2011 the literacy rate has increased in these talukas. In Ranavav and Kutiyana taluka the female literacy rate is 62.9% and 61.8 % respectively. Thus steps should be taken to increase the female literacy rate.

For increasing the literacy rate special night classes should be conducted with better facilities and resources, especially for the illiterate who are working for their livelihood. To increase the literacy rate in the socially backward people, some kind of meeting can be held at taluka and village level to facilitate the people who are literate in front of villagers, so that some motivation can be given. Illiterate people can be shown the demonstration regarding the importance and value of education and literacy in the life.

The basic facilities provided to the children are higher in Kutiyana taluka when compared to Ranavav taluka. Computer facilities are less seen in Ranavav taluka when compared to Kutiyana taluka. Some positive steps should be taken to provide computer facilities in the schools of the district and specific to Ranavav taluka.

Enrollment of the students in the primary and upper primary has increased over the last years. The number of students enrolled is less in Upper primary when compared to primary level. The CAGR for the 10 years in primary is 3.32% and for upper primary it is 3.11%. Net Enrollment Ratio (NER) is less in the upper primary level when compared to primary level in the year 2013-2014. In primary level it is 85.4 and in upper primary level it is 70.1. The students who clear their primary level should be pursued personally for their upper primary level and thus the students can get higher education. Girl's enrollment in grade 4 has reduced. In the year 2008-2009 out of total enrolled students in grade 4, 48.21% were girls but in the year 2013-2014 it has reduced to 46.39%. Gaps in boys and girls enrollment in upper primary level are high in Ranavav taluka.

Dropout rate of girls for standard 1-7 has reduced drastically but the dropout rate of boys has increased from 1.62 in the year 2012-2013 to 2.06 in the year 2013-2014. To reduce the dropout rate of boys there has to be adequacy of teachers of respective subject and should be adhered to ensure proper education in all subjects at primary and upper primary level. For proper administration of schools principals should be appointed immediately. To reduce the dropout rate of girls and increase the enrollment of girls, the parents of school going girls can be called at a social gathering or function at taluka or village level. The primary education should be intensively monitored to reduce dropout rate and continuous evaluation is needed for the improvement in student's performance. To reduce the dropout rate in upper primary schools, schools should have a special facility of creches for few exceptional students who cannot come to school because they have to take care of younger brother or sister. Dropout rate for upper primary is high where the facility of school is not available near to their village. Thus some type of hostel facilities at cheaper rate should be provided near the schools or new school buildings should be set up in NES area.

Government can provide two sets of textbooks for the primary and upper primary level as it is difficult for the students to carry heavy books and commute from village to schools. Thus one set of text books can be kept at the schools and for reference purpose one set can be kept at home. This will reduce the physical burden of the students and it will be weightless education in true sense.

The administrative burden for maintaining the Vidya Lakshmi Bond is on the higher side and thus the same can be given at 7th pass result only. Thus it will be reducing the administrative burden of maintaining the bonds.

Under the program of Gunotsav, in the year 2015, the points earned by the district and taluka schools are between 76 to 81 and thus all the talukas and district except Kutiyana has secured B grade. Kutiyana taluka has secured A grade. The schools who have secured good score under Gunotsav can adopt the schools with poor score and help to increase the scoring pattern under Gunotsav.



CHAPTER 3
HEALTH, NUTRITION
AND SANITATION



Chapter 3 Health, Nutrition and Sanitation

3.1 Introduction

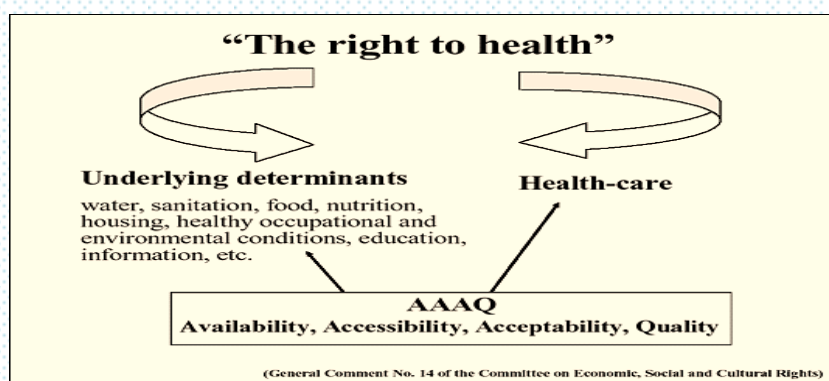
Indian government has set eight vital goals to be achieved by 2015 under its Millennium Development Goals (MDG). The MDG goals mainly caters to eradication of poverty, hunger, providing of primary education, ensuring environmental sustainability, developing global partnerships, reducing child mortality, improving maternal health, and combating AIDS, Malaria and other diseases (Mavalankar, n.d.). Medical Services are an important sector of Health Department. Medical services are working under the administrative control of Health and Family Welfare Department. Based on the health care approach, the health policy, is formulated to provide health services to people depending on qualitative disease prevention, incentive, remedial and amendatory referral system and inter-structural coordination. (Gujarat Social Infrastructure Development Society, 2014-15). Based on the Human Development Index (HDI) of 2007-08 Gujarat stands in the category of Medium HDI at 0.527, at a position of 11th rank. The HDI of Gujarat is comparable to Angola country's HDI (List of Indian states and territories by Human Development Index, 2007-08).

According to World Health Organization (WHO) (n.d.), health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health is viewed more holistically in the definition. Tones and Green (2004) described there are dichotomous differences in approach to define health. When health is viewed in a positive shade, it tends to focus on the concept of “well being”. A negative focus on health emphasizes the aspect of absence of disease.

‘Better health’ is central to human happiness and well-being. It also makes an important contribution to economic progress, as healthy populations live longer, are more productive, and save more (World Health Organization, n.d.). In fact right to health plays a pivotal role. The right to health means that governments must generate conditions in which everyone can be as healthy as possible (World Health Organization, 2013).

It is diagrammatically explained in Figure 3.1.

Figure 3.1 The Right to Health



(Source: Retrieved from <http://www.who.int/mediacentre/factsheets/fs323/en/>)

It may be inferred that there should be sufficient availability of health care facilities, goods and services; it should be easily affordable and accessible without any discrimination; it should be acceptable and sensitive to gender and life-cycle requirements and it should be scientifically and medically appropriate and of good quality. Health, nutrition and sanitation are interwoven with each other to provide a quality life to human beings. Nutritious food and Cleanliness in the surroundings, acts as a platform of providing sound health to the living beings.

The chapter discusses health care aspect in Porbandar district. It mainly concentrates on the availability of healthcare infrastructural facilities, dedicated human resource in health care, major health care services in the district, women health care, nutrition, sanitation, various schemes and programmes for health care and its corresponding performance. An outstanding success story is also incorporated.

3.2 Healthcare Scenario

Porbandar is known for its closed network of hospitals and medical centers that include Specialty Clinics, Acupressure Centers, Yoga Centers and others. Through such an extensive medical support the city guarantees health for every citizen. Porbandar city is supported by excellent coverage of hospitals and nursing homes for better healthcare. The renowned hospitals include Shri Murarji Khairaj Thakarak Hospital, Bhavsinhji Civil Hospital, Shivam Eye Hospital, Shri Jivandas Dhamecha Eye Hospital and Aastha Hospital where all sorts of problems related to different body organs are treated with intensive care. Clinics are considered as added medical facility apart from hospitals. There are umpteen clinics in Porbandar (Healthcare in Porbandar, n.d.).

Porbandar district has many allopathic, ayurvedic and homeopathic medical institutions. In rural and urban areas the allopathic medical institutions consists of hospitals, PHCs, CHCs,

dispensaries and others. Ayurvedic and Homeopathic medical institutions are often managed by state government and local bodies.

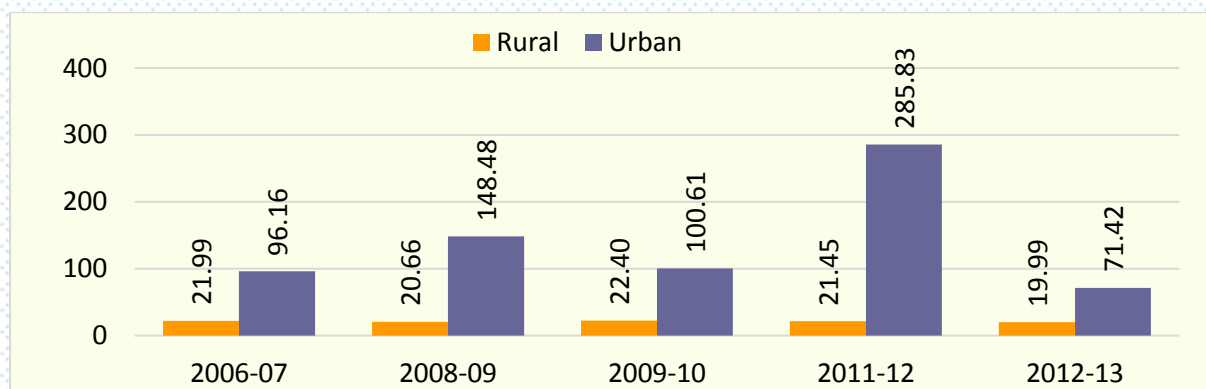
Table 3:1 Medical Institutions in Porbandar District

Year	Allopathic			Ayurvedic	Homeopathic
	Rural	Urban	Total		
2006-07	10	5	15	6	2
2008-09	10	5	15	6	2
2009-10	10	5	15	6	2
2011-12	10	5	15	6	2
2012-13	10	5	15	6	2

(Source: Based on database of Commissionerate of Health, Medical Services, Medical Education and Research, Gujarat-2006-2012)

It may be noticed that the number of Allopathic medical institutions in Porbandar district has remained constant on year-on-year basis. 6 Ayurvedic and 2 Homeopathic institutions have remained constant throughout the period of five years. It clearly indicates that residents of Porbandar district are in high favour of allopathic treatment than ayurvedic and homeopathic treatment.

Figure 3.2 Population Served Per Allopathic Institution (In 1000s) (2011-12)

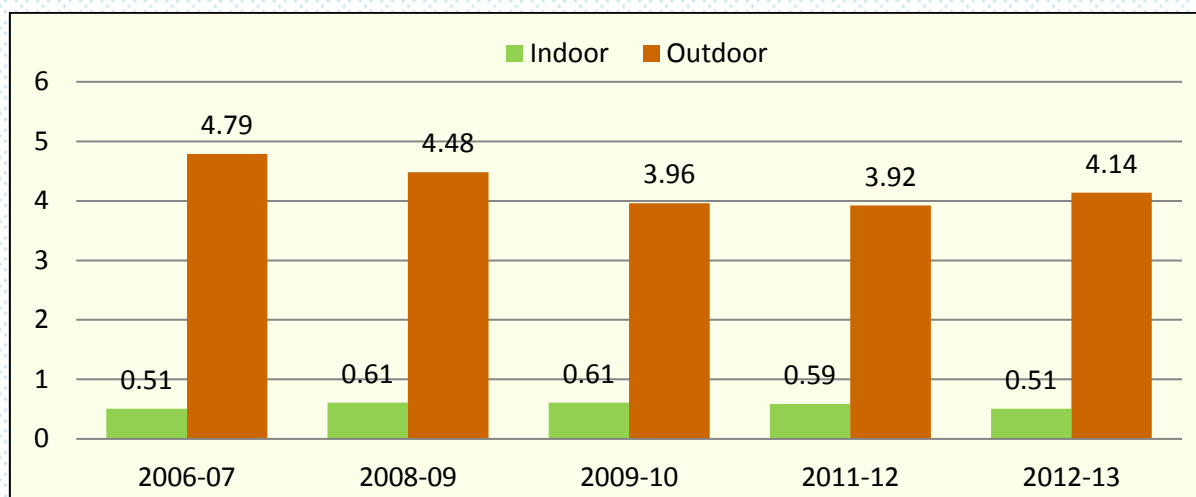


(Source: Based on database of Commissionerate of Health, Medical Services, Medical Education and Research, Gujarat-2006-2012)

It may be inferred that the population served per allopathic hospitals in rural area of Porbandar district is lower than urban counterparts. It is noticed that the number of population served per allopathic hospitals in rural region is not consistent. A steady decline has been observed in the year 2008-09, 2011-12 and 2012-13. It highlights that people in rural region still believe in conventional sources of treatment like Jhar-Phunk (Exorcism by blowing on the face of the patient), Jantra (magic), Tantra (Charms), Dora (Tying a piece of thread round the wrist) etc. Population served per allopathic hospitals in urban area is more, indicating that medical

facilities are in a better state in urban areas than rural areas. As the data pertains to only government hospitals, population served per allopathic institution in urban areas is more than rural counterparts.

Figure 3.3 Patients Treated in Government Medical Institution (In 1,00,000)

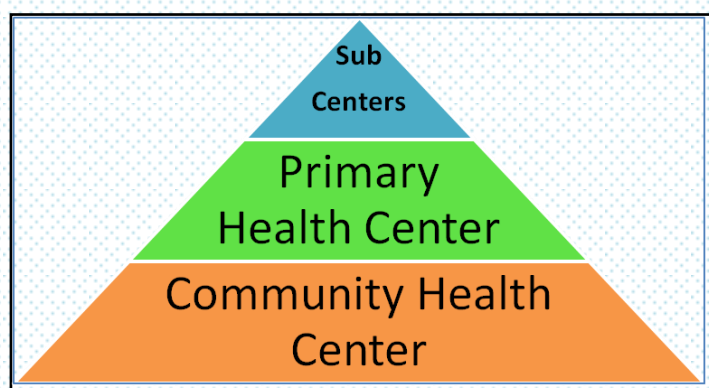


(Source: Based on database of Commissionerate of Health, Medical Services, Medical Education and Research, Gujarat-2011)

It may be inferred that the number of outdoor patients are higher than the indoor patients. Indoor patients have been consistent over a period of five years. In the year 2006-07 and 2012-13 the number of indoor patients are same at 51,000. The figure stands consistent at 61,000 indoor patients for two consecutive years 2008-09 and 2009-10. An outdoor and indoor patient describes the reach of people to the medical institution. Universal health care and quality care are very important areas to focus, which will describe how many percentages of people are availing universal quality health services.

3.3 Health Care Infrastructure Accessibility

Hospitals are basic health care infrastructure through which the medical services and treatment is provided to the people. The public health system comprises of a set of state-owned health care facilities funded and controlled by the government of India. Some of these are controlled by agencies of the central government while some are controlled by the State Government (Public Health System, n.d.). Medical College Hospital, District hospitals, sub-divisional hospital and Primary Health Center (PHCs) and Community Health Centers (CHCs) have a crucial role to play. The health system consists of three-tiered structure, which is described in Figure 3.4.

Figure 3.4 Three-Tiered Health Structure

(Source: Adapted from Majumder and Upadhyay, 2004)

Sub-Centers (SC) is the first contact point between health workers and village community. PHC is the first contact point between village community and doctor. CHC serves as a referral center for PHCs (Majumder and Upadhyay, 2004). PHCs sometimes referred, as Public Health Centers are cornerstone of rural healthcare, which are state owned centers, actively engaged in providing rural health care needs, including minor surgeries. Each primary health centre covers a population of 1,00,000 and is spread over about 100 villages. A PHC acts as a referral unit for 6 Sub Centres. It has 4 – 6 beds for patients. The activities of Primary Health Centres involve curative, preventive, primitive and Family Welfare Services (Primary Health Centers, n.d.). The CHC is the third tier of the network rural health care institutions which acts primarily as a referral centre (for the neighboring PHCs, usually 4 in number) for the patients requiring specialized health care services. The objective of having a referral centre for the primary health care institutions was two-fold; to make modern health care services accessible to the rural people and to ease the overcrowding in the district hospitals. CHCs deliver specialized health care services, to rural people. They are equipped with diagnostic services and laboratory testing, along with curative and other services to deliver complete health care facilities at the grassroots level (PEO Evaluation Studies, n.d.).

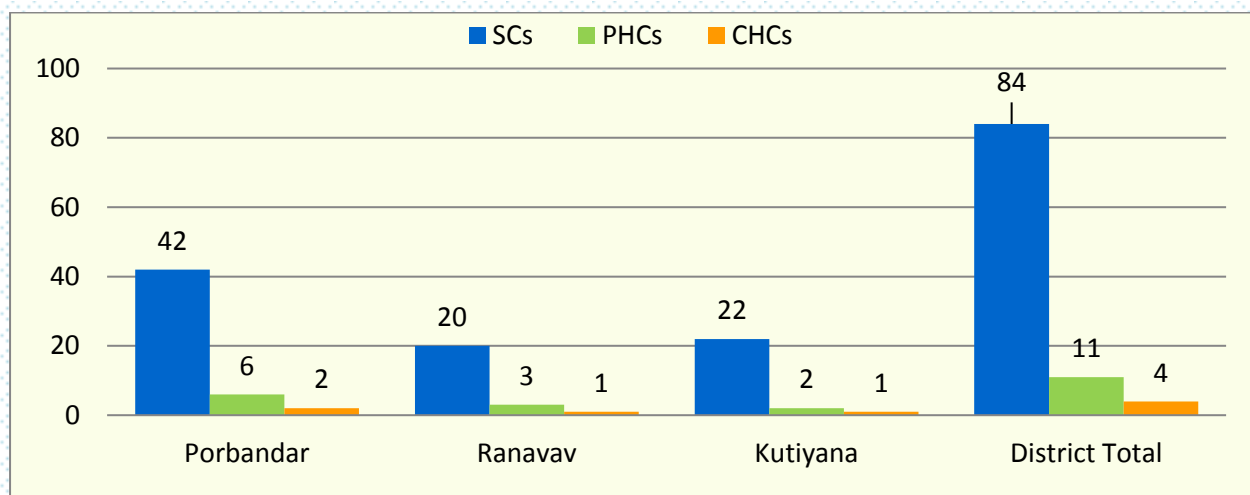
Table 3:2 HealthCare Infrastructure in Porbandar District (2015-16) Upto Nov.-15

Health Infrastructure	In Nos.	Health Infrastructure	In Nos.
Sub Centers	84	District Hospitals	1
Primary Health Centers (Rural)	11	Beds Available in CHC	120
Community Health Centers (Rural)	4	Beds in Rural Areas	126
Urban Health Centers (Urban)	4	Beds in Urban Areas	301
Ayurvedic Institutions	6	First Referral Units	1
Homeopathic Institutions	2	Mobile Medical Units	1
Beds Available in Hospitals	361	AYUSH	6
Beds Available in PHC	66	Ambulance (Govt.)	21

(Source: Chief District Health Office, Porbandar)

It can be observed that district has 84 sub-centers, 11 PHCs and 4 CHCs. There are 6 Ayurvedic Institutions, 2 Homeopathic Institutions. Number of beds in hospitals, PHC, CHC, rural and urban areas is respectively 361, 66, 120, 126 and 301. It is also evident that there is 1 district hospital. The district has 1 first referral unit, 1 mobile medical unit, 6 Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) health facilities (which works in developing education and research in ayurveda etc) and 21 ambulance.

Figure 3.5 Taluka Wise Number of SCs, PHCs and CHCs (2013-14)



(Source: Chief District Health Office, Porbandar)

Urbanization rate has increased in Porbandar taluka when compared to Ranavav and Kutiyana taluka, which means the amenities required is more. Moreover, population density is also more in Porbandar taluka than Ranavav and Kutiyana taluka. Higher population density and higher urbanization indicates that requirement of medical facilities are higher in Porbandar taluka. Out of the total 84SCs; 11PHCs and 4 CHC, 42SCs; 6PHCs and 2CHCs are in Porbandar taluka.

Table 3:3 Gap Identification of SC, PHC and CHC in District (Rural Area -2011)

Taluka	SC			PHC			CHC		
	Std.	Actual	Gap	Std.	Actual	Gap	Std.	Actual	Gap
Porbandar	33	42	+8	6	6	0	1	2	+1
Ranavav	14	20	+6	2	3	+1	1	1	0
Kutiyana	13	22	+9	2	2	0	1	1	0

(Source: Computed from Chief District Health Office, Porbandar and Rural Health Statistics-2013-14, MOHFW, Government of India, 2011)

Based on the rural population of Census 2011 and number of SC, PHC and CHC data of 2013-14, the gap was found with respect to number of SC, PHC and CHC. It was very positive to note that in all the talukas, the number of SC, PHC and CHC were either greater or equal to the benchmark prescribed by the Rural Health Statistics. No shortfall was noticed in the number of SC, PHC, CHC.

Table 3:4 PHCs and CHCs and Number of Beds in Porbandar District

Year	PHCs		CHCs	
	Sanctioned and Functioned	Beds	Sanctioned and Functioned	Beds
2010	10	60	3	90
2011	10	60	4	120
2013	11	66	4	120
2014	11	66	4	120
2015	11	66	4	120

(Source: Health Statistics, Gujarat)

The figure for the number of sanctioned and functioning PHCs and CHCs are same, it indicates that both of them have a major role to promote healthcare services in the district. The number of beds in PHCs has just grown by 10% in 2013 and remained consistent till 2015. The increase in number of beds at CHCs has grown at 33%, which has remained consistent from 2011 to 2015.

Table 3:5 Talukawise Details of Hospitals and Beds Available in Porbandar (2015-16)

Taluka	Hospitals	Beds
Porbandar	3	301
Ranavav	1	30
Kutiyana	1	30
District Total	5	361

(Source: Chief District Health Office, Porbandar)

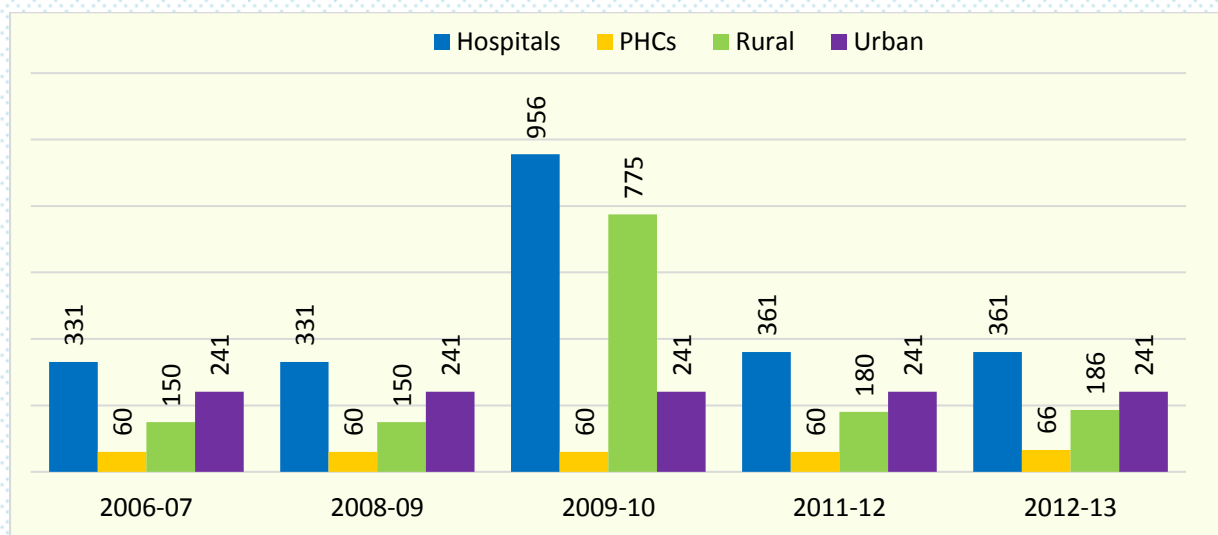
The data pertains to the government medical hospitals. It may be observed that total number of hospitals in the district is 5 of which 3 are in Porbandar taluka. Total number of beds is 361 of which highest number of beds is in Porbandar taluka i.e. 301. 30 beds each are in Ranavav and Kutiyana taluka.

Table 3:6 Talukawise Details of Hospitals and Beds (2015-16) Upto Nov.-15

Taluka	Government Hospital	Beds
Porbandar	3	301
Ranavav	1	30
Kutiyana	1	30
District Total	5	361

(Source: Chief District Health Office, Porbandar)

It is observed that the highest number of government hospitals and beds are in Porbandar taluka. Ranavav and Kutiyana taluka have hospitals with identical number of beds.

Figure 3.6 Number of Beds in Medical Institutions in Porbandar District

(Source: Commissionerate of Health, Medical Services, Medical Education & Research)

On applying CAGR, it may be inferred that number of beds in hospitals from 2006-07 to 2012-13 has increased at the rate of 1.75%. Number of beds in PHCs and rural areas has increased at a CAGR of 1.92% and 4.40% respectively over a period of five years. It can also be noticed that in urban areas number of beds have remained constant for 5 years period that is, 241 beds. It is clearly evident that hospitals are one-stop solutions for varied type of treatments, so numbers of beds are increasing in hospitals. PHCs provide preliminary healthcare services so the increase in number of beds at PHCs is limited. In rural areas the number of beds have increased, which indicates that medical facilities in rural Porbandar is increasing, whereas in urban areas it is maintained. Number of bed with occupancy and special care is increased. Recently kidney dialysis units and ICU care is increased so better facilities are availed at district place.

Table 3:7 Details of Health Care Facilities at CHCs in Porbandar (2015-16) Upto Nov.-2015

Facilities at CHCs	Porbandar	Ranavav	Kutiyana
Population Covered (No.)	384660	114568	86221
Emergency Services (24 Hours) (Yes /No)	Yes	Yes	Yes
24- Hours Delivery Services (Yes /No)	Yes	Yes	Yes
Emergency Obstetric Care (Yes /No)	Yes	Yes	Yes
New-Born Care (Yes /No)	Yes	Yes	Yes
Family Planning Services (Yes /No)	Yes	Yes	Yes
Safe Abortion Services (Yes /No)	Yes	Yes	Yes
Surgeries Performed (Yes /No)	Yes	No	No
Bed Occupancy Rate (%)	60%	20%	60%
Average Daily OPD Attendance	120/day	200/days	140/days
Number of Beds (No.)	60	30	30
Rooms (No.)	15	18	16
Toilets (No.)	11	2	2
Condition of Rooms (Good/ OK)	Good	Good	Good
Condition of Toilets (Good/ OK)	Good	Ok	Good
Staff Against IPHS Norm of 40	0	0	0

(Source: Chief District Health Office, Porbandar)

It can be inferred that highest population is served in CHC of Porbandar. All the 3 talukas are equipped with the facility of emergency service, 24-hour delivery service. The center also provides emergency obstetric care, new-born care, family planning and safe abortion service. The surgeries are only performed at CHC center of Porbandar taluka. Bed occupancy rate is 60% in both the Porbandar and Kutiyana taluka. At Ranavav taluka the bed occupancy is just 20%. Outdoor Patient Diagnosis is highest at CHC of Ranavav taluka. Porbandar taluka's CHC has double the number of beds compared to other two taluka's CHC. Number of rooms at every CHCs of the three taluka is more than 10. Condition of rooms and toilets are satisfactory. Staff against the defined norm of 40 is not available in Porbandar District.

3.4 Human Resource Availability in Health Care

Human resource plays a crucial role in providing the healthcare services. The quality of the public healthcare services is dependent on the skilled medical and paramedical staff. Paramedical refers to a person trained to give emergency medical treatment or assist medical professionals. It mainly consists of pharmacists, nurses, hospital worker, sanitary worker, ophthalmic assistant, social worker, laboratory technician, laboratory attendant, Auxiliary Nurse Midwife (ANM), Lady Health Visitor (LHV), Public Health Nurse (PHN), Matron, and Physiotherapist.

Table 3:8 District Level Government Medical and Para-Medical Staff, Porbandar (2013-14)

Post	Sanctioned	In Position			Vacant (%)
		Regular	Contractual	Total	
Medical Officer	53	25	1	26	27 (51%)
Staff Nurses	99	72	0	72	27 (27%)
ANM	84	74	0	74	10 (12%)

(Source: Chief District Health Office, Porbandar)

The sanctioned posts for medical officer and ANM are 53 and 84 respectively. 99 posts have been sanctioned for staff nurses, of 27 are vacant. For the post of medical officer, 25 posts are filled on regular basis and 26 posts are kept vacant. In the case of ANM 84 posts are sanctioned and 74 ANM are absorbed on regular basis and 10 seats are kept vacant for the same post. All the vacant posts should be filled on priority basis, which would reinforce the system to meet the health needs of the masses efficiently and effectively. Adequate number of trained human resources will significantly contribute to the improvement in providing of services pertaining to health at the district level.

Table 3:9 Medical and Para-Medical Staff at District Hospital, Porbandar (2015-16)
Upto Nov.-15 (S: Sanctioned, F: Filled)

Medical Staff	S	F	Para-Medical Staff	S	F
Hospital Superintendent	1	1	Orthopedic	1	1 *
Medical Specialist Physician	1	3*	Dental Surgeon	1	1
Surgery Specialist	1	1	Staff Nurse	71	49
Gynecologist	1	1*	Sanitary Worker	1	0
Pediatrician	1	1	Ophthalmic Assistant	4	4
Anesthetist	2	2	Social Worker/ Counselor	1	0
Pathologists	1	1	Laboratory Technician	2	2*
Psychiatrist	1	1	Pharmacist	12	5
ENT Surgeon	1	1	Matron	1	1
Ophthalmologist	1	1	Radiologists	1	1

(Source: Chief District Health Office, Porbandar){Note *: On Contract basis}

District hospital is suppose to provide effective, affordable healthcare services (curative), preventive and promoting care for the defined population of the district. Best quality services can be provided when skilled and qualified human resources (medical and paramedical) are available. It is evident that the sanctioned post of medical staff 11 and the filled positions is 9 i.e. 82%, which is quite satisfactory. If the rest 18% positions are filled then there will not be any dearth of skilled specialists. With respect to paramedical staff out of the sanctioned posts of 95 only 61 posts are filled i.e. 64%. It indicates dearth of the paramedical staff. If these vacant posts are filled up at the earliest, it shall prevent other staff from being overloaded with work and assist in providing efficient and effective service delivery.

Bhavsinhji hospital the civil hospital of Porbandar, has no VIP, Semi-special and special room. It has only three general ward with a bed capacity of 361 (CDHO, n.d.). Details of beds and types of rooms were not available for other hospitals.

Table 3:10 Taluka-Wise Details of Doctors and Nurses in Porbandar, 2015-16

Taluka	Upto Nov-15	
	Doctors	Nurses
Porbandar	18	62
Ranavav	5	5
Kutiyana	2	4
District Total	25	71

(Source: Chief District Health Office, Porbandar)

Highest number of doctors and nurses are in Porbandar, as more number of footfalls of patients happens to be in the city hospital of Porbandar. Numbers of nurses are more in Ranavav when compared to Kutiyana region, whereas numbers of doctors are more in Ranavav.

On scrutiny of health personnel data it was learnt that 2 posts for Porbandar taluka and 1 post each for Kutiyana and Ranavav taluka were sanctioned in the cadre of General Surgeon. Thus, despite of sanction of 4 posts of general surgeon, none was filled. Post of physician, gynecologists and Orthopedic has been sanctioned, but unfortunately not filled. Non-availability of skilled doctors in the taluka, would act as a hindrance in providing quality health services to the people of the district. In total 12 posts have been sanctioned for Medical Officer's (MO)- Bachelor of Medicine and Bachelor of Surgery (MBBS) in the district, of which 6 posts has been sanctioned for Porbandar taluka and 3 each for Kutiyana and Ranavav taluka. Against the sanctioned number of posts for MO and MBBS only 8 posts have been filled viz., 4 in Porbandar taluka and 2 each in Kutiyana and Ranavav taluka. It may be inferred that only 67% of sanctioned posts have been filled, there is a shortfall of each 33% in the cadre of MO and MBBS for all the three talukas. Increase in number of patients and non-recruitment of skilled personnel, will deteriorate the quality of health services in the district (CDHO, 2013).

3.5 Healthcare Services Offered

PHC, CHC and District Hospitals play a fundamental role in providing healthcare services to people of Porbandar district. With respect to 2012-13 data, Porbandar has 14 PHCs centers, which is 1.11% of PHCs of Gujarat. It has 4 CHCs centers, which is 1.26% of CHCs of Gujarat.

Table 3:11 Outdoor Patients of Porbandar District

Year	PHC	CHC	Sub-District+ Civil Hospital	Total
2009-10	101610	118894	175059	395563
2010-11	106944	149094	172398	428436
2012-13	93864	154823	165103	413790
2013-14	110756	153178	193803	457737
2014-15	127642	119092	192371	439105

(Source: Health Statistics, Gujarat)

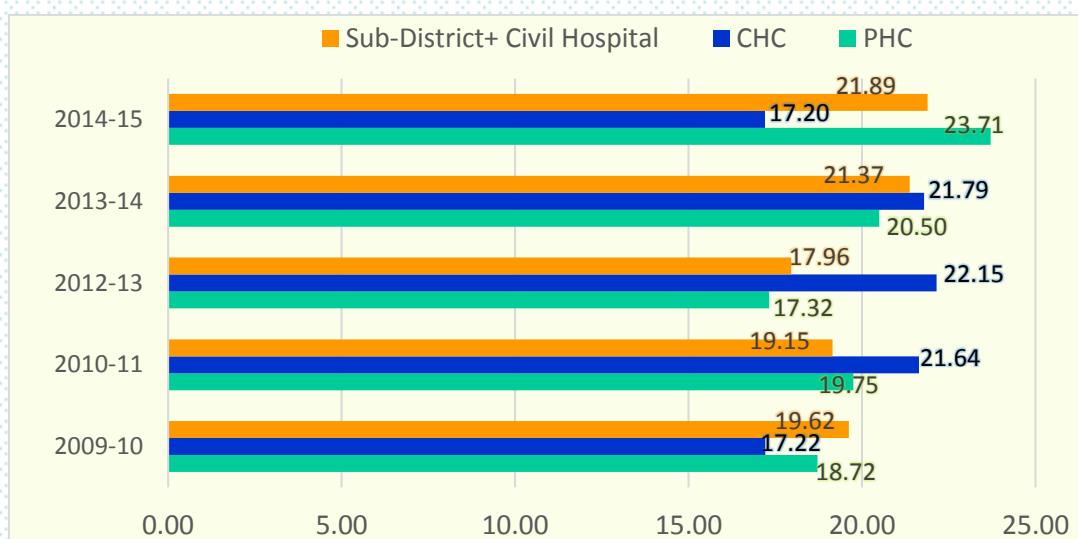
The respective CAGR, with respect to treatment of outdoor patients at PHCs, CHCs and Sub-District and Civil Hospital, over a period of five years are 4.67%, 0.03% and 1.90%. The CAGR of total outdoor patients treated across all three centers is 2.11%. CAGR is found greater for PHC than other centers, which indicates that PHCs play a crucial role providing medical services to the outdoor patients.

Table 3:12 Indoor Patients of Porbandar District

Year	PHC	CHC	Sub-District+ Civil Hospital	Total
2009-10	192	5286	55843	61321
2010-11	498	6982	52989	60469
2012-13	348	4907	46220	51475
2013-14	758	4004	57690	62452
2014-15	1335	4999	65252	71586

(Source: Health Statistics, Gujarat)

The respective CAGR, with respect to treatment of indoor patients at PHCs, CHCs and Sub-District and Civil Hospital, over a period of five years are 47.38%, -1.11% and 3.16%. The CAGR of total indoor patients treated across all three centers is 0.46%. CAGR is found greater for PHC than other centers, which indicates that in rural areas PHCs serves as the first contact point for the patients, and so large number of footfalls is depicted at PHCs. It also indicates that in rural areas the people are getting sick at a higher rate, so they are being hospitalized for quick treatment at PHCs. A negative CAGR of CHCs indicates that if the patient's condition is proved to be critical then instead of treating the case in CHC, it is directly referred to the Civil Hospital, which has a pool of expert doctors to treat the patients.

Figure 3.7 Treatments of Indoor and Outdoor Patients (%)

(Source: Computed from Health Statistics, Gujarat)

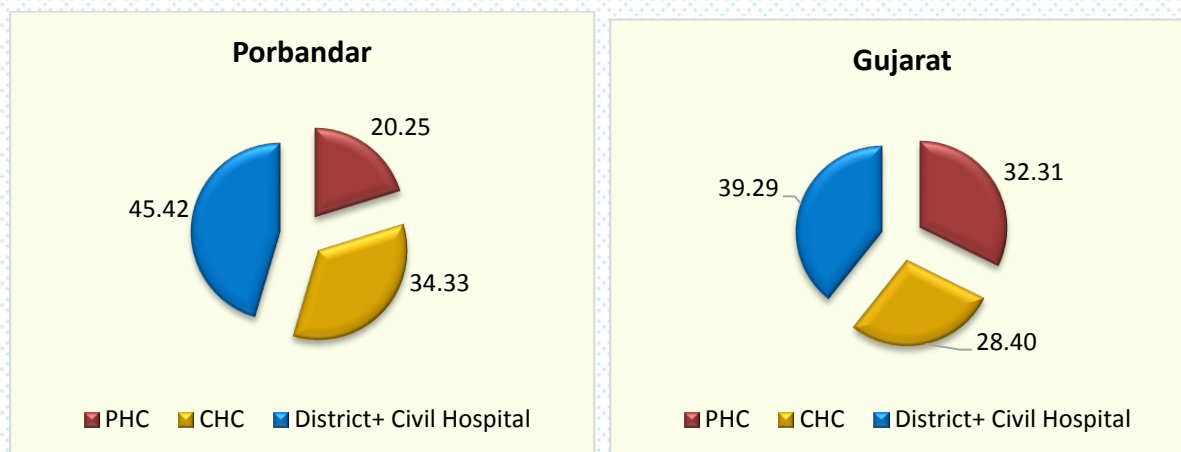
It may be inferred that in 2009-10 highest number of indoor and outdoor patients are treated in Sub-District and Civil Hospital. In 2010-11 the more number of patients are treated in CHC, the scenario continues for 2011-12 too. In the year 2013-14 there is a marginal increase in number of patients being treated at Sub-District and Civil Hospital. In the year 2014-15 number of patients are treated more at PHC.

Table 3:13 Indoor and Outdoor Patients Served (2012-13)

Details	PHC		CHC		District+ Civil Hospital		Total	
	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Indoor
Porbandar District	93864	348	154823	4907	165103	46220	413790	51475

(Source: Health Statistics, Gujarat)

It can be observed that in Porbandar district, total number of outdoor and indoor patients treated at PHCs, CHCs, Civil hospital and district level hospital is 4,13,790 and 51,475 respectively. It can be observed that with respect to total number of outdoor patients, 23%, 37% and 40% outdoor patients are treated at PHCs, CHCs and Civil hospital and district level hospital, respectively. Civil hospitals and district level hospitals serves the highest number of outdoor patients. 1%, 10% and 90% indoor patients are respectively treated in PHCs, CHCs and Civil hospital and district level hospital. Thus, civil hospital and district level hospital stands foremost in serving large number of indoor patients. Civil hospital is the busiest hospital treating large number of indoor as well as outdoor patients, by using the necessary medical resources at its disposal. It is clearly evident that the medical treatment availed by outdoor patients is more than indoor patients across all the public health facilities, at the district level.

Figure 3.8 Percentage of Patients Served in Different Government Institutions (2012-13)

(Source: Based on Database of Health Statistics, Gujarat)

In 2012-13, out of the total patients of Porbandar, 20.25% of patients were served by PHCs, while 34.33% of patients were served by CHCs and 45.42% of patients were served by District and Civil Hospital. Out of the total patients of Gujarat, 32.31% of patients were served by PHCs, while 28.40% of patients were served by CHCs and 39.29% of patients were served by District and Civil Hospital. It indicates that most of the patients avail medical treatment in district and civil hospital of Porbandar. It may be inferred that people from rural areas visit the civil hospital located in urban area for their medical treatment. The development of necessary healthcare facilities at district and civil hospital will enhance the public health service facilities in Porbandar city.

Table 3:14 Taluka Wise Average Population Served by SCs, PHCs, & CHCs (2011-12)

Talukas	SCs	PHCs	CHCs	Total
Porbandar	4409	30865	384660	419934
Kutiyana	3919	34820	86221	124960
Ranavav	5728	22850	114568	143146
Total	14056	88535	585449	495710

(Source: Adapted from CDHO, Porbandar)

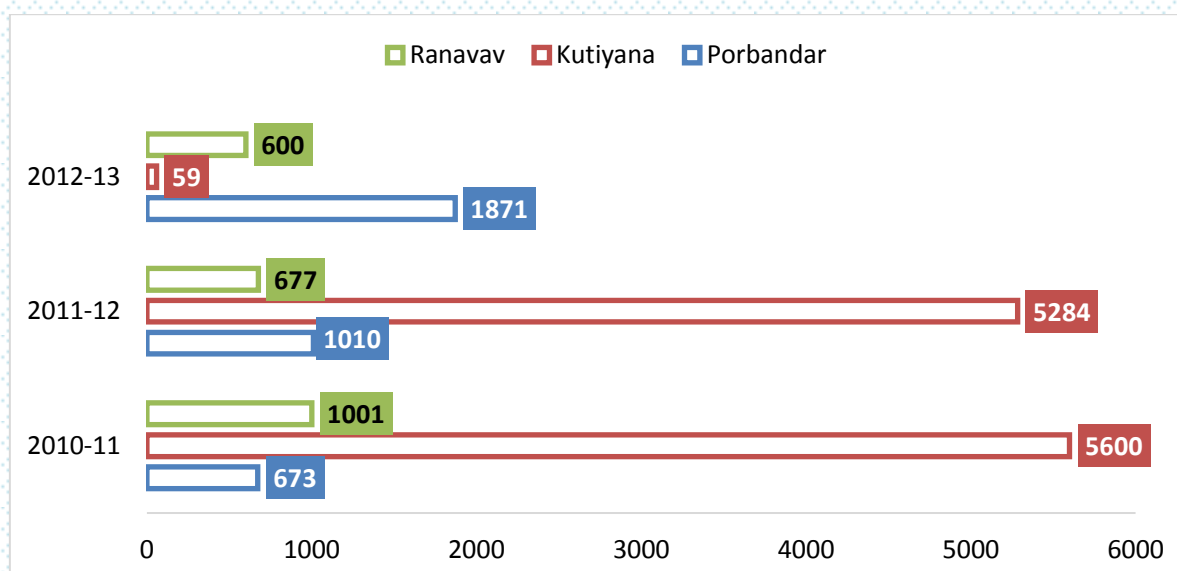
It may be inferred that out of the total average population served by SCs, PHCs and CHCs in Porbandar, Kutiyana and Ranavav taluka; CHCs serves the highest number of people at 91.60%, 69.00% and 80.04%, respectively. Thus, additional facilities at CHCs will help to serve the patients in a better way. With respect to all the three talukas, highest number of the average population served by SCs is in Ranavav taluka at 40.75%, by PHCs is in Kutiyana taluka at 39.33% and by CHCs is in Porbandar taluka at 65.70%.

Table 3:15 Taluka Wise Average Population Served by SCs, PHCs, & CHCs (Rural Areas)

Talukas	SCs	PHCs	CHCs	Total
Porbandar	3987	27910	167457	199354
Kutiyana	2849	31339	62678	96866
Ranavav	3482	23213	69640	96335
Total	10318	82462	299775	392555

(Source: Computed from Register General of India, Porbandar and Rural Health Statistics-2013-14, MOHFW, Government of India, 2011)

With respect to the population data of 2011 Census and data of 2013-14 on number of SC, PHC and CHC average population served by SCs, PHCs and CHCs were calculated. Highest average numbers of patients were served by SCs and CHCs in Porbandar taluka followed by PHCs in Kutiyana taluka. It may be inferred that out of the total average population served by SCs, PHCs and CHCs in Porbandar, Kutiyana and Ranavav taluka, CHCs serves the highest number of people at 84.00%, 64.71% and 72.29%, respectively. Thus, additional facilities at CHCs will help to serve the patients in a better way. With respect to all the three talukas, highest number of average population served by SCs is in Porbandar taluka at 38.64%, by PHCs in Kutiyana taluka at 38.00% and by CHCs is in Porbandar taluka at 55.86%.

Figure 3.9 Taluka Wise Indoor Patients Admitted in Government and Government Aided Hospitals of Porbandar

(Source: District Statistics Outline, Porbandar)

On Year-on-Year (2010-11 and 2011-12) basis it is observed that there is an increase in admission of 50.01% of patients (men, women and children) in Porbandar taluka. Decline of

5.64% and 32.37% of patients is found for Kutiyana and Ranavav taluka respectively. For the year 2012-13, a small decline in number of indoor patients is noticed for Ranavav taluka, steep fall in the number of indoor patients is noticed for Kutiyana taluka and sharp rise in number of indoor patients is witnessed for Porbandar taluka. The flow of patients has increased for Porbandar taluka, because it falls in the urbanized category compared to other taluka, most of the high-tech amenities are available in the hospital at Porbandar.

Table 3:16 Taluka Wise Outdoor Patients Admitted in Government and Government Aided Hospitals of Porbandar

Taluka	2010-11	2011-12	2012-13
Porbandar	68993	72120	88743
Ranavav	74100	74079	69494
Kutiyana	81304	71612	15787

(Source: District Statistics Outline, Porbandar)

It can be observed that number of outdoor patients (men, women and children) treated in Porbandar taluka has increased at a CAGR of 8.75%. Number of patients (men, women and children) has declined at CAGR of -2.12% and -42.09% for Ranavav and Kutiyana taluka respectively.

Table 3:17 Taluka Wise Indoor and Outdoor Patients (Children) Admitted in Government and Government Aided Hospitals of Porbandar

Taluka	2010-11		2011-12		2012-13	
	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor
Porbandar	130	18829	138	18180	173	16192
Ranavav	152	14394	32	128000	30	7799
Kutiyana	180	14718	80	15315	0	4488

(Source: District Statistics Outline, Porbandar)

It can be observed that number of children admitted in the hospital as indoor patients has increased at a CAGR of 9.99% in Porbandar taluka. A CAGR of -41.78% has been noticed for Ranavav taluka and for Kutiyana taluka there were no cases of children being admitted as indoor patients in the year 2012-13. Number of children, outdoor patients has declined at a CAGR of minus 4.90%, -18.48% and -32.69% in Porbandar, Ranavav and Kutiyana taluka respectively. Lesser the number of cases of children being reported as indoor and outdoor patients better it is.

Table 3:18 Talukawise Details of Indoor Children Patients (2011)

Talukas	Children	Total Children Population (0-6) (in '000)
Porbandar	138	41
Kutiyana	80	14
Ranavav	32	9
Total	250	64

(Source: District Statistics Outline, Porbandar)

It may be inferred from the data of 2011-12, that, per 41,000 child population, in Porbandar taluka the number of children admitted in the hospital are 138. With respect to Kutiyana taluka 80 children are admitted as indoor patients per 14,000 child population and in Ranavav taluka 32 children are admitted as indoor patients per 9,000 child population. Thus, considering the sum total of child population of the district only 0.39% of children of the district are admitted as indoor patients. Awareness of child health care amongst parents has increased. It may also be inferred that Porbandar has large number of medical facilities so people from Kutiyana and Ranavav might have admitted their children in hospital of Porbandar taluka, for better medical treatment.

3.6 Prevalence of Major Diseases and Immunization

A disease lowers the health and well-being of a person. Major diseases prevalent in the district are listed in the table below.

Table 3:19 Disease Wise Cases Treated in Porbandar

Major Diseases	2007	2009	2010	2012	2013	CAGR (%)
Gastroenteritis	4510	1265	4131	9339	10413	18.22
Infective Hepatitis	118	59	37	74	15	-33.80
Enteric Fever	45	189	73	442	191	33.53
Malaria	371	589	535	860	421	2.56
AIDS	17	9	10	294	349	83.01
Measles	5	13	27	18	6	3.71
Leprosy	35	17	11	13	13	-18.00
Tuberculosis	189	812	815	768	754	31.88

(Source: District Statistics Outline, Porbandar)

The CAGR growth rate depicted for certain diseases like Gastroenteritis, Enteric Fever, Malaria, AIDS, Measles and Tuberculosis were 18.22%, 33.53% , 2.56%, 83.01%, 3.71% and 31.88% respectively. Infective Hepatitis and Leprosy had a decline in CAGR of -33.80% and -18.00% respectively. The largest CAGR of 83.01% in AIDS, is an alarming situation. Higher prevalence of HIV was due to higher transmission rate from mother to child. Number of HIV

patients are increasing suggesting that more patients are being registered at ART centers, thus, it does not indicate increase in number of cases. In other words it indicates increase in reporting of HIV cases, and not the actual growth in HIV cases. Reporting of HIV cases has come to the limelight, which was earlier not done due to social stigma. Lot of awareness regarding AIDS is required in the district, to keep people safe from the fatal disease. A higher CAGR in case in of Tuberculosis and Enteric Fever indicates that lot of awareness needs to be inculcated amongst the people of the district, so that they can take preventive steps. Tuberculosis is a notifiable disease, despite that number of patients from private sector is not satisfactorily notified. Awareness regarding the dos and don'ts of the diseases will help the people to stay healthy. The minuscule increase in the cases of Malaria and Measles indicates that people are aware on the measures of how to protect themselves from such disease. Routine health, hygiene and cleanliness guidance and creation of mass awareness and educating the people regarding prevention of diseases will help the people to practice the dictum of 'prevention is better than cure'.

Table 3:20 Status of Waterborne Diseases in Porbandar District (Cases)

Year	Gastroenteritis	Viral Hepatitis	Typhoid/ Enteric Fever
2009-10	3469	43	59
2010-11	7921	75	242
2012-13	10413	16	229
2013-14	9432	5	108

(Source: Health Statistics, Gujarat)

Waterborne diseases are caused by pathogenic microorganisms that most commonly are transmitted in contaminated fresh water. The Year-on-Year change (YoY) indicates that gastroenteritis disease has more than doubled in 2010-11. It rose by 31.46% and dropped by -9.42% in the year from 2012-13 and 2013-14, respectively. Viral Hepatitis disease had increased to 74.42% in 2010-11 and there after it started to decline at -78.67% and -68.75%. In the case of Typhoid a whopping increase of more than four times was noticed for the year 2010-11, and thereafter a decline of -5.37% and -52.84% in respective year of 2012-13 and 2013-14. 2010-11 could be considered as 'unhealthy year' for Porbandar district as there was a huge outbreak of waterborne disease exceeding 50%. Considering the descending chronology highest cases were reported for Typhoid, Gastroenteritis and Viral Hepatitis. The data for the year 2013-14 showed that all the waterborne disease had come under the control, which shows

the efficiency of healthcare units and local bodies in treating and preventing the waterborne disease. Rise in the cases of Gastroenteritis was meager, followed by Typhoid and Viral Hepatitis. Control of disease directly means the well-being of the residents.

Table 3:21 Cases Reported Under Integrated Diseases Surveillance Project (IDSP)

Disease	2009-10	2010-11	2012-13	2013-14
Acute Water Diarrhea	6113	6899	10413	9432
Acute Bacillary Dysentery	116	116	213	263
Acute Viral Hepatitis	42	34	21	5
Enteric Fever	58	171	230	108
Diphtheria	0	0	0	7163
Measles	23	16	6	0
Neonatal Tetanus	0	0	2	7
Pertussis (Whooping Cough)	0	0	0	4
Acute Flaccid Paralysis (AFP)	0	1	9	0
Fever	28348	19536	7731	0
Dengue	0	0	40	50
Falciparum	148	105	447	43
Malaria	508	587	21	9

(Source: Health Statistics, Gujarat)

The Integrated Diseases Surveillance Project initiates to detect and respond to the disease outbreak very quickly. Under the project weekly disease surveillance data on epidemic prone disease are being collected from reporting units such as sub centres, primary health centres, community health centres, hospitals including government and private sector hospitals and medical colleges. The data are being collected on ‘S’ syndromic; ‘P’ probable; & ‘L’ laboratory formats using standard case definitions. The weekly data are analyzed for disease trends. Whenever there is rising trend of illnesses, it is investigated to diagnose and control the outbreak (Integrated Disease Surveillance Programme, n.d.). It can be witnessed that in 2009-10 and 2010-11 there was huge outbreak of fever. In 2013-14 it was reported 0, indicating that concrete remedial measures were adopted for the same. Cases of Acute Water Diarrhea were reported highest in 2012-13 and 2013-14. It was also noticed that for the first time in 2013-14 cases were detected for Diphtheria and Whooping Cough, which needs to be put under control. Stringent cases of Falciparum and Malaria was found under control.

Table 3:22 Confirmed Cases of Mosquito Based Disease in District

Details	Year	Chikungunya	Dengue
Gujarat	2009-10	169	2461
District		1	15
Gujarat	2010-11	348	2568
District		0	6
Gujarat	2011-12	396	1693
District		0	2
Gujarat	2012-13	247	3067
District		0	26
Gujarat	2013-14	1157	6272
District		7	45

(Source: Health Statistics, Gujarat)

Chikungunya and Dengue is a mosquito borne disease, generally the virus breeds in the stagnant water. It can be observed that in the duration of five consecutive years, CAGR growth rate of Chikungunya cases is 47.58% against Gujarat's CAGR of 46.92% and CAGR of dengue is 24.57% in Porbandar district, against CAGR of Gujarat of 20.58%. Higher growth in both Chikungunya and dengue cases, describes that lot of awareness is required to be spread among the inhabitants of Porbandar, so that, they can also cooperate in the practice of keeping the surroundings clean. It also suggests that timely spraying of insecticides will also prevent the outbreak of the disease. To fight against the mosquito borne disease various treatments are adopted like spraying of insecticides, using mosquito repellent, applying mosquito repellent cream, drinking herbal concoction, using 'googal-limdo (Nimb or Margosa)' incense stick or 'dhoop' and using mosquito nets.

Table 3:23 Insecticides Treated Mosquito Nets

Details	Year	Available	Treated	%
Gujarat	2009-10	2631729	2156869	82.00
District		65404	65404	100.00
Gujarat	2010-11	2728152	2304612	84.50
District		65404	65404	100.00
Gujarat	2012-13	2718252	2416406	88.90
District		8942	8942	100.00

(Source: Health Statistics, Gujarat)

It can be observed that the usage of insecticides treated mosquito nets are higher at district level than state level, because the mosquito borne diseases are reported more in Porbandar. Emptying the stagnant water is also an effective way of curbing the growth of virus. Dengue cases can go down only when the proper underground covered gutter is built and it functions in the right way. There are various diseases, which are treated in district.

Table 3:24 Treatment to Indoor and Outdoor Patients for Various Types of Diseases

Names of Main Groups of Disease	2010-11	2011-12	2010-11	2011-12
	Indoor Patients	Indoor Patients	Outdoor Patients	Outdoor Patients
Infectious and Parasitological Virus	1695	1398	20560	18889
Tabernacles				
Cancer	98	103	206	384
Internal Bleeding, Nutrition Deficiency, Metabolism	507	2263	4088	8028
Blood and blood productivity related disease	849	1155	11073	5902
Psychosis	18	268	2804	4394
Nervous System and Sensation	111	144	5809	3462
Blood Circulatory	535	2164	16416	27663
Respiratory	1490	3508	64252	56418
Digestive	1542	3890	21166	22850
Urinary Bladder disease	140	1366	7788	13909
Complications in Pregnancy	2915	3930	7648	13711
Skin and Skin Tissue	27	5	25567	18216
Disease related to Muscle, Bones etc	1310	2136	33841	36961
Congenital Disability	0	0	49	6
Maternity related disease and death thereof	0	0	172	193
Symptoms and Uncategorized Disease	539	33458	21293	137741
Accidental, Toxins and Violence	1550	2756	1713	5787
Total	13326	58544	244445	374514

(Source: Health Statistics, Gujarat)

It may be inferred that numbers of indoor patients have increased by more than four times in 2011-12 when compared with figures of 2010-11. Admission of patients in hospitals was due to uncategorized disease, pregnancy, digestive system, respiratory, nutrition deficiency, viral, blood related, cancer, psychosis, nervous system, urinary bladder, muscles and bones related and accidental issues. In 2011-12 it was noticed that there was an increase in number of outdoor patients by 53.21%. The number of patients increased for uncategorized disease, followed by rest of the diseases listed above. It was also noticed that figure of maternity related disease also rose. The increase in number of patients for the both the indoor and outdoor categories, over a period of two years highlights that the health condition of the people of Porbandar district have deteriorated to a considerable extent.

Immunization is one of the cost-effective way in which the beneficiaries of vulnerable section of the society is also covered. Tuberculosis (T.B.) is a fatal disease, if not treated. If a person is healthy, he has a good immune and thus, can fight back the germs of TB. TB is very contagious disease. Timely diagnosis and proper treatment will keep the person away from TB.

Table 3:25 Revised National TB Control Programme in Porbandar District

Taluka	Porbandar
Total TB Patients Registered for Treatment	719
New Smear Positive Patients Registered for Treatment	314
Annualized New Smear Positive Case Detection Rate (>56)	50.64
Annualized New Smear Positive Case Detection Rate (>70%)	63.69%
3 Months Conversion Rate of New Smear Positive Patients (>90%)	87.37%
Cure Rate of New Smear Positive Patients (>85%)	85.99%
Death	6.88%

(Source: Health Statistics, Gujarat)

It may be inferred that highest number of patient are registered in Porbandar taluka for treatment of TB. Registration of new patients is more in Porbandar taluka. The biggest worry is with respect to the new cases being detected and their full compliance of treatment. Reasons for death could be either because of non-continual of medicine or because of detection in last (very late) stage, it was beyond the control. Notification by private sector is dismal despite it is notifiable disease.

Mass drug administration refers to the administration of drugs to entire population, in order to control, prevent, or eliminate common or widespread disease (Envision, n.d.). In Porbandar district mass drug administration was carried out for Albendazole (ALB) and Diethylcarbamazine Citrate (DEC). The Scott Hamilton CARES Initiative (n.d.) explains that Hypoalbuminemia is a deficit of albumin in the blood, more often seen in elderly patients. Albumin is a protein that is found in the blood. It is mainly caused due to poor nutritional state of a person. DEC tablets are administered to check the incidence of lymphatic filariasis in the district. Lymphatic filariasis is a parasitic disease caused by microscopic, thread-like worms (Centers for Disease Control and Prevention, n.d.). People with the disease can suffer from disfigurement and permanent disabilities due to lymphedema. Elephantiasis is a crippling condition in which limbs or other parts of the body are grotesquely swollen or enlarged. In addition, people with the disease suffer from hidden internal damage to the kidneys and lymphatic system caused by the filariae (USAID's NTD Program, n.d.).

Table 3:26 Mass Drug Administration

Year	Total Population	Eligible Population	Population Covered	DEC	ALB
2009-11	589700	501245	497819	1261969	497819
2010-12	589700	501245	497819	1261969	497819
2012-14	586062	501245	499072	1268753	499072

(Source: Health Statistics, Gujarat)

Mass drug administration was carried out for the year 2009-11, 2010-12 and 2012-14, at the rate of 84.4%, 84.4% and 85.16% of the total population, respectively. Coverage of higher population, indicates the satisfactory work of the health department of Porbandar, to protect people from the fatal diseases.

3.7 Women Health Care

Women's health refers to health issues specific to human female anatomy. Women's health issues include menstruation, contraception, maternal health, childbirth, menopause and breast cancer (Selfgrowth, n.d.). Antenatal care is the care provided by healthcare professionals to pregnant women. The purpose of antenatal care is to monitor prospective mother's health, baby's health and assist to make plans which are right for prospective mother. The lady will be offered a series of appointments with a midwife, GP or sometimes an obstetrician (a doctor specializing in pregnancy and birth) (Frimleypark, n.d.). Tetanus Toxoid (TT) doses are given during pregnancy to prevent tetanus to the pregnant women and the child. Tetanus is a life-threatening bacterial disease that is caused by the toxin of a bacterium called *Clostridium tetani*. Tetanus bacteria enter the body through an open wound. It could well be a tiny prick or scratch on the skin, although Tetanus infection is more common when there is a deep puncture wound such as a bite, cut, burn or an ulcer. Tetanus affects a person's nervous system and can be fatal if left untreated. It is preventable through immunization (Babycenter, n.d.).

Table 3:27 Performance of ANC Registration (in %)

Details		2009-10			2013-14	
District	Early ANC to Total ANC	ANC-3 to Total ANC	TT Doses to Total ANC	Early ANC to Total ANC	ANC-3 to Total ANC	TT Doses to Total ANC
District	78.89	93.09	92.49	83.47	91.37	90.63
State	58.00	75.40	82.95	70.87	74.24	83.98

(Source: Health Statistics, Gujarat)

On comparison of the data of 2009-10 and 2013-14, it may be inferred that the percentage of early ANC to total ANC has improved at district level by 4.58%. The improvement of ANC registration at state level is by 12.87%. At district level the improved ratio indicates that more number of women has received the pre-natal care, but if the same is compared with state level data, it indicates that performance of district in terms of pre-natal care is high. The percentage of performance of ANC-3 to Total ANC at district level and state level has gone down by 17.2% and 4.53%, respectively, for the period 2009-10 and 2013-14. With respect to TT doses,

it indicates that from the registered number of pregnant women, 90.63% of pregnant women have been provided with TT dose in district, in the year 2013-14, at the state level the coverage is 83.98%. Higher the percentage, better it is, as it indicates proper immunization of women as well as child. Proper antenatal care supervised by qualified medical officer or gynecologist is preferred.

Table 3:28 Institutional and Home Delivery in District

Category	2009-10	2010-11	2012-13	2013-14	2014-15	2015-16 Upto Nov.-15
Government Institutions	3101	2831	4053	4651	4150	3083
Private Institutions	8209	7834	7158	5582	5269	3863
Home	366	210	91	45	40	38
Total	11676	10875	11302	10278	9459	6984

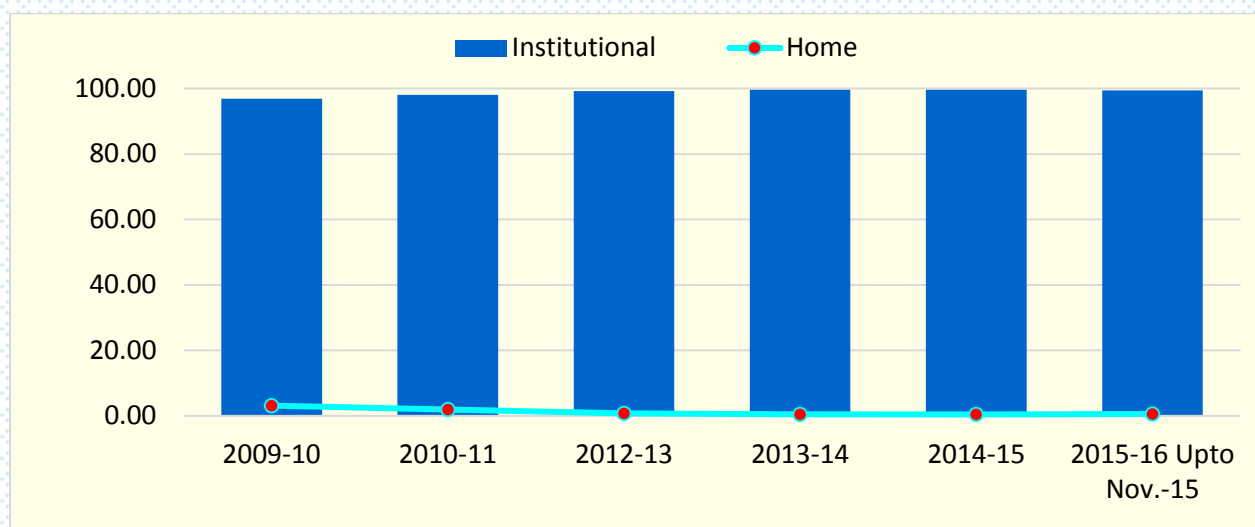
(Source: Health Statistics, Gujarat)

Institutional deliveries safeguards women from the sufferings of injuries, infections, complications and disabilities. Institutional deliveries must be encouraged in order to reduce the maternal and infant death. Generally a Trained Birth Attendant (TBA), Doctor, Private Nurse, Untrained Dai or Auxilliary Nurse Midwives (ANM) assist the women in child birth (Garg, Shyamsunder, Singh and Singh, 2010). Institutional deliveries are further demarcated on the nature of organization, in which the delivery is performed i.e. private hospitals or government hospitals.

In 2009-10, 3.13% of deliveries were performed at home, which has consistently decreased to 0.54% for the year 2015-16. The percentage of government deliveries in 2009-10 was 26.56% which remained moderate in the year 2010-11. The percentage of government deliveries rose to 35.86% in the year 2012-13 and it was highest at 45.25% for the year 2013-14, 43.87% for the year 2014-15 and 44.14% in 2015-16. In the year 2014-15 total number of deliveries were less when compared to other year and deliveries in government hospital were less by 501 number viz a viz private deliveries in the same year. For 2015-16 since the date is up to November 2015 it fails to give comparable picture with other whole year's data pertaining to government, private and home deliveries. Deliveries in private hospitals were highest at 70.31% and 72.04% respectively for the year 2009-10 and 2010-11. A gradual decline was observed in deliveries being performed in the private hospitals at the rate of 63.33% in 2012-13 and a considerable fall at 54.31% in the year 2013-14, 55.70% in 2014-15 and 55.31% in

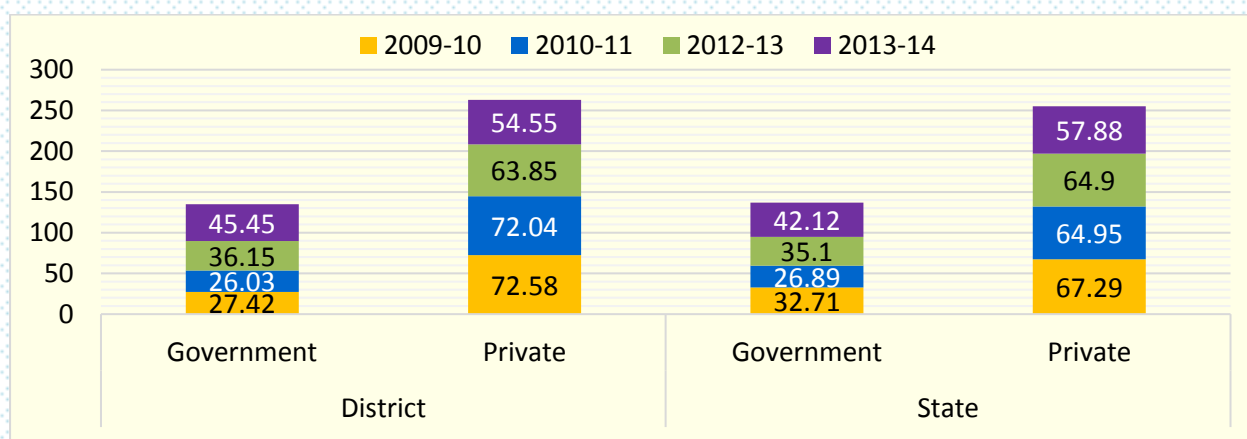
2015-16. The increase in the percentage of deliveries at government hospitals may be interpreted that either the quality of maternity treatment may have been better than counterparts or the private hospitals maternity bills might be too expensive for below the poverty line people, to endorse the maternity treatment. On a closer look, for the year 2013-14, it is noticed that percentage of deliveries in government hospitals is 45.25% which is lower than percentage of deliveries in private hospitals which is 54.31%. It indicates that if the government hospitals are willing to increase their market share, then they need to make their maternity facilities the best. The institutional delivery (Government + Private) which was 96.87% in 2009-10 has sharply increased to 99.56% in 2013-14, 99.58% in 2014-15 and 99.46% in 2015-16. A rise in the percentage of institutional deliveries is a positive sign towards maternity health care. An institutional delivery are equipped with right kind of medical apparatus and trained staff, whereas home deliveries are often risky, and proves to be fatal for the life of both the mother and the baby. Overall on a consecutive six years basis the number of deliveries has declined at a CAGR of -8.21%, the reason may be attributed to the better family planning instruments adopted by the couples. A CAGR of -0.10% and -11.81% is noticed with respect to deliveries in government institutions and private institutions respectively. The number of home deliveries is 38, for the year 2015-16, which is indeed a positive sign when compared with 2009-10 data's of 366 home deliveries.

Figure 3.10 Institutional and Home Delivery (%)



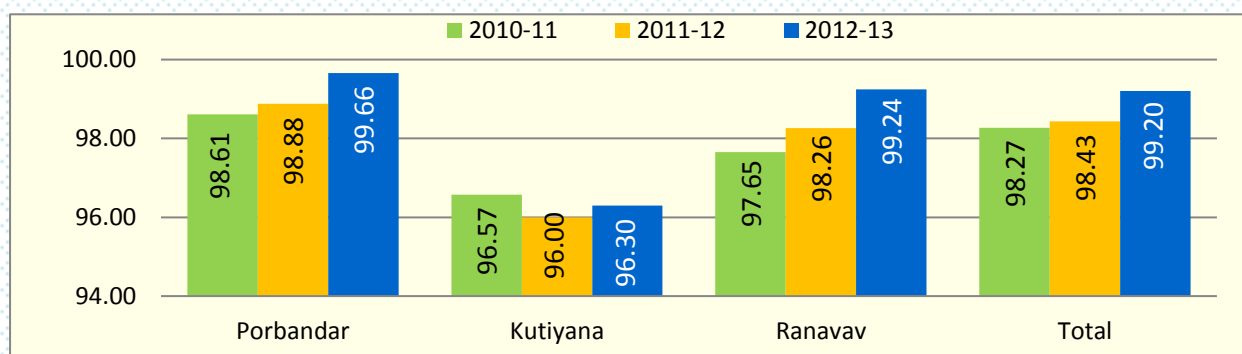
(Source: Computed from Health Statistics, Gujarat)

It may be noticed that percentage of home deliveries is reducing and percentage of Institutional deliveries is constantly increasing. Thus, premature death of infant and mother is minimized.

Figure 3.11 Institutional Delivery (%)

(Source: Health Statistics, Gujarat)

Institutional delivery takes place either in government hospitals or in private hospitals. Considering total institutional delivery as the base, the percentage is found for government institutional delivery and private institutional delivery. It can be observed that in 2009-10 at district level the gap between the government institutional delivery and private institutional delivery was huge at 45.16%. Eventually, in 2013-14 the gap started narrowing between the two institutional delivery model. The gap of the latest year is at 9.1% only. At the state level gap between institutional delivery and private delivery for 2009-10 and 2013-14 stood at 34.58% and 15.76% respectively. A lower gap at district level indicates that the medical amenities and maternity treatment has improvised to a considerable extent, so not only the below poverty line people are availing the treatment but lower middle class is also attracted to government hospitals. It signals the true welfare of the people.

Figure 3.12 Taluka Wise Institutional Delivery (%)

(Source: Chief District Health Office, Porbandar)

It may be inferred that highest institutional delivery is performed in Porbandar taluka across all the three consecutive years. It is further followed by Ranavav and at last it is Kutiyana. As Porbandar taluka is an urbanized place, people from rural areas, in search of 24x7 efficient medical services and good medical amenities, might have travelled to the city area, which

enhances the number of institutional delivery in Porbandar taluka. Across all the three taluka the maternity facilities are more or less the same, as the gap in the percentage of institutional delivery has narrowed. It can also be inferred that people are well-informed about the benefits of institutional delivery and so they avoid home delivery, which is positive for child as well as mother's life. The hospitals of Porbandar are indeed performing a commendable job.

Table 3:29 Classification of Deliveries at Government Institutions

Year	Hospitals	CHCs	PHCs	Sub Centre
2012-13	2650	174	90	120
2013-14	5582	649	400	267
2014-15	3097	698	355	186
2015-16	1404	313	182	83

(Source: CDHO, Porbandar)

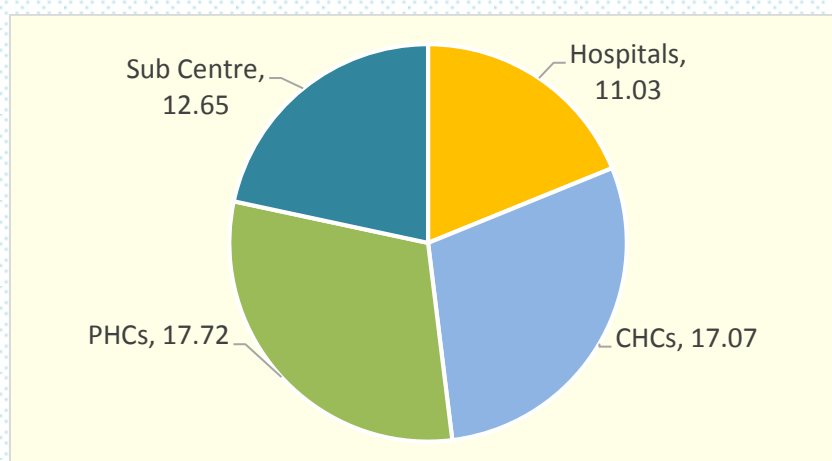
It may be inferred that percentage change in the number of deliveries at government institutions has considerably increased in hospitals, CHCs, PHCs and Sub Centre at the rate of 111%, 273%, 344% and 123% respectively. Large number of deliveries at government institutions indicates that preference for the same has increased may be due to quality service and skilled staff. It also indicates that home deliveries have declined. This is a positive sign for life of mother and child. It can be further noticed that number of deliveries at government hospitals and sub centre has declined at a CAGR of -14.68% and -8.80%. Number of deliveries has increased at a CAGR of 15.81% and 19.25% at CHC and PHCs respectively. It clearly indicates that people have high faith in the closet contact point i.e. CHCs and PHCs with respect to maternity services provided by them. Thus, the rush towards the district level hospitals and sub centers are proved to decline.

Table 3:30 Classification of Deliveries at Home (2014-15)

Taluka	Untrained Dai	Trained Dai	ANM
Porbandar	9	5	5
Ranavav	15	12	12
Kutiyana	21	13	13
Total	45	30	30

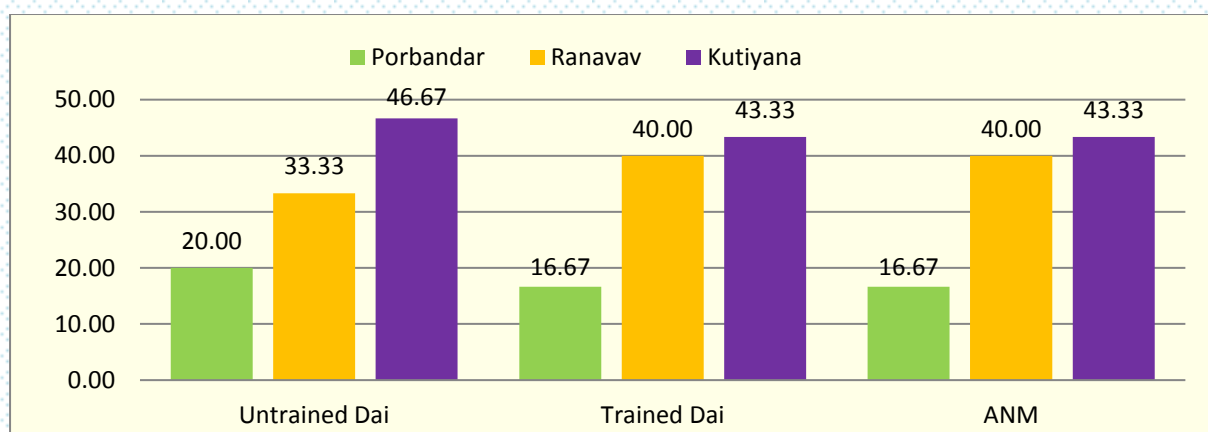
(Source: CDHO, Porbandar)

It may be inferred that the number of deliveries at home through untrained dai is higher compared to the figures of deliveries done by trained dai and ANM. When the numbers are compared to the number of deliveries at government hospitals, it is just meager as good as the tip of the iceberg. Deliveries through untrained dai can be brought at zero level by properly communicating the pros and cons associated with the conventional method.

Figure 3.13 Classification of Deliveries at Government Institutions (%) (2015-16)

(Source: Computed from CDHO, Porbandar)

It may be inferred that highest number of delivers are performed at PHCs, followed by CHCs, hospitals and sub-centers.

Figure 3.14 Classification of Deliveries at Home (%) (2014-15)

(Source: Computed from CDHO, Porbandar)

It may be inferred that highest percentage of home deliveries are happening in Kutiyana taluka, with the due assistance of untrained dai. Again in Kutiyana and Ranavav district trained dai assists in home delivery. ANM assisted home deliveries are found highest in Kutiyana.

Table 3:31 Year Wise Details of Work Accomplishments in Hospital

Year	OPD	IPD	Delivery	Operation
2010-11	172398	52989	1874	6569
2011-12	143918	43574	1708	5829
2012-13	165103	46220	2632	4482
2013-14	193803	57486	3333	4622
2014-15 (Till October)	110502	37350	1827	2828
CAGR (%)	-8.51	-6.76	-0.51	-15.51

(Source: CDHO, Porbandar)

It may be inferred that growth in number of patients being treated in OPD and IPD has reduced. Delivery and Operation cases have been reduced over the consecutive period of 5 years.

3.8 Family Welfare

Family welfare is related to reproductive health, maternal health, pediatrics, and information, cooperation with Non-Government Organizations (NGOs), international groups, and rural health services (Health Department, n.d.). Family welfare also deals with the aspect of family planning. Family planning refers to practices that help individuals or couples to attain objectives like avoiding unwanted births, bring about wanted births, regulate the intervals between pregnancies, control the time at which births occur in relation to the ages of the parent and determine the number of children in the family (Commissionerate of Health, Medical Services, Medical Education and Research, 2009). Contraception of male or female is an important part of the family welfare programme. Contraceptive methods include sterilization, Intrauterine device insertions, condoms or pills, which protects the couple against the childbirth. In 2012-13, in Porbandar district, the voluntary sterilization operations stood at 2011. The percentage workload against achievement was 84.21%.

Table 3:32 Performance in Sterilization

Sterilization Method	2009-10	2010-11	2012-13	2013-14	2014-15
No-Scalpel Vasectomy (NSV)	15	26	7	2	5
Intrauterine device insertions (IUD)	4135	3969	3833	3489	3383
Cervical Caps (C.C.)	5058	5177	2010	2500	2004
Progestogen- Only Pills (O.P.)	1512	1641	1347	1457	1211

(Source: Health Statistics, Gujarat)

It can be observed that NSV method of sterilization has reduced at a CAGR of -19.73%. A respective downfall of 3.93%, 16.90%, and 4.34% CAGR was noted for IUD, C.C. and O.P. method of sterilization. It highlights that sterilization is inconsistent in the district.

Table 3:33 Achievements under Family Welfare Programme

Year	Voluntary Sterilization Operations			I.U.D Insertions		
	Workload	Achievements	(%)	Workload	Achievements	(%)
2006-07	2500	2131	85.24	3200	2573	80.41
2008-09	2200	2065	93.86	3500	5875	167.86
2009-10	2200	2113	96.05	3500	4135	118.14
2011-12	2388	1907	79.86	4081	3972	97.33
2012-13	2388	2011	84.21	4081	3833	93.92
2013-14	2600	1711	65.81	4400	3489	79.30
2014-15	2600	1812	69.69	4400	3383	76.87

(Source: Commissionerate of Health, Medical Services, Medical Education and Research)

It may be inferred that highest achievement of 96.05% in voluntary sterilization operations was in the year 2009-10. Achievement above the targeted workload for I.U.D insertions was in the year 2008-09 and 2009-10 at the rate of 167.86% and 118.14%% respectively. It can also be noticed that preference for I.U.D insertions was more than voluntary sterilization operations.

3.9 Child Health Care and Immunization

Childbirth is a major event in the family. Parents of a newborn child have a responsibility to register the details of the baby in the administrative office of local bodies and avail a birth certificate in the name of the newborn child. The registration of childbirth helps the local bodies to compute the crude birth rate (CBR). CBR is defined as the number of live births in a year per 1,000 of the midyear population (Commissionerate of Health, Medical Services, Medical Education and Research, 2009). A newborn infant, or neonate, is a child under 28 days of age. During these first 28 days of life, the child is at highest risk of death. It is thus crucial that appropriate feeding and care are provided during this period, both to improve the child's chances of survival and to lay the foundations for a healthy life (World Health Organization, n.d.). In the early days, it is very pivotal that the child is provided intensive medical health care and vaccination, so that the probability of survival increases. Crude death rate (CDR) is defined as the number of deaths in a year per 1,000 of the midyear population. Infant mortality rate (IMR) is defined as the number of infant deaths in a year per 1,000 live births during the year (Commissionerate of Health, Medical Services, Medical Education and Research, 2009). Lower the IMR rate in the district represents proper medical healthcare facilities provided to the newborn.

Table 3:34 Live Birth, Infant Mortality and Dead at Birth (2011-13)

Taluka	Live Birth		Infant Mortality		Dead at Birth	
	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13
Porbandar	9640	9645	00	15	104	103
Ranavav	1056	1016	00	9	00	00
Kutiyana	948	875	00	11	02	01
Total	11644	11536	00	35	106	104

(Source: CDHO, Porbandar)

For the year 2011-12 and 2012-13 the figures of live birth data, infant mortality and still birth, pertains to the summation of numbers of male and female, pertaining to the various talukas of urban and rural areas of Porbandar district. It may be inferred that on Year-on-Year basis, number of live birth in the district has declined by 0.93%. On Year-on-Year basis, live births have declined in Ranavav and Kutiyana taluka by -3.79% and -7.7%, respectively. It is

worrisome situation to note that infant mortality numbers stands at 35 for the year 2012-13 against 00 for the year 2011-12. Increase in IMR rate could be attributed to awareness towards reporting of infant mortality. Numbers pertaining to the still birth has declined by -1.89%, in the consecutive two years. Still birth data are worrisome issue and they are grossly under notified and not considered in neonatal death or in infant mortality.

Data pertaining to registered birth for the year 2012-13, obtained from Health Statistics of Gujarat connotes the figures of registered birth in the district, which are 11,278. Numbers pertaining to district's live birth is equal to 11,536 for 2012-13. It clearly points out that there is 97.76% registration of live birth in Porbandar district. It means that parents or family members understand the importance of registering the birth of the child. Proper guidance to the people would take the percentage to 100.

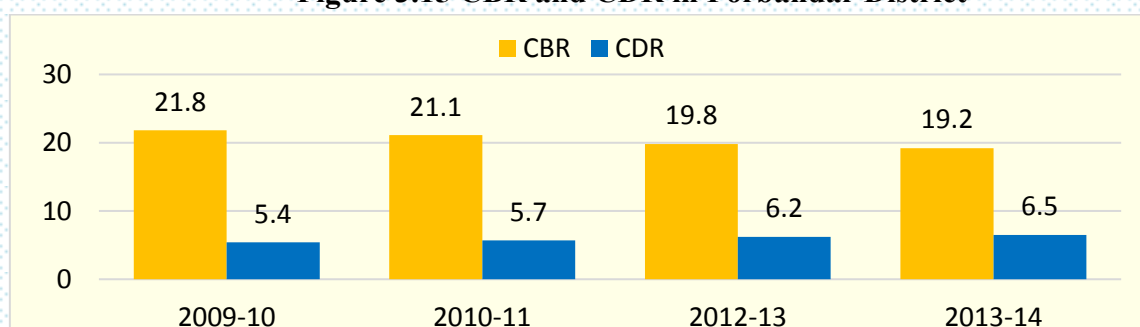
Table 3:35 Registered Birth and Infant Death

Year	Registered Birth		Infant Death	
	Gujarat	District	Gujarat	District
2009-10	1345861	12695	9578	30
2010-11	1327404	12157	8954	27
2012-13	1242989	11536	7980	20
2013-14	1266047	11307	12464	34

(Source: Health Statistics, Gujarat)

It may be inferred that the CAGR of registered birth, during 2009-10 to 2013-14, in Gujarat and Porbandar district is -1.52% and -2.85%, respectively. It indicates that the registration of number of birth of newborn babies have reduced in 2013-14. At district level the reduction of birth registration is higher than state level. A CAGR of 6.81% and 3.18% was noticed in infant death at Gujarat level and Porbandar level during the period of 2009-10 to 2013-14. For the year 2013-14 percentage of district's birth rate is equivalent to state's rate. In the year 2013-14 districts' percentage infant death rate is marginally lower compared to Gujarat's infant death rate.

Figure 3.15 CBR and CDR in Porbandar District



(Source: Health Statistics, Gujarat)

The census data of 2011 indicates that total population of Porbandar district is 5,85,449. On comparing with CBR of 21.1, it indicates that around 12,353 number of children are born in the year 2011-12, amongst the total population of 5,85,449. The CBR of the district has declined from 21.8 to 19.2, from the year 2009-10 to 2013-14. CDR has increased from 5.4 to 6.5. Higher CDR indicates that inhabitants of the district are not using the medical facilities to the fullest.

Childcare is the caring for and supervision of a child or children, usually from age six weeks to age thirteen (Childcare, n.d.). Children are futures of tomorrow. Healthcare in children can be promoted through three main pillars viz., nutritious food, routine immunization and regular health checkup. Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease (World Health Organization, n.d.). Vaccination curtails the risk of infant death. There are six major vaccines like measles, tetanus, tuberculosis, polio, diphtheria and pertusis (whooping cough) that should be provided to the children to prevent premature death and disability (Immunisation, 2014).

Table 3:36 Routine Immunization of Children at District Level

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
BCG (%)	110.85	96.64	93.50	87.71	78.26	80.53
DPT-3 (%)	104.06	103.29	97.04	91.23	83.73	85.96
Measles (%)	96.83	93.43	94.88	90.84	82.99	84.96
Polio (%)	104.05	103.29	97.04	91.23	83.73	85.96
Fully Immunized (%)	96.83	93.14	94.82	90.84	82.99	84.92
Vitamin A (%)	90.00	70.00	58.00	91.00	73.07	83.27

(Source: Health Statistics, Gujarat)

Vaccines such as Bacille Calmette-Guérin (BCG), Diphtheria, Pertusis and Tetanus (DPT), Measles, Polio were provided to the children in large number in the year 2009-10. It can be observed that in all the cases the vaccination was highest in the year 2009-10 and later in the latest year 2014-15 it was found to be reduced. The decline could be attributed to the fall in crude birth rate or migration of families.

Table 3:37 Snapshot of Performance of Porbandar District in Child Health Care Compared to Gujarat (2013-14)

Details	Particulars	Porbandar	Gujarat
BCG Immunization	% against workload	141.15	92.89
	% against live birth	100.66	107.13
DPT 3 rd Dose Immunization	% against workload	162.71	96.66
	% against live birth	111.27	107.11
Measles Immunization	% against workload	150.69	90.11
	% against live birth	103.05	99.86
Fully Immunized	% against workload	150.29	88.13
	% against live birth	102.77	97.66
Polio 3 rd Dose	% Achievement	151.49	90.55
Vitamin A 1 st Dose	% against ELA	148.77	84.51
	% against live birth	101.74	93.65

(Source: Compiled from Health Statistics, 2014)

It may be observed that the performance of district in the matter of child health care has outperformed the State in all the above mentioned parameters.

Table 3:38 School Health Check-up Programme

Details	2009-10	2010-11	2012-13	2013-14
Children Examined	137700	144120	144443	143319
Treated on the Spot	14473	18899	37758	28599
Children Identified and Provided Referral Services	2126	1666	2785	1601

(Source: Health Statistics, Gujarat)

Schools are the best center to examine the children on a large-scale basis. Early detection of health-related problems in the children, helps in quick cure and better prevention. It may be inferred from the trend percentage that approximately 105% increase was noticed in terms of children examination, in all years. Number of children treated on the spot has grown at a CAGR of 18.56% in the period of four years. In the year 2009-10, 2010-11, 2012-13 and 2013-14; the number of children provided referral services as percentage of total children examined were 1.54%, 1.16%, 1.93% and 1.12% respectively. It is indeed positive to note that in the year 2013-14 percentage of children identified for referral services have reduced, which indicates active effort of the health department in providing childcare quality services.

Table 3:39 Children Treated for Disease during the School Health Programme

Details	2009-10	2010-11	2012-13	2013-14
Anemia	2154	4485	7125	6802
Worm Infestations	3169	7138	7917	7909
Ear Discharge	550	621	1160	1080
Skin Disease	471	631	973	1078
Vision Problem	2012	1316	2649	2057
Dental Problem	454	1249	1723	1801

(Source: Health Statistics, Gujarat)

Children are examined for various types of diseases in the school. There was 33%, 26%, 18%, 33%, 0.55% and 41% CAGR in Anemia, Worm infestations, ear discharge, skin disease, vision problem and dental problem, respectively in the children. Problems like Anemia (due to low red blood cells, creates fatigue) and skin disease (due to saline water) are increasing at a very high rate. The dictum, 'A healthy mind lives in healthy body' needs to be addressed soon in the district. If the children are not physically strong they will not be able to study well, play well and progress well. The deteriorating health of the children should be addressed soon. Proper medication and prevention will improve the health of the children.

Table 3:40 Referral Services and Super Specialty Care Provided During the School Health Programme as a Percentage of Children Examined

Year	Referral Services						Super Specialty		
	Pediatr ician	Ophthal mic	Dental	Skin	ENT	Others	Heart	Kidney	Cancer
2009-10	(549) 0.40	(1263) 0.92	(81) 0.06	(83) 0.06	(150) 0.11	(0) 0.00	(36) 0.03	(15) 0.01	(8) 0.01
2010-11	(312) 0.22	(757) 0.53	(99) 0.07	(88) 0.06	(101) 0.07	(309) 0.21	(80) 0.06	(17) 0.01	(1) 0.00
2012-13	(1315) 0.91	(738) 0.51	(360) 0.25	(189) 0.13	(159) 0.11	(24) 0.02	(20) 0.01	(2) 0.00	(0) 0.00
2013-14	(548) 0.38	(536) 0.37	(179) 0.12	(151) 0.11	(110) 0.08	(77) 0.05	(70) 0.05	(40) 0.03	(20) 0.01

(Source: Health Statistics, Gujarat)(Numbers in parenthesis indicates absolute number)

In school the health check-up programme are carried out and if the level of health problem is acute then according to the health issues, children are referred to the specialist like Pediatrician, Ophthalmic, Dental, Skin, Eyes-Nose-Tongue (ENT), Others. In the year 2009-10, 2010-11 and 2013-14 highest percentage of students were referred for ophthalmic problem. In 2012-13 students' highest percentage of students were referred to Pediatrician. On closely monitoring the absolute numbers it is revealed that dental problems are rising at a CAGR of 22%, in the district, over a period of 4 years. The skin problems are growing at CAGR of 16%. Out of the

total children examined, it was noted that number of children being referred for super specialist services like kidney grew to 40 cases from 15 cases. Students being referred for cancer super specialty services have increased to 20 cases from 8 cases. Students' were being referred to heart specialist was highest at 80 cases in 2010-11, which has gone down to a mere 70 cases in the year 2013-14. As the reporting system has become robust and proper, quick diagnosis has helped to identify the cases at the earliest.

3.10 Nutrition

Good nutrition is an important part of leading a healthy lifestyle. Combined with physical activity, your diet can help you to reach and maintain a healthy weight, reduce your risk of chronic diseases (like heart disease and cancer), and promote your overall health (President's Council on Fitness, Sports and Nutrition, n.d.). People who are well nourished are more likely to be healthy, productive and are able to learn. Under nutrition is devastating. It blunts the intellect, saps the productivity of everyone it touches and perpetuates poverty (UNICEF, n.d.). Nearly half of all deaths in children under 5 are attributable to under nutrition. This translates into the unnecessary loss of about 3 million young lives a year. Under nutrition puts children at greater risk of dying from common infections, increases the frequency and severity of such infections, and contributes to delayed recovery. In addition, the interaction between under nutrition and infection can create a potentially lethal cycle of worsening illness and deteriorating nutritional status. Poor nutrition in the first 1,000 days of a child's life can also lead to stunted growth, which is irreversible and associated with impaired cognitive ability and reduced school and work performance (UNICEF, 2015). Under nutrition is more common for children of mothers who are malnourished themselves than for children whose mothers are not malnourished.

Table 3:41 Details Pertaining to Anganwadis

Year	Approved Number	Actual Working	Construction	Electrification	Drinking Water Facility	Sanitation
2006-07	428	363	97	110	98	99
2007-08	428	396	24	66	56	57
2008-09	451	403	25	92	99	69
2009-10	452	449	58	118	112	79
2010-11	476	469	33	124	94	81
2011-12	481	477	22	143	101	113
2012-13	482	481	31	189	117	133
2013-14	490	490	30	195	120	172
2014-15	490	490	13	190	149	190
2015-16	490	490	0	353	353	353

(Source: ICDS, Porbandar)

In the period of 10 years it can be observed that approved number of Aganwadis, actual number of working Aganwadis has increased by 62 (from 428 to 490) and 127 (from 363 to 490) respectively. 97 constructions of new Aganwadis were highest in 2006-07. Electrification, drinking water facility and sanitation facility are found as high as in 353 Aganwadis.

Table 3:42 Staff at Aganwadis

Year	Worker	Helper	C.D.P.O	Main Servant
2006-07	342	328	3	3
2007-08	382	373	2	3
2008-09	395	381	2	2
2009-10	431	427	1	5
2010-11	464	454	1	14
2011-12	470	468	2	15
2012-13	480	475	2	17
2013-14	484	479	2	16
2014-15	485	477	0	15
2015-16	479	459	2	15

(Source: ICDS, Porbandar)

It can be noted that during one decade number of workers, helpers and main servant increased at a CAGR of 3.43%, 3.42% and 17.46% respectively. Number of Child Development Project Officer (CDPO) was 2 across majority of the years.

Table 3:43 Nutrition Status

Year	Number of Children Having Very Low Weight		Number of Children Having Low Weight		Normal	
	0-3 (Years)	3-6 (Years)	0-3 (Years)	3-6 (Years)	0-3 (Years)	3-6 (Years)
06-07	834	802	622	681	8541	7693
07-08	1127	1097	650	678	8677	7118
08-09	1238	732	635	675	8695	7136
09-10	559	515	709	656	6805	6509
10-11	202	192	1814	1641	6874	5848
11-12	57	63	918	961	6185	6751
12-13	839	784	773	778	17853	16504
13-14	486	434	400	295	20825	17078
14-15	147	157	172	162	21712	17176
15-16	266	358	187	170	18658	14030

(Source: ICDS, Porbandar)

It can be observed that number of children having very low weight in the age group of 0-3 years and 3-6 years has declined at a CAGR of -10.80% and -7.75%. It is indeed a good sign as there are lesser the number of children in the red zone (very dangerous). With respect to the

low weight category a CAGR decline of -11.32% and -12.96% was noticed in the number of children falling in 0-3 years and 3-6 years category. It is a positive signal as the children are in the yellow (less dangerous) zone as far as nutrition level is concerned. A CAGR of 8.13% and 6.19% was noticed in the 0-3 years and 3-6 years category of normal children. Higher the number of children under normal weight category, it indicates that they are in the green zone and their physical and mental growth will be proper. Moreover, if a child is in a green zone, it shows that his or her nutrition level is up to the mark and there are higher chances of survival.

A baby's weight at birth is a strong indicator of maternal and newborn health and nutrition. Being undernourished in the womb increases the risk of death in the early months and years of a child's life. Those who survive tend to have impaired immune function and increased risk of disease; they are likely to remain undernourished, with reduced muscle strength, cognitive abilities and Intelligent Quotient throughout their lives. As adults, they suffer a higher incidence of diabetes and heart disease. The incidence of low birth weight, defined as the proportion of newborns weighing less than 2,500 grams (UNICEF, 2014).

Table 3:44 Weight of New Born Children

Taluka	New Born Weight Less than 2.5kg		New Born Weight More than 2.5kg	
	2013-14	2014-15	2013-14	2014-15
Porbandar	822	677	8628	8286
Ranavav	4	10	260	208
Kutiyana	2	54	182	161
Total	828	751	9070	8645

(Source: CDHO, Porbandar)

It may be observed that number of babies whose weight is less than 2.5kgs has reduced by 9.30% in the year 2014-15 when compared to the statistics of 2013-14. It is a positive sign that number of babies whose weight is less than the benchmark weight of 2.5Kgs is reducing, it means that the born babies are physically not weak. Number of babies whose weight, is more than 2.5Kgs has also reduced by 4.69% when the comparison is based on consecutive year on year basis. The number of babies whose weight is more than 2.5Kgs benchmark weight should be maintained.

Table 3:45 Taluka Wise Nutritious Status (2015)

Details	% of Normal Child	% of Total Underweight
Porbandar	98.50	1.50
Kutiyana	99.61	0.39
Ranavav	99.79	0.21

(Source: ICDS MPR)

Based on the 2015 data it can be noticed that highest number of underweight children is found to be 1.50% in Porbandar taluka. Ranavav is ahead in nutritious status with respect to 99.79% as children are of normal weight. Kutiyana stands at 99.61% status under category of normal weight. With respect to 2014 data, 99% children in Ranavav taluka are of normal weight. Highest number (4%) of children is underweight in Porbandar taluka. In the year 2013, with respect to nutritious status, in Porbandar district 93% of the children were of normal weight and 7% children were found to be underweight. The statistic of 2014 depicted that 97% children of Porbandar district were of normal weight and 3% were underweight. In the year 2014, overall 4% improvement was noted in the status of nourishment of children (ICDS-2014).

Table 3:46 Monthly Progress Report March, 2014

Details	No. of AWC Sanction, Operational, Reporting and Providing SNP 21+ Days
Porbandar	270
Kutiyana	110
Ranavav	110
Total	490

(Source: ICDS, MPR)

Table 3:47 Enrolled Population and Beneficiaries (2014)

Details	Enrolled Population				SNP Beneficiaries				PSE Beneficiaries			
	6M-3Y	3Y-6Y	Adole scent Girl	Preg. and Lact. Wom en	6M-3Y	3Y-6Y	Adole scent Girl	Preg. and Lact. Wom en	AW C Pro. PSE 21+ Days	Boys	Girls	Live Birth
Porbandar	9578	9601	18446	4362	3580	6842	6086	1716	250	4980	4621	198
Kutiyana	3050	3251	6682	1245	0	2651	299	364	110	1680	1571	52
Ranavav	5549	5295	10415	2228	5549	5295	1618	700	130	2666	2579	76
Total	18177	18147	35543	7835	9129	14788	8003	2780	490	9326	8771	326

(Source: ICDS MPR)

3.11 Drinking Water and Sanitation

Safe drinking water, proper sanitation facilities and proper hygiene education can reduce the instances of illness and death, thereby ensuring better health and socio-economic development. Potable or drinking water comes from a variety of sources including public water systems, private wells or bottled water. Ensuring uninterrupted supply of safe and healthy drinking water is a pivotal aspect of health and hygiene. Sanitation is the hygienic means of promoting health through prevention of human contacts with the hazards of wastes as well as the treatment and proper disposal of sewage or wastewater (Sanitation, n.d.).

Table 3:48 Taluka Wise Water Supply Status in Porbandar (2014)

Taluka	Habitation Covered with Piped Water Supply Schemes			Water Supply in Habitations by Sources		
	Total	Ongoing	Completed	Water Sources	Delivery Points	Public and Private Sources
Porbandar	71	2	71	195	318	1756
Kutiyana	46	0	46	117	154	986
Ranavav	30	0	30	95	107	699

(Source: Compiled from database of Ministry of Drinking Water and Sanitation, 2014)

In rural areas the water supply schemes is centralized. Rural water supply schemes are framed and implemented by state government through Gujarat Water Supply and Sewerage Board (GWSSB), Gujarat Water Infrastructure Limited (GWIL) and Water and Sanitation Management Organization (WASMO). Taluka wise water supply status is mentioned in the above table.

Table 3:49 Taluka Wise Drinking Water Facility in Schools and Aganwadis

Details	Total	Drinking Water	No Drinking Water
Porbandar	8	8	0
Kutiyana	81	81	0
Ranavav	44	43	1
Total	133	132	1

(Source: Compiled from database of Ministry of Drinking Water and Sanitation, 2014)

Schools and Aganwadis are important places, where the health issues needs to be addressed. Improper drinking water facilities in schools and aganwadis will take a toll on the health of the children. So, right kind of infrastructure is a necessity at the learning centers. The result of poor infrastructure is high absenteeism, high dropout rate and low enrollment in schools. Agnanwadi centers being the place of health care, safe drinking water and hygienic sanitation facilities becomes precondition for implementing any scheme or project. 99% schools of the three taluka have the facility of clean drinking water. Only one school in Ranavav taluka does not have the facility of clean drinking water.

Table 3:50 Water Borne Diseases

Details	2014	2015
Porbandar	9228	9647
Kutiyana	NA	1799
Ranavav	6178	3932
Total	15406	15378

(Source: IDSP)

It may be noticed that water borne disease has marginally increased at the rate of 4.5% in Porbandar taluka. In Ranavav taluka water borne disease (Actue Diarrheal Disease) has decreased at a rate of 36.4%.

3.12 Schemes and Programmes for Health Care

Multiple programmes and schemes for healthcare and children care are being implemented for specific target group beneficiaries. The details of various schemes are given below.

➤ *Chiranjeevi Yojana*

The scheme provides maternity benefits to the below poverty line (BPL) mothers at the nursing homes or hospitals. It is a cashless scheme in which the beneficiary has not to pay any type of charges related to delivery, medicine, anesthesia, laboratory investigations or operation. The obstetricians are paid Rs.3,80,000 for a package of 100 deliveries (normal, complicated and cesarean). If the private Gynecologist offers these services in the government hospital, Rs.2,500 per delivery is payable to him or her. With respect to the 2013-14 data, it was observed that 82.93% of normal deliveries took place at district level against the Gujarat's percentage of 85.33. The Low Segment Cesarean Section (LSCS) delivery in Porbandar was 16.67% and in Gujarat it was 8.53%. Complicated delivery cases in Porbandar were 0.41% and in Gujarat it was 6.12%.

➤ *Bal Sakha Yojana*

The scheme aims to provide nutritious food to infant born in families living below poverty line and all infants born in Government Hospitals. In the scheme, private specialist pediatricians and voluntary organizations are involved on contract basis. Beneficiaries can also avail free treatment from private child specialist. As per the details of 2013-14, Percentage of children admitted to Neonatal Intensive Care Unit (NICU-2) were 2.35% in Porbandar district and 10.17% in Gujarat. The percentage cases referred to NICU-3 at district level was 0 and at state level it was 0.46.

➤ *Kasturba Poshan Sahay Yojana (Nourishment Assistance Scheme)*

Under Kasturba Poshan Sahay Yojana, Govt., provides assistance to pregnant mothers for nutrition based on early registration during the carrying period at the rate Rs.700 at the time of delivery of child, Rs.700 after the child – birth and Rs.700 after full immunization, making the total assistance to Rs.2100 per women mother. In Porbandar district, 835 such mothers were assisted during the year 2014, till the month of August.

➤ *Baal Sanjeevani Center (Malnutrition) Yojana*

Under the Baal Sanjeevani Center (Malnutrition) Yojana, Govt., houses under-nourished children for 21 days in N.R.C. centers. A care-taker per such child like his/her mother is paid at the rate Rs.100 per day to compensate the wage-loss. Thus, Rs.2100 is spent for 21 days. During the year 2013 – 14, 51 such children were assisted till August 2014, in Porbandar district. At Taluka level also such Baal Sanjeevani Center (Malnutrition) Yojana, are run where under-nourished children, are assisted for 21 days in Nityanand Rehabilitation Center (N.R.C) centers. A care-taker per such child like his/her mother is paid at the rate Rs.100 per day to compensate the wage-loss. Thus, Rs.2100 is spent for 21 days. During the year 2013 – 14, 37 such children were admitted of which 31 were fully treated till August 2014.

➤ *Janani Suraksha Yojana (Mother Security Scheme)*

Under Janani Suraksha Yojana, pregnant mothers need to apply in the prescribed format with the Health Workers based on the Certificate indicating their belonging to Scheduled Caste or Scheduled Tribe or Below Poverty Line (SC/ST/ BPL) class. A sum of Rs.500 is made available to these prospective mothers to take nutritious food and an additional sum of Rs.100 is paid as transportation if they go for institutional child– birth.

➤ *No-Scalpel Vasectomy (N.S.V.) Yojana*

Under the Social Welfare measures taken by Govt., N.S.V. operation are promoted for males. A sum of Rs.1,100 is paid per male beneficiary who undergoes the surgery for family planning.

➤ *Shala Arogya Tapasani Karyakram (Program to Inspect Health in Schools)*

Under this program, free health checks up is undertaken for the school children up to 14 years, and also for the students of 18 years of age reading in Class XII. The children having health deficiencies are treated on the spot. In addition, in serious cases, free treatment is made available at Govt. hospitals at district level. In needy cases, children are referred to super specialists dealing with heart, kidneys, cancer etc., at Ahmedabad without any cost. During the year ended 2012, 167 children were referred to and treated by super specialist doctors. During the current year, till August 2014, 121 children have been provided such treatment by super specialist doctors.

➤ ***Rashtriya Svasthya Veema Yojana (National Health Insurance Scheme)***

Under Rashtriya Svasthya Veema Yojana, free medical treatment is made available to family of five persons i.e., husband, wife and three dependents, by way of issuance of smart cards to the BPL persons, and Raliway coolies and workers in building and other construction industry, Mahatma Gandhi National Rural Employment Guarantee Act (MNEREGA) are also extended this benefit. Since implementation of Rashtriya Svasthya Veema Yojana, benefit of Rs.100,95,037 has been made available to 2009 beneficiaries in Porbandar district.

➤ ***Deekari Yojana (Scheme for daughter)***

Saving Certificates worth Rs.6,000 per family having one daughter and Rs.5,000 per family having two daughters are issued by Govt., provided the parents have undergone family planning operations as per Social Welfare Department.

➤ ***Kshay Niyantran Yojana (T.B. Control Program)***

Free medical treatment is made available at door step to all T.B. patients under this Kshay Niyantran Yojana. In addition, a sum of Rs.4,000 is paid by Social Welfare Department to each such person per annum as assistance. During year 2013–14, 144 such beneficiaries were assisted.

➤ ***Leprosy Yojana***

Free medical treatment is made available to all newly registered leprosy cases under this Yojana. In addition, a sum of Rs.4,000 is paid by Social Welfare Department to each such person per annum as assistance; and free surgery is taken up to remove any physical deformity of persons. They are also paid Rs.8,000 as economic assistance. Two such patients were given treatment in Porbandar district.

➤ ***Free Medical Aid***

Different type of free financial assistance is made available in the bank account of the medical patients suffering from T.B., Cancer, leprosy and other such incurable diseases when the patients belong to socially/ educationally/ economically backward castes, minority communities, and the progressive communities/ the moving tribes. The amount is paid on monthly basis till the disease gets cured. For this purpose, an annual income level of Rs.27,000 and Rs.36,000 is fixed to be eligible in Rural and Urban area, respectively. A sum of Rs.20.66 lakh was sanctioned for 308 beneficiaries during the year 2012–13. A sum of Rs.20.50 lakh

was sanctioned for 360 beneficiaries as against target of 390 during the year 2013 – 14. Rs.1,000; Rs.500; Rs.800 and Rs.500 is paid on monthly basis for diseases like cancer, T.B., Leprosy and Human Immunodeficiency Virus (HIV) Positive respectively.

➤ *National Health Insurance Scheme (NID) Yojana*

Rashtriya Swasthya Bima Yojana or National Health Insurance Scheme is a government run health insurance scheme for the Indian poor. It provides for cashless insurance for hospitalization in public as well as private hospitals. Inpatient medical care of up to Rs.30,000 per family per year in any of the empanelled hospitals. Pre-existing illnesses are covered from day one, for head of household, spouse and up to three dependent children or parents (Rashtriya Swasthya Bima Yojana, n.d.).

Every year in the two rounds children in the age group of 0 to 5 years were covered under the NID scheme. The percentage achievement is depicted in the graph. It may be observed that at district level the coverage of children under the scheme has consistently increased in the first round from 2009-10 to 2012-13. In the year 2013-14 the percentage has declined. In the second round the percentage has remained constant from inception, except for the year 2013-14.

➤ *National Programme for Control of Blindness and Cataract Performance*

The programme was launched in the year 1976 as a 100% Centrally Sponsored scheme with the goal to reduce the prevalence of blindness. The programme mainly emphasized on the extension of eye care services, establishment of permanent infrastructure and intensification of eye health education.

Table 3:51 Percentage Performance under National Programme for Control of Blindness and Cataract Performance (2013-14)

Details	Porbandar	Gujarat
% Cases served by District Hospital	1.72	2.8
% Cases served by Sub-District Hospital	0.00	2.44
% Cases served by DMU/CMU	0.00	0.00
% Cases served by NGOs	28.45	39.02
% Cases served by Private	69.83	53.25
% Cases served by Others	0.00	0.96

(Source: Compiled from Health Statistics, 2014)

It can be observed that NGOs and private hospitals play a vital role in the control of blindness and cataract performance. NGOs and Private hospitals have outperformed in terms of serving

the eye patients. Role of district hospitals is minuscule at both district and state level. Sub district hospitals do not play any role in serving eye patients at district level.

➤ ***National Programme for Control of Blindness- School Eye Screening and Eye Donation***

Childhood blindness and visual impairment are as important and perhaps more devastating and disabling than adult onset blindness, because of the long span of life still remaining to be lived. Refractive errors and more particularly myopia, place a substantial burden on the individual and society. School-age children constitute a particularly vulnerable group where uncorrected refractive errors may have a dramatic impact on learning capability and educational potential. National Program for Control of Blindness (NPCB) was initiated by Ministry of Health and Family Welfare, Government of India in the year 1976 and primarily administered by respective State Governments in collaboration with district health authorities through public and NGO institutions. School Eye Screening (SES) program became the integral part of the NPCB since 1994. Based on administrative, logistic, social and medical reasons, it is envisaged under the program to focus initially on screening of students in “middle and secondary schools” or schools having 5th to 10th standard students. This is because of the reason that age of the pupils in these classes is around 10-14 years and they are in the position to understand the purpose and need for vision screening. Administratively it is easy to implement and the students can carry the message home thereby creating awareness in their respective villages. The activities under SES program include identification of schools, collection of information on number of students and teachers, screening and referral centres, training of school teachers, training of general health care personnel, confirmation of “suspect” students by ophthalmic assistant/ ophthalmologist, prescription of glasses, and provision of free glasses to students from poor socioeconomic strata (Jose and Sachdeva, 2009).

Table 3:52 National Programme for Control of Blindness- School Eye Screening and Eye Donation Programme (2013-14)

Details	Porbandar	Gujarat
% of School Covered under SES to Total Schools	100.77	80.29
% of Students Screened to total Students of School	99.60	82.96
% of Students Detected with Refractive Error to Total Students Screened	1.67	2.25
% of Students Provided with Free Glasses to Students Detected with RE	103.18	94.69
% of Eyes Utilized to Total Eye Donation	89.59	90.85
% of Unutilized Eyes to Total Eye Donation	10.41	9.15

(Source: Compiled from Health Statistics, 2014)

It may be observed that all schools of the district are covered under the SES against the 80.29% of state level. More than 80% students are screened at both the district and state level under SES. Detection of refractive error is more than 1.5% at both the state and district level. Free spectacles are provided to the students of economically poor classes. At district and state level it is more than 90% students, who have availed the benefit of free glasses. It was also noticed that the eyes that were donated were used for purposes like Keretoplasty, Pediatric, Research or sent to other eye banks or hospitals. Utilization of eye was more than 80% at district and state level. Percentage of unutilized eyes were more at district level when compared to the state level.

➤ *National Leprosy Eradication Programme*

The National Leprosy Eradication Programme is a centrally sponsored Health Scheme of the Ministry of Health and Family Welfare, Govt. of India. The Programme is also supported as Partners by the World Health Organization, The International Federation of Anti-leprosy Associations (ILEP) and few other Non-Govt. Organizations. Leprosy is a chronic infectious disease caused by Mycobacterium leprae. It usually affects the skin and peripheral nerves, but has a wide range of clinical manifestations. The disease is characterized by long incubation period generally 5-7 years and is classified as paucibacillary or multibacillary, depending on the bacillary load. Leprosy is a leading cause of permanent physical disability. Timely diagnosis and treatment of cases, before nerve damage has occurred, is the most effective way of preventing disability due to leprosy. NELP is launched with the objective to arrest the disease activity in all the known cases of leprosy (National Leprosy Eradication Programme, n.d.). Based on the health statistics of 2013-14, it was noticed that Annual New Case Detection Rate in Porbandar district was 2.59 against 15.27 in Gujarat. Deformity rate was 12.50 and 9.33 for Porbandar and Gujarat respectively.

➤ *Mukhya Mantri (Chief Minister's) Amrutum Yojana*

People in below poverty line (BPL) category can avail of free medical treatment in super-speciality hospitals in cases of heart disease, cancer, kidney problems, serious accident injuries and burn injuries, besides treatment for the newborns. The state government has signed memorandum of understanding with over 60 hospitals, government and private, for the purpose as part of its Mukhyamantri Amrutam (MA) scheme to ensure the poorest also get the best of treatment for illnesses requiring high expenditure. Barring serious accidental or burn injuries, the BPL card holders would have to get themselves registered with the nearest government hospitals or primary health centre and get a reference certificate for treatment of the diseases

covered under the MA scheme. In case of emergency, they can go to the empanelled hospitals directly. Under the scheme, each of the BPL families is being issued MA smart cards, which are similar to health insurance cards. The empanelled hospitals will be paid the treatment expenses by the respective zilla panchayats on production of the details of the patient's MA card and the treatment provided (The Indian Express, 2013). Under the Chief Minister's Amrutam Ma Yojana, free treatment is made available for patients up to of Rs.2,00,000. At present in Porbandar district, 41,20,993 families are registered and 19,54,694 are to be enrolled. At present, under Ma (mother) Vatsalya Yojana, persons with annual income of Rs.1,20,000 are registered and issued cards under Chief Minister's Amrutam Ma Yojana.

Table 3:53 Snapshot of Various Schemes Implemented in the District

Sr.No.	Scheme/Activities	Name of Scheme	2012-13		2013-14		Percentage YoY Change
			Beneficiaries (B)	Payment (P)	Beneficiaries	Payment	
1	Mother Care Scheme	Janani Surksha Yojna	2027	1330100	2131	1355900	B= 5.1, P= 1.9
		Kastuba Poshan Sahay Yojna	1641	1146600	2158	1510600	B= 31.5, P= 31.7
		Chiranjivi yojna	446	1248800	246	691125	B= -44.8 , P= -44.6
2	School Health Camp	Target	144443		143319		-0.78
		screen out	144443		143319		-0.78
		Treatment on Place	37758		28599		-24.26
		Refer	2785		1601		-42.51
3	Mother & Child Care scheme	ANC Registration	13470		11996		-10.94
		Anti Natal Care	13010		11220		-13.76
		TT Mother	13171		11926		-9.45
		Number of Deliveries	11791		10559		-10.45
		Post Natal Care	11832		10533		-10.98
		BCG	11645		10391		-10.77
		Pentavalent	11380		10529		-7.48
		OPV	11484		10540		-8.22
		Measles	11435		10447		-8.64
4	Family Planning	Sterilization	2011		1711		-14.92
		Copper T	3833		3489		-8.97
		Condom Users	2010		2500		24.38
		Oral Pills Users	1346		1058		-21.40

(Source: Chief District Health Office, Porbandar)

Table 3:54 Snapshot of 20 Points Health Programme
(Details of Porbandar District's Immunization and Family Planning for March, 2013)

Sr. No.	Details of Work	Physical Achievement				
		Targeted Workload	Last Month's Work Details	Current Month's Work Details	Achievement	%
1	Pregnant Women's Registration	14000	11078	918	11996	85.69
2	T.T. Pregnant	14000	10963	963	11926	85.19
3	BCG (0-1 year)	12700	9432	959	10391	81.82
4	Polio	12200	9591	949	10540	86.39
5	DPT	12200	9580	949	10529	86.30
6	Measles	12200	9537	346	9883	81.01
7	Fully Immunized	12200	9537	346	9883	81.01
8	Polio Booster	11800	8671	813	9484	80.37
9	DPT Booster	11800	8671	813	9484	80.37
10	Vitamin A- First Dose	12200	8914	0	8914	73.07
12	Vitamin A- Bio-Annual Round	48800	43360	0	43360	88.85
13	D.T. (5 years)	10601	7636	63	7699	72.63
14	T.T. (10 years)	10800	10577	239	10816	100.15
15	T.T. (16 years)	11299	9637	162	9799	86.72
16	Second Time Pregnant	14000	7168	921	8089	57.78
17	Delivery Registration	12700	9694	865	10559	83.14
18	Postnatal Registration	12700	9472	861	10333	81.36
20	Assistance under Janani Surksha	2469	2040	249	2289	92.71
21	Chiranjivi yojna-Case	-	245	1	246	
	Chiranjivi yojna- Expense	-	805000	2800	805000	
22	Bal Sakha- Case	-	169	4	173	
	Bal Sakha- Expense	-	291600	5500	297100	
23	KPSY- Case	-	1762	0	1762	
	KPSY- Expense	-	1169000	0	1169000	
24	Maa Yojna- Case	-	263	36	299	
	Maa Yojna- Expense	-	4513189	804695	5317884	
25	RRBY Case	-	1437	104	1541	
	RRBY Expense	-	7256087	483000	7739087	
Family Planning						
26	Sterilization Operation					
	Tubal Ligation (TL)	2600	29	1	30	65.81
	Laparoscopic Tubal Ligation		1580	99	1679	
	Male Vasectomy (VT)	0	2	0	2	
	Total	2600	1611	100	1711	65.81
27	Copper T	4400	3273	216	3489	79.30
28	Nirodh	4500	164975	10073	175048	54.00
			2500	1679	2431	
29	Oral Pills	1700	12908	853	13761	62.00
			1172	853	1058	

(Source: Chief District Health Office, Porbandar)

3.13 Success Stories

Box 3.1 Success Story of Swachh Bharat Mission (Rural) of Village Tukada Gosa

Tukada Gosa is a village located on the Madhupur highway about 22 km South of Porbandar on the sea shore. 312 families reside in this village. They belong to Mer, Aboti Brahmin, Rabari, Devipoojak and the under privileged communities. The people are engaged in agriculture, field works and also in animal husbandry business. Shri Heeriben Arjan Tukadia, aged 65 years, has been a resident of this area, also known as Ghed Panthak, for about 45 years. She lost her husband 25 years before and she does field work to run her family. She said that when she did not have this toilet built in her house, she had to go to outer parts of the village in the early morning or late evening hours to hide behind the shrubs. With the growing age, this distance was also becoming a problem to walk – especially during some sickness. Sometimes, she had to use some private lands at closer distance.



Box 3.2 Mega Health Camp Under Mukhya Mantri Amrutum Yojana

A mega health camp under Mukhya Mantri Amrutum Yojana was organized on 12th January, 2014. The objective behind the camp was to screen patients, diagnose and provide necessary treatment along with drugs. Patients, who were covered under different health scheme, were referred to nearest empanelled hospital (private or public) for further treatment. Total BPL families in Porbandar district as on 2014 were 33,176, of which 69.86% i.e. 23,176 were MA card holders. 1,499 people were referred to various specialist. In the mega camp 217 personnel offered the services to patients. Depending upon the ailment, 75 types of different drugs were provided to the beneficiaries based on their requirement.

Around 15 days before the camp, Jilla Panchayat teams, PHC, CHCs, ASHA workers, FHW started visiting local areas. The aim was to mobilize and disseminate information about MA

yojana. Door to door distributions of printed MA card were carried out. 75,000 pamphlets were distributed in the district, hoardings were displayed in each and every PHCs and public places, public meetings, television scroll, advertisement in newspaper and other medias, door to door survey, involvement of key persons in patient mobilization and screening by health staff was done to make the camp a great success. There were 25 Medical Officer and other Para-medical staff in each General screened stall. After screening, patients were referred to specialist doctors or prescribed drugs were provided. Primary investigations were done at the camp site itself by specialist doctors with the due assistance of Arogya Mitra. Various specialist doctors like Pediatric, Orthopedic, Physician, Psychiatric, Dermatology, Dental, General Surgery, E.N.T., Gynecology, Plastic surgeon and Ophthalmology participated in the camp. Patients who were screened and identified for MA yojana, district coordinators and Arogya Mitra recorded their details and guided them to go to referred empanelled hospital. All primary drug were provided to patients free of cost. Primary investigation like Laboratory, X-ray, Sonography, Electro Cardiogram (ECG) etc were made available at the camp. General facilities like pick and drop facility for patient, Shamiana, Sitting lounge, fans, pure drinking water and hygienic food was provided to the people.

Table 3:55 Snapshot Details of Mega Camp (2014)

Details	Statistics	Details	Statistics
Total Registered Patients	2608	Total MA Yojana Referred Patients	343
Patients Referred to:			
General Surgeon + Plastic Surgeon	113	Orthopedic	276
Ophthalmology	338	Dermatology	104
Psychiatric	132	Physician	210
ENT	138	Pediatrics	103
Gynecology	77	Dental	8
Beneficiaries who Availed Facilities:			
ECG	85	Sonography	54
X-ray	29	Laboratory Investigation	220
Manpower Involvement			
Physician	4	Dentist	2
Dermatologist	1	ENT	1
Ophthalmologist	1	Gynecologist	4
Pediatrician	2	General Surgeon	3
Psychiatrist	1	Orthopedic Surgeon	1
Radiologist	1	Pathologist	1
Plastic Surgeon	1	Medical Officer	25
Laboratory Technician	15	Pharmacist	12
Multipurpose Health Worker (MPHW)	60	Female Health Worker (FHW)	60
Project Coordinator (MA)	3	District Coordinator	4
Regional Coordinator	2	MDI Staff	3

Arogya Mitra	4	Taluka Kiosk Executive	6
<i>(Source: Mega Health Camp Report, 2014)</i>			
			

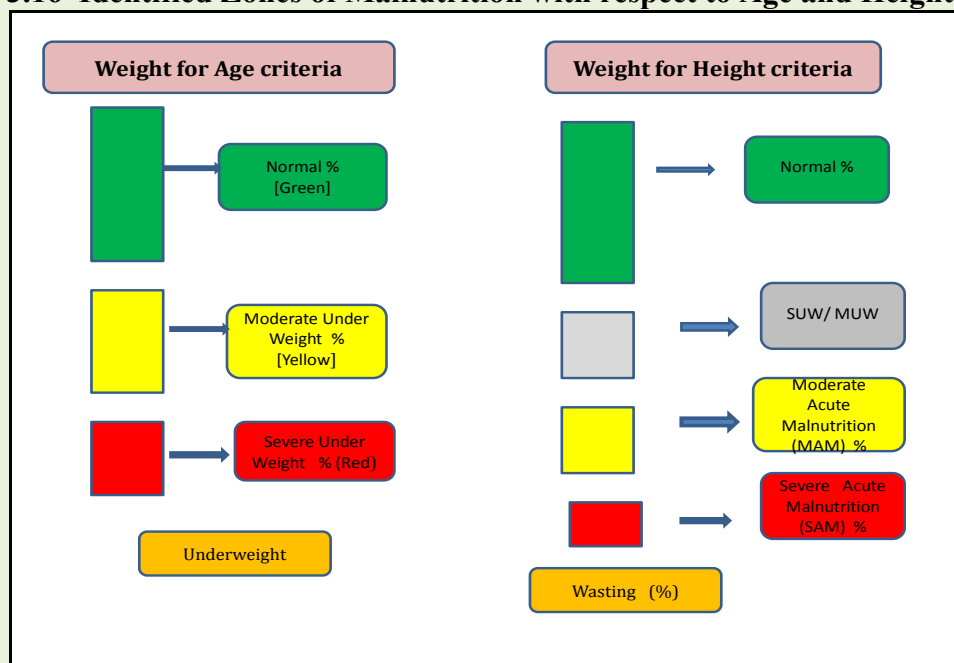
Box 3.3 Ankur Project

Motto of Ankur Project

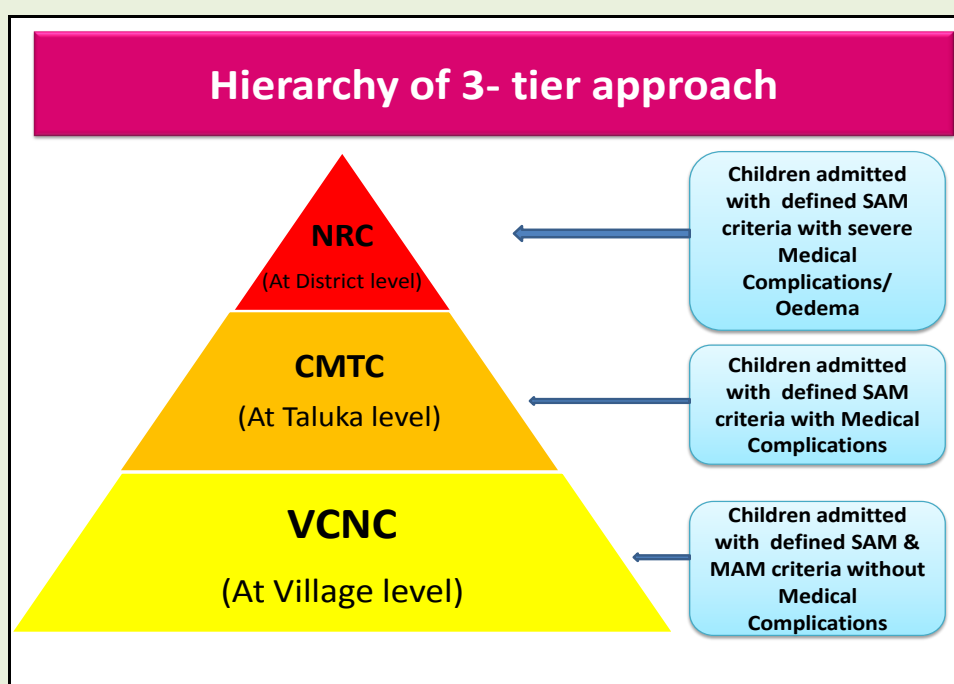
Reducing Child Mortality is inseparable duty. The Health Department rededicates itself to the meticulous implementation of Ankur Project in Porbandar district by extending complete cooperation to efforts of Govt., and works for making Porbandar district healthier; and reducing the child mortality rate. Project named Ankur Project has been implemented in Porbandar district by District Health Department for reducing rate of child mortality. To reduce the Maternal mortality rate (MMR) and Infant Mortality Rate (IMR), project Ankur has been implemented in the mentorship of Collector and District Development Officer. It takes care of aspects of the child birth and covers care till Inoculation. Efforts are made to register the name of mothers as early as possible and ensure monthly checks ups where they are educated about importance of breast feeding and inoculation of the Mamata Day. The fundamental objective of Mamata day is to provide essential and comprehensive health & nutrition services to pregnant women, lactating mothers, children (0-5 yrs) and adolescent girls. To ensure early registration, identification and referral of high risk children and pregnant women. To provide an effective platform for interaction of service providers and the community (through Gaon Kalyan Samiti or the mothers group). To provide information to families on care of mothers and children at the household and community level through discussion of various health topics (as envisaged in the Health Calendar); and to ensure establishment of linkage between health & ICDS as to promote maternal & child survival programmes (Mamata Diwas, 2009). The infant mortality rate (No. of death of children of less than 1 year of age in a year X 1000/ No. of live births in the same year) is 14 for Porbandar district and it is 38 at Gujarat level. Ankur project has six thrust areas of work.

Malnutrition and Three Tier Structure:

Malnutrition consists of underweight (A composite measure- low weight for age), Stunting (An indicator of past growth failure- Low Height for Age), Wasting (Current or Acute malnutrition- low weight for height) and Micronutrient deficiencies (Iron-Anaemia, Iodine-Hypothyroidism, Cretinism-Mental retardation, Vitamin-A- Night Blindness). Three zones are fixed to identify the children under malnutrition.

Figure 3.16 Identified Zones of Malnutrition with respect to Age and Height Criteria

(Source: Adapted from Gujarat State Nutrition Mission, 2015)

Figure 3.167 Hierarchy of 3-Tier Approach

(Source: Adapted from Gujarat State Nutrition Mission, 2015)

Table 3:56 Focus Points of Ankur Project

Work Methodology	Description
Registration of birth of the child	The information of child birth will be registered at the earliest by the ASHA worker, Health Worker and the Village Anganwadi worker. After that, child will have to be taken for monthly Mamata Day for necessary treatment and guidance.
Arrangement for taking the child home (Khilkhilat) after medical checkup and diagnosis of the child	On Mamata Day, after screening the child, a medical checkup of child will be conducted by PHC lady worker, ASHA worker and Anganwadi worker along with the Medical officer of PHC and the RBSK Team.
Identification of dangerous symptoms of sickness	Deformity on birth, Under – nourished child, Underweight child, Birth of two or more children at a time and Injury during the process of childbirth is identified.
Reference of case to First Referral Units (FRU)	If found necessary under the first stage diagnosis.
Free inoculations	After the birth, children will be given all inoculation facilities.
Arrangement of transportation for medical checkup	So that the regularity is maintained in the health check up.

(Source: Chief District Health Office, Porbandar)

Major Modus Operandi in Ankur Project consist of:

Table 3:57 Modus Operandi of Ankur Project

Initiatives	Description
Sensitization workshop for Health workers	Arranging periodical Sensitization workshops for health workers where the staff will be informed of the Ankur Project and will be sensitized as to how to reduce the Child Mortality Rate. This will also include the aspects of taking care of prospective mothers.
Capacity Building Training	On identifying serious symptoms in a child or a prospective mother by ASHA worker or the lady health worker, the same will be discussed with the family members. A Mahila Health Sangh will be formed for this purpose. This will be followed by the weekly meetings at home, monthly review of the same at Village level, and at meeting of Sanjivani Committee.
Skill Lab Training	To train the person who is providing the health services. This is done to ensure that the person possess the skill sets required to deliver quality services.
SBA training	The training is imparted to the Skill-Birth Attendant.
HBNC Training	The infant and the mother will be kept under surveillance, diagnosis and medical treatment for 42 days by the ASHA and the lady health worker where loss of blood, body temperature, nutrition, sanitation,

	weight of child and its activeness and the breast-feeding will be observed; and in case of medical issues, the infants and the mother would be referred for better medical attention
Weekly monitoring program	Infants will be monitored weekly and will be accordingly taken care of by the female health worker of PHC, ASHS worker and (RBSK) team and Anganwadi worker.
Information, Education and Communication (IEC), Behavior Change Communication (BCC), Inter Personal Communication (IPC)	In Porbandar district, IEC and BCC will be ensured by banners, posters, pamphlets and by advertisements on TV channels to reduce the child mortality.
Mass Meeting, group discussion and gram sanjivani meeting	Under Ankur Project, discussions are held on reducing child mortality and implementation of the Project by way of organizing periodical meetings of Health Workers at the PHCs. Due publicity is given at public gathering on the subjects of Safe Child Birth and importance of inoculation to increase awareness on the subjects. In the monthly meetings of the Gram Sanjivani Committee, discussions are held and people are guided on Safe motherhood and on a Health Child; and reasons of any death due to these short comings, are discussed with a view to stopping anymore such cases; and necessary steps are initiated.
IEC supplementary food by Integrated Child Development Services (ICDS)	Necessary services are provided.
Gynecologist's monthly camp	As a part to boost Ankur initiative the private gynecologists, pediatrician and government doctors, on the last Sunday of every month, in the 'Rupadi Ba Lady Hospital' carried out free of cost examination of ANC, risky mothers and undernourished children. Necessary medicines were also offered without charging any money.
Private doctors' workshop	With a view to reducing the child mortality rate, periodical workshops of private and Govt. doctors are arranged where they are sensitized and trained in Porbandar district.
Effective use of Mamata Ghar	The purpose of Mamata Ghar is to provide a setting where high-risk women or women from remote areas can be accommodated during the last 7- 10 days of pregnancy or even more if needed near a hospital where Obstetric and Newborn care facilities are available. Mamata Ghar not only decreases maternal mortality but it helps in improving the maternal and neo-natal outcomes. Emphasis is put on education and counseling regarding pregnancy, delivery care and care of the newborn infant and family.

Effective implementation of Village Child Nutrition Centers (VCNCs), Child Malnutrition Treatment Centers (CMTCs) and Nutrition Rehabilitation Centers (NRC)	Based on the malnutrition level the child is sent to the respective centre.
Consultation Services	Under Bal-Sakha Yojana, with a view to reducing the Child Mortality rate, necessary consultation / treatment is provided to the children having serious symptoms, at the Bhavsinh Ji Hospital in Porbandar district
Third Party Evaluation	Ankur Project is evaluated by independent third party for its successful implementation and for any mid – term correction based on that evaluation.
Monitoring at District Level	Block Development Health Officer (BDHO) Additional District Health Officer (ADHO) Reproductive And Child Health Officer (RCHO) Epidemic Medical Officer (EMO) District Primary Education Officer (DPEO) Public Officer (PO) (ICDS)
Monitoring at Taluka Level	Taluka Health Officer (THO) Child Development Programme Officer (CDPO) Medical Officer (MO) Main Female Worker Block Coordinator Taluka Health Visitor (THV)
Team at Sub Center Level	Female Health Worker (FHW) ASHA Worker Anganwadi Worker Multipurpose Worker (MPW)

(Source: Chief District Health Office, Porbandar)

Various task are set before the officers involved in the Ankur Project.

Table 3:58 Major Task in Ankur Project

For Whom	Task Description	For Whom	Task Description
The Task before the District level officer	Meet the malnourished children at their residence Discuss with the parents by interpersonal relations To ensure that the child regularly takes food at Anganwadi Regular check up and guidance to children with red and yellow cards in Anganwadi	Supervisory task before District Level Officer	Monitor weight of Child Observe whether the weight is appropriately increased Upgrade the Growth Chart Discuss problems with parents of undernourished children in weekly meetings Fill up Supervisory Check Lists and give appropriate guidance.

Future Initiatives: Number of Anganwadis Proposed to be adopted by NGOs in Porbandar District

Lions Club – 5 Anganwadies
 Rotary Club – 5 Anganwadies
 Red Cross – 5 Anganwadies
 Dr. Surekhben Shah (Sharadaben Trust) – 5 Anganwadies
 Shri Anilbhai Kariya (District Chamber of Commerce) – 5 Anganwadies

The Process

Details
Instructions given to bring children into Green zone by providing necessary food by regularly calling the children in red and yellow zones.
Parents of children in Red zone informed to admit the children for 21 days in CMTC and NRC.
Anganwadi workers instructed to provide necessary food to all children by regularly calling them to Anganwadi, and also bring children to Green zone from the Red and Yellow zones.
Instruction given to provide the third meal.
Instruction given to immediately refer the children with heart problems. Instructions also given to increase the regularity among children.

Table 3:59 Description of Child Malnutrition Treatment Center (April-August, 2014)

Place	Number of Centers	Bed Occupancy		Percentage	Average Weight Gained during the Stay (In Gms.)	Average Length of Stay
		Target (Admission)	No. of Admitted Children			
Porbandar	1	50	36	72	454	19
Kutiyana	1	50	32	64	738	21
Ranavav	CMTC is yet to be started					

Table 3:60 Weekly Performance Under Ankur Project

Date	Child Birth in a Month	Malnourished Children (Last Month)	Underweight Children	Children Admitted to CMT C and NRC	Transfer of Children from Red to Yellow and Green Zone	No. of Children Died	No. of officers who visited in a month	No. of Anganwadis Visited	No. of Children Visited
24/09/14-29/09/14	162	1020	10	1	21	3	4	9	18
29/09/14-04/10/14	108	1030	2	1	15	2	4	12	14
05/10/14-11/10/14	131	1032	1	0	4	2	5	20	40



3.14 SWOC Analysis

Strength

- Number of Allopathic institutions are more than Ayurvedic and Homeopathic.
- Porbandar taluka has highest number of government hospitals (15) with highest number of beds (361).
- Number of SC, PHC and CHC are more than prescribed benchmark number.
- Patients served in urban Allopathic hospitals are more, indicating good amenities.
- More than 50% rise of water borne disease was controlled on immediate basis by Health department. It was possible due to IDSP improvement.
- Mass drug administration in the district is more than 84%. Porbandar district have been declared “Filaria Free”.
- Rate of Institutional deliveries is 99.46% indicating better maternity facilities.
- Family welfare measures are well accepted in the family.
- Vaccination to children is more than 100%.
- There is 97% registration of live birth in district.
- 100% schools of the district have facility of clean drinking water.
- More than 90% of children in Porbandar district are of normal weight.
- E-mamta initiatives is strong effort to record, monitor and track the data name wise of the live entry made of birth records.

Weakness

- Population served per Allopathic hospitals is less in rural areas compared to urban counterparts. Poor functioning of CHC is found at Ranavav and Kutiyana taluka.
- Staff against IPHS norm of 40 is zero which is a hurdle in providing healthcare services.
- 51% and 12% post of MO and ANM cadre are vacant and 27% post of staff nurse is not filled.
- There is a dearth of paramedical staff as filled position is only 64%.
- Children are found affected by Anemia and Skin disease problem.
- Despite sanction of post of General Surgeon, Physician, Gynecologists and Orthopedic Surgeon, it has not been filled.
- Number of MO recruited is less than the post sanctioned.
- Human resource power of medical officer and specialist is worrisome issue.

Opportunities

- Number of Ayurvedic and Homeopathic hospitals may be increased.
- Beneficiaries have been benefitted under various governmental schemes which should not only be maintained but also enhanced.
- School Eye Screening and Eye Donation Programme has achieved success in district, which is more than state level. One can promote corneal implant in the hospitals.
- Mukhya Mantri Amrutum Yojana received very good response at the district level, which should be further encouraged. More awareness programmes are needed.
- Ankur project to eradicate malnutrition was quite successful in the district should be continued. NRC and CMTC need to be more functional by promotion of more admission of SAM by health worker to reduce malnutrition and its associated preventable mortality.

Threats

- Deliveries in private hospitals have increased. It is more than 50%, there is a perception among masses that private hospitals provide quality services as they charge more.
- Increase in new case detection of TB due to better diagnosis and reporting system. The cure rate of TB is 85%, the target is to achieve 100%.
- There is increase in CDR, indicating that inhabitants are not using medical facilities to the fullest.
- Disease like Gastroenteritis has decreased, Enteric Fever has increased due to better diagnosis and reporting system.
- CAGR growth in AIDS is at 83%, as new cases have been reported.

3.15 Way Ahead

Hospitals and Healthcare

Number of patients served by CHCs is higher than PHCs and SCs. Pool of amenities should be increased at CHCs so that rush at District Level hospital can be controlled. Number of Ayurvedic and Homeopathic hospitals may be increased in the district. All the vacant positions must be filled so that there is no dearth of medical and para-medical staff and the medical services can be provided effectively and efficiently. Indian Public Health Standard (IPHS) allows people to recruit on contractual basis, which should be put into practice to do away with dearth of medical and paramedical staff. CHC should be filled with Class I staff recruitment for highest center. Special and Semi-Special rooms are planned to be constructed. Vacant post of Public officer and Child development programme officer must be immediately filled. There are Headquarter issues, wherein the medical staff does not stay in the allotted quarters on the contrary they commute from the place of residence to the hospital. This should be taken care of and medical staff should be compulsorily asked to stay in hospital quarters, so that they are available for 24x7 duty and they genuinely complete their allotted duty load. Neither any political interference should be entertained nor should any preference be given to employees who come with the request for not staying the staff quarters. In fact such cases must be strictly dealt. Concept of Telemedicine and online appointment must be implemented in the district.

Health education training should be provided to Anganwadi Workers. Recruitment norms for Anganwadi workers should be enhanced, by shifting the eligibility criteria from 10th pass out to at least 12th pass out or graduate. Anganwadi workers should not be engaged in Aadhar card preparation, election duty, 'vasti ganatri' etc, they should be allowed to perform their duty without such interruptions. Specific projects like private balmandir/nursery, music, painting etc should be started at Anganwadis.

Intermittently, awareness campaigns for AIDS, Tuberculosis, Enteric Fever, Malaria and Measles should be done so that its outbreak can be controlled. Recently, TB notification rate has increased so, it is superficially appears there is outbreak of TB. Other reason for more number of cases being reported for TB is following of strict implementation for detection, when the drug are bought from the medical stores; it is mandatory for them to report. Since IDSP reporting has increased the cases of Gastroenteritis, Enteric Fever, AIDS and TB have come into limelight. Initiatives for providing clean water and clean environment will put a check on viral and contagious disease. Sensitizing the people to keep their surroundings clean will prevent them to fall in the clutches of Chikungunya and Dengue. In order to control the cases

of Chikungunya and Dengue, the open gutter system should be transformed into closed gutter system. The work of IEC primarily lies in creating awareness of AIDS. Measures like use of condoms, single partner norm and non re-usage of disposables in private and other hospitals will but a strong check in the growth of AIDS.

Women Healthcare

Institutional Deliveries are increasing at a higher rate, which is a positive signal for mother's and child's life. More funds should be allocated to provide incentives to private doctors, who come in government hospitals for managing deliveries or gynecologists should be appointed to take care of institutional deliveries. Number of normal deliveries has increased when compared to cesarean deliveries. Home deliveries through trained dai minimizes the risk of death which is usually higher in the case of conventional home deliveries at the assistance of untrained dai. Deliveries through untrained dai should be brought to zero level by motivating prospective mother to favour institutional deliveries. Proper campaigning will help to mitigate the risk of premature maternal and babies death. There is a Lady Specialty hospital but there is no lady Gynecologist, who should be recruited on immediate basis. In Porbandar women are also consumers of tobacco, which should be strictly banned as it not only affects the health of women but also creates critical health-issues for new born babies.

Child Healthcare

Despite mass drug administration, the infant death rate is rising. A thorough assessment of childcare medical facilities needs to be done. Parents should be educated towards the importance of timely vaccination and emergency childcare facilities, so that they can assure good health for their children. The other entire immunization programme should meet the success like Pulse Polio Campaign. Problems like Anemia and skin disease in increasing at a very high rate amongst the children of Porbandar district. Importance of balanced diet and personal hygiene should be taught to children mandatorily from the early age itself. Schools can be assigned a responsibility to create such type of awareness through audio-video visuals, short skits or including it as a one of the chapter in the curriculum, so that students are not only sensitized but the useful message can be spread across the masses very quickly. Dental, ENT and Other disease referral cases are also rising amongst children.

Nutrition

The statistical data revealed that in the early 2013 the number of new born babies were malnourished. With the implementation of Ankur Project, more than 97% new born babies in

each taluka were healthy babies under the category of normal child. In connotation to 2015's data, in Porbandar taluka still 1.50% of the children were found to be underweight. Under Ankur project, proper education on food habits, communicating the importance of including milk as a complete food in balanced diet has helped to create awareness amongst the prospective mother, lactating mother and mother of young children. Such movement will remove the problem of malnourishment or undernourishment in near future.



CHAPTER 4

LIVELIHOOD



Chapter 4 Livelihood

4.1 Introduction

Agriculture means the science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products.

Agriculture plays an important role in Gujarat's economy. It contributes around 21 percent of the gross domestic product (GDP). About 60 percent of the State's rural population depends on agriculture for their livelihood. Enhancing growth of the agriculture sector is vital for ensuring the food security, poverty eradication, price stability, overall growth and sustainability of the economy.

The primary sector, including agriculture and animal husbandry holds significant position in the economy of Porbandar district. Well-developed agriculture, establishes strong linkages between agriculture and the rest of the economy, which helps agricultural population to access higher incomes and better opportunities for human development. The animal husbandry also plays vital role in providing nutritive food and supplementary income to the economically weaker section of the society. Porbandar is one of the important fish landing centres of the Saurashtra coastline. The turnover from fish and fishery products (from processing units) along the coast is comparatively high. Tourism at this historical site and eco-tourism in and around the bird sanctuary and beach and related activities yield good revenue to the local community.

The chapter discusses land use pattern, land holding features, cropping pattern, major crops and productivity, livestock in Porbandar, livelihood by agriculture and animal husbandry, schemes and programs for agriculture and animal husbandry, success stories and status of talukas pertaining to agriculture and animal husbandry, etc in Porbandar.

4.2 Land Use Pattern

Forest area includes all land classified either as forest under any legal enactment, or administered as forest, whether State-owned or private, and whether wooded or maintained as potential forest land. Non agriculture lands includes all land occupied by buildings, roads and railways or under water, e.g. rivers and canals, and other land put to uses other than agriculture. This includes all grazing land whether it is permanent pasture/meadows or not. Village common grazing land is included under this category. Livelihoods are the means that people use to support themselves, to survive and to prosper. It comprises the abilities, assets and

activities for a means of living (Chambers and Conway, 1991). Access to various levels and combination of asset has major influence on choice of livelihood options. Land being a vital natural asset, its efficient use is the prerequisite for development as it has greater significance in livelihoods especially for backward agrarian area like Porbandar where majority of working population is dependent on agriculture.

Table 4:1 Taluka wise Land Use Classification (2003-04) (Area in Ha.)

Talukas	Forest Area	Non Agricultural	Grazing Land	Net Sown Area	Net Irrigated Area	Total Area
Porbandar	4655	9486	12670	58321	8241	114137
Ranavav	15018	3969	5939	22875	5224	58800
Kutiyana	4739	1925	6904	38177	5744	56598
Total	24422	15380	25513	119373	19209	229535

(Source: District Statistics Outline, 2012-13)

The total reported area of Porbandar district is 22953500 hectares as shown in Table 4.1. The total forest area for the district is reported as 24422 hectares of which 15018 hectares are of Ranavav followed by 4739 hectares of Kutiyana and 4655 hectares of Porbandar taluka. Similarly the composition of non-agricultural land for the district is 15380 hectares, which includes 9486 hectares, 3969 hectares and 1925 hectares for Porbandar, Ranavav and Kutiyana respectively. Also Table 4.1 shows the composition of grazing land and net sown area. The net sown area for the district is 119373 hectares of which 58321 hectares are of Porbandar followed by 22875 hectares of Ranavav and 38177 hectares of Kutiyana.

Table 4:2 Taluka Wise Land Use Classification in % (2003-04)

Talukas	Forest Area		Non Agricultural		Grazing Land		Net Sown Area		Total Net Irrigated Area		Total Area
	% Dist	% Taluk a	% Dist	% Taluk a	% Dist	% Taluk a	% Dist	% Taluk a	% Dist	% Taluk a	% Dist
Porbandar	19.06	4.08	61.68	8.31	49.66	11.10	48.86	51.10	42.90	7.22	49.73
Ranavav	61.49	25.54	25.81	6.75	23.28	10.10	19.16	38.90	27.20	8.88	25.62
Kutiyana	19.40	8.37	12.52	3.40	27.06	12.20	31.98	67.45	29.90	10.15	24.66
Total	100		100		100		100		100		100

(Source: Computed from District Statistics Outline, 2012-13)

Of the total reported area of Porbandar taluka 4.08% is forest, 8.31% is non-agricultural and 11.10% is grazing land. However, 51.10% of total reported area is net cropped area and 7.22%

of total reported area is irrigated. It can also be observed that Porbandar is the biggest taluka sharing 49.73% of district area, Kutiyana shares half of the district area of Porbandar i.e. 24.66%. Ranavav shares maximum forest area i.e. 61.49%. Porbandar shares largest area (61.68%) under non-agricultural use. Kutiyana shares least area (12.52%) under non-agricultural use. With respect to grazing land Porbandar shares the highest area (49.66%) and Ranavav the least (23.28%). 48.86%, 31.98% and 19.16% are the respective net cropped areas of Porbandar, Kutiyana and Ranavav. Irrigated area is highest for Porbandar (42.90%) and least for Ranavav (27.20%). Majority of Ranavav taluka's area is forest area (25.54%) and for remaining taluka majority area is net cropped area. More than 50% net cropped area is witnessed for Porbandar (51.10%) and Kutiyana (67.45%) taluka. It can be observed that largely Kutiyana taluka's area is net irrigated (10.15%). Only Kutiyana taluka shares greater proportion of net cropped area as compared to district average.

4.3 Land Holding Features

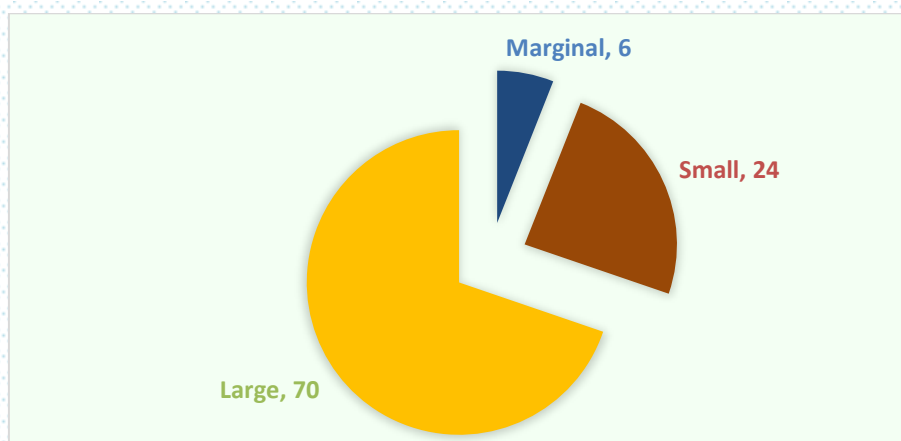
Land holding is the concept which involves operating of land for the purpose of producing agricultural goods. Land is the fundamental means of production without which no agriculture production can take place. An understanding of the pattern of ownership and operational holdings of land is therefore very important to understand the structure of the society. Land is regarded as the means of piling up wealth that also symbolizes social status and political power and hence land is a basic and primary resource. Distribution and ownership of land has greater significance in determining income level. The diversity of livelihoods in agrarian region exists as a result of variation land holdings. The economic wellbeing of agrarian region people is tied-up with amount of land owned by the household.

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Table 4:3 Number &Area (ha) of Operational Holders according To Size Class & Social Groups (2011-12)

Taluka	Unit	Marginal (below 1 hect.)					Small (1.00 to 2.0 hect.)					Other Holdings (Above 2.0 hect.)					Total				
		I	SC	ST	Others	Total	I	SC	ST	Others	Total	I	SC	ST	Others	Total	I	SC	ST	Others	Total
Porbandar	No.	8	223	0	6525	6756	8	339	0	10208	10555	36	137	0	11029	11202	52	699	0	27762	28513
	Area	3	170	0	4132	4305	12	469	0	14958	15439	986	407	0	44578	45971	1001	1046	0	63668	65715
Ranavav	No.	1	25	0	1988	2014	1	77	0	4427	4505	5	21	0	4280	4306	7	123	0	10695	10825
	Area	0	20	0	1446	1466	1	100	0	6416	6517	115	56	0	17335	17506	116	176	0	25197	25489
Kutiyana	No.	1	183	101	2582	2867	2	316	214	6376	6908	18	160	167	6324	6669	21	659	482	15282	16444
	Area	0	151	74	1874	2099	3	443	309	9102	9857	645	564	650	26175	28034	648	1158	1033	37151	39990
Total	No.	10	431	101	11095	11637	11	732	214	21011	21968	59	318	167	21633	22177	80	1481	482	53739	55782
	Area	3	341	74	7452	7870	16	1012	309	30476	31813	1746	1027	650	88088	91511	1765	2380	1033	126016	131194

(Source: District Statistics Outline, 2011-12)

Figure 4.1 Percentage Size of Land Holding

(Source: Computation from District Statistics Outline, 2011-12)

It may be inferred that out of the total land area, 70% area of land holding is above 2 hectares (large holdings) in nature. 24% of land holdings is small area in the range of 1 to 2 hectares and 6% holdings is below 1 hectare i.e. marginal land holding.

Table 4:4 Taluka Wise Operational Holdings

Taluka	Total Holdings		Average Size (Ha)	SC Holdings		ST Holdings		Other Holdings		Institutional Holding	
	No	Hectares		(%No)	(%Area)	(%No)	(%Area)	(%No)	(%Area)	(%No)	(%Area)
Porbandar	28513	65715	2.31	2.45	1.59	0	0	97.37	96.89	0.18	1.52
Ranavav	10825	25489	2.35	1.14	0.69	0	0	98.80	98.85	0.06	0.46
Kutiyana	16444	39990	2.43	4.01	7.04	2.93	2.58	92.93	92.90	0.13	1.62
District	55782	131194	2.35	2.65	1.81	0.86	0.79	96.34	96.05	0.14	1.35

(Source: Computed from District Statistics Outline, 2012-13)

With respect to operational holdings (in numbers) 2.65% belongs to SC, 0.86% belongs to ST and 96.34% belongs to other categories in Porbandar district. In terms of operational holdings (in hectares) 1.81% of holdings belong to SC, 0.79% belongs to ST and 96.05% belongs to other categories in Porbandar district. Kutiyana taluka is inhabitant of large number of SC and ST population, so their operational holding (both in terms of number and in terms of hectares) is found more for the specified community. Kutiyana taluka shares 2.93% and 2.58% of operational holdings in number and hectares respectively for ST category. It shares 4.01% and 7.04% of operational holdings in number and hectares respectively for SC category. Considering the distribution of population across categories and across the talukas, SC and ST population share less operational holdings from the total operational land holdings as compared to the other population that shares the operational land holdings in Porbandar district.

4.4 Cropping Pattern

Cropping pattern refers to the acreage distribution of different crops in any one year in a given farm area such as a county, water agency, or farm (Cropping Pattern, n.d.). Proper cropping pattern provides maximum benefit, as it reduces the risk and gives some insurance against the failure of one of the crops. Out of the total reported area of Porbandar district, more than 50% of area is the net cropped area. More than 60% of reported area in Kutiyana taluka is under cultivation. 30% to 40% of reported area in Ranavav is under cultivation. Thus, it may be inferred that agriculture is the mainstay of people of Kutiyana and Porbandar.

Table 4:5 Year Wise Area (in hectares) of Food and Non-Food Crops

Year	% Food Crops	% Non-Food Crops
2010-11	84.32	15.68
2011-12	78.13	21.87
2012-13	78.42	21.58
2013-14	86.64	13.36
2014-15	76.93	23.07

(Source: Computed from database of District Statistics Outline, 2010-14)

In the year 2010-11 the share of food crops in the cultivated area was 84.32% and non-food crops was 15.68%. From the year 2010-11 onwards to 2012-13 a fall in the shares of cropped area was noticed for food crops and the area was considerably expanded for cultivation of non-food crops. In the year 2013-14 an upswing was noted in the area devoted for cultivating food crops and for non-food crops it was considerably reduced. Further in the year 2014-15 the area for 2014-15 was 76.93% for food crops and 23.07% for non-food crops. The volatile trend of shifting from food to non-food crops indicates the change in cropping pattern of the district. Unpredictable cropping pattern and fluctuating production in food crops and non-food crops is not only a serious threat on the food security aspect but it also imposes a peril on the remunerative prices to cultivators.

Table 4:6 Talukawise Area (% Hectares) Under Food and Non-Food Crops (2014-15)

Taluka	% Food Crops	% Non-Food Crops
Porbandar	86.82	13.18
Ranavav	79.90	20.10
Kutiyana	53.38	46.62

(Source: Computed from database of District Statistics Outline, 2010-11)

It may be observed that in the year 2014-15 in Porbandar taluka the cultivation of food crops was 86.82% and non-food crops was 13.18% against the available land for cultivation. Farmers of Ranavav taluka grew 79.90% of food crops and 20.10% of non-food crops, in the cultivable area. In Kutiyana the share of food crops and non-food crops was 53.38% and 46.62% respectively. Major inclination to grow non-food crops is the remunerative and quick

realization of prices. Cultivation of major non-food crops is done at the cost of food security and nutrition.

4.5 Major Crops and Productivity

Crop yield is dependent on various factors like weather, seed quality, input materials etc. Agricultural productivity is measured as the ratio of agricultural output to agricultural inputs, i.e. in yield. Higher agricultural productivity implies that there is optimum utilization of scarce resources, assurance of food security and income stability. Higher agricultural productivity assists in alleviating poverty in agrarian regions, where agriculture sector employs large pool of labourers. When the productivity rises, the wages of the workers increase and food supplies become stable.

Table 4:7 Productivity of Major Food Crops (Yield in Kgs/Ha)

Major Food Crops	Porbandar			Gujarat		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
Jowar	805	1269	859	1048	1105	1127
Bajara	1333	2250	1800	1232	1720	1861
Wheat	2681	3329	2901	2678	3156	3015
Maize	1000	1800	0	963	1730	1525
Others	1000	1333	1000	842	1109	911

(Source: Computed from database of Directorate of Agriculture, Gujarat-2009-2012)

The productivity of food crops like jowar, bajara, wheat and other crops is lower compared to the productivity of the state. A contradiction was observed that only in the year 2010-11 the productivity for jowar, bajara, wheat and other crops was highest compared to the state yield. It could be considered as bumper production year for the district. The climatic condition and cultivation aspect might have acted as a boon to the farmers of the district. Maize was cultivated only for two consecutive years i.e. 2009-10 and 2010-11.

Table 4:8 Productivity of Major Pulses Crops (Yield in Kgs/Ha)

Major Pulses Crops	Porbandar			Gujarat		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
Gram	1056	1342	1277	945	1138	1139
Tur	0	1000	0	906	986	1054
Other Pulses	500	0	0	734	604	583

(Source: Computed from database of Directorate of Agriculture, Gujarat- 2009-2012)

Production of gram in Porbandar district remained volatile in the three consecutive years. The yield for gram was highest in 2010-11 when compared with Gujarat state. The yield for Tur was consistent in the state, but in the district it was just 1,000 kg/ha in the year 2010-11.

Cultivation of other pulses in district was only for the year 2009-10, whereas it was consistently produced, with the highest yield in the year 2009-10.

Table 4:9 Productivity of Major Oilseeds Crops (Yield in Kgs/Ha)

Major Oilseeds Crops	Porbandar			Gujarat		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
Groundnut	1984	885	2173	964	1860	1611
Castor	2000	1667	2050	1972	2010	2055
Seasum	0	521	438	356	438	471

(Source: Computed from database of Directorate of Agriculture, Gujarat- 2009-2012)

Porbandar stands ahead in the production yield of groundnut when compared to state's production yield. Despite lot of volatility in the yield of groundnut, farmers continued to produce it. The production yield for castor is highest in Gujarat state. Farmers of Porbandar district have started the cultivation of seasum oilseeds; the yield is also higher than Gujarat.

Table 4:10 Productivity of Major Cash Crops (Yield in Kgs/Ha)

Major Cash Crops	Porbandar			Gujarat		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
Cotton	513	512	447	511	637	587

(Source: Computed from database of Directorate of Agriculture, Gujarat- 2009-2012)

With respect to cash crops cultivation only cotton is grown in Porbandar district. The yield for cotton is lower than Gujarat's productivity.

Table 4:11 Productivity of Major Fruit Crops (Yield in M.T./Ha)

Major Fruit Crops	Porbandar					Gujarat				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Mango	7.10	9.40	10.00	9.46	8.00	7.05	7.01	7.09	7.11	7.89
Chiku	8.90	10.80	11.00	11.08	10.93	9.96	10.00	10.72	10.76	10.38
Lemon & Limes	8.00	7.81	7.95	7.95	8.50	10.40	10.44	10.58	10.62	10.94
Ber	7.30	7.00	7.46	9.03	8.00	10.43	10.48	10.57	10.58	10.05
Date Palm	0.00	4.00	5.00	4.50	4.50	7.40	7.42	7.42	8.05	8.66
Papaya	43.00	58.30	60.00	60.00	55.00	54.29	54.73	57.24	60.87	60.52
Custard Apple	6.80	5.42	6.00	6.25	7.00	10.61	10.34	10.84	10.96	10.14
Aonla	8.00	6.60	8.00	6.67	8.00	9.73	9.74	9.56	9.61	9.54
Coconut	8.30	8.35	8.56	8.55	8.49	10.34	10.29	10.41	10.51	9.39
Others	6.30	6.32	31.96	32.79	6.75	6.91	6.81	29.33	36.84	7.40

(Source: Computed from database of Directorate of Horticulture, Gujarat- 2009-2014)

Porbandar district is ahead in the productivity (production per hectare) of mango and chiku when compared to the state. It can be noticed that productivity of lemon and limes, papaya and other fruits have consistently increased over a period of five years (2009-10 to 2013-14). Yield of Custard apple, Aonla and Coconut is volatile for Porbandar district. Yield for Date Palm is

highest in Gujarat. It clearly points out that cultivation of mango and chiku are highly remunerative for farmers.

Table 4:12 Productivity of Major Vegetable Crops (Yield in M.T./Ha)

Major Vegetable Crops	Porbandar					Gujarat				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Onion	36.00	39.80	39.80	40.00	28.20	24.85	24.42	25.48	24.42	25.28
Brinjal	16.00	15.30	17.00	16.00	17.00	17.37	17.17	17.39	17.47	19.43
Cabbage	16.67	16.00	16.08	16.00	17.90	18.53	19.63	19.88	21.46	21.79
Okra	10.50	12.00	10.99	11.00	10.00	9.42	10.88	10.97	11.02	11.50
Tomato	23.00	24.80	35.86	37.17	27.17	24.90	25.22	25.96	26.29	28.25
Cauliflower	17.40	18.00	17.40	16.00	15.00	18.00	18.36	18.49	18.60	21.72
Cluster Beans (Guar)	8.00	7.10	8.00	8.00	8.00	7.91	9.16	8.89	8.91	9.98
French Beans (Cow Peas)	6.50	7.20	6.50	6.50	8.00	9.24	10.35	10.49	10.69	10.61
Cucurbits	8.22	8.89	10.70	8.75	13.75	14.20	14.51	15.20	16.09	15.56
Others	0.00	8.10	15.38	0.00	12.00	12.10	14.15	25.70	26.13	17.16

(Source: Computed from database of Directorate of Horticulture, Gujarat- 2009-2014)

In Porbandar district the productivity for onion, brinjal, okra and cauliflower is quite volatile. Yield for cabbage is consistently increasing at the district level in the duration of 2009-10 to 2013-14. Yield for onion and tomato is highest in the year 2012-13, when compared on Year-on-Year basis and with Gujarat. Yield for cluster beans (guar) is nearly stable at 8.00 (Mt/Ha). Gujarat is ahead in the yield of French beans (Cow Peas), Cucurbits and other vegetable crops.

Table 4:13 Productivity of Major Spices Crops (Yield in M.T./Ha)

Major Spices Crops	Porbandar					Gujarat				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Cumin	0.90	0.83	0.84	0.89	0.85	0.71	0.75	0.76	0.91	0.80
Chilly (Dry+Green)	3.55	3.10	0.00	0.00	0.00	6.83	7.01	7.62	8.67	1.75
Garlic	7.45	10.48	8.34	8.24	8.09	6.86	6.97	7.08	7.62	7.84
Corrainder	1.50	1.52	1.56	1.50	1.60	1.49	1.59	1.57	2.85	1.46
Fenugreek	1.88	2.10	2.43	2.21	0.00	2.05	2.65	2.65	2.86	1.90

(Source: Computed from database of Directorate of Horticulture, Gujarat- 2009-2014)

For spices and condiments it can be observed that Porbandar district's yield is highest for garlic. A contradiction is observed that farmers for Porbandar district have stopped the cultivation of Chilly and Fenugreek, after growing it for two and four years respectively. Proper exploration will help to understand the reason for stoppage of production.

Table 4:14 Productivity of Major Flower Crops (Yield in M.T./Ha)

Major Flower Crops	Porbandar					Gujarat				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
Rose	7.17	6.80	8.00	8.58	8.00	7.43	7.78	7.83	8.02	9.06
Marrigold	8.20	8.70	8.20	6.31	8.00	8.82	9.02	9.34	9.49	9.55
Others	8.00	8.00	8.06	8.31	8.50	6.83	10.61	8.31	8.33	8.76

(Source: Computed from database of Directorate of Horticulture, Gujarat- 2009-2014)

It can be noticed that Porbandar is not ahead in floriculture. The production yield for rose, marigold, mogra, lily and other flowers is highest for Gujarat. Cultivation of rose, marigold and other flowers is done despite volatility.

Cropping intensity is defined as a ratio between net sown area (NSA) and gross cropped area (GCA). It thus indicates the additional percentage share of the area sown more than once to NSA. It can be measured as gross cropped area/net sown area x 100. The intensity of cropping, therefore, refers to raising a number of crops from the same field during one agricultural year. The index of cropping intensity is 100 if one crop has been grown in a year and it is 200 if two crops are raised. Higher the index, greater is the efficiency of land use. Cropping intensity can also be defined as annual cropped area (sum of area under all crops in a year) divided by net land area into 100. For example: A farmer having net cultivable land of 5 hectares has cropped paddy in 5 hectares, wheat in 4 hectares, mung bean in 1.5 hectares in a year, then the cropping intensity will be: Cropping Intensity = total cropped area (5+4+1.5)/net land area (5) *100 = 210%.

The ever increasing demand for food can be satisfied by either bringing the net area under cultivation or intensifying cropping over the existing area. Cropping intensity is rising of a number of crops from the same field during one agriculture year. Higher cropping intensity means, a higher portion of the net area is being cropped (cultivated) more than once during one agricultural year.

Table 4:15 Taluka wise Cropping Intensity

Talukas	2003-04			2009-10			2013-14		
	Net	Total Cropped Area	Cropping intensity (%)	Net	Total Cropped Area	Cropping intensity (%)	Net	Total Cropped Area	Cropping intensity (%)
Porbandar	58321	65579	112.44	63640	84253	132.39	63640	144157	226.52
Ranavav	22875	27166	118.76	23889	30140	126.17	23889	41815	175.04
Kutiyana	38177	41260	108.08	34410	49058	142.57	34410	66105	192.11

(Source: Computed from database of District Statistics Outline, 2010-11 and District Agriculture Office)

It is very positive to notice that in all the three talukas of Porbandar district the cropping intensity has increased. Higher favourable rise in cropping intensity is noticed from the year 2003-04 to 2009-10. In the consecutive year the cropping intensity has also increased for all the three talukas. For Porbandar taluka the cropping intensity is almost double in the year 2013-14 when compared with 2003-04. Higher cropping intensity indicates that farmers have a good opportunity to earn their livelihood either by farming their own fields or by working as labour in landowners' field. Increasing cropping intensity justifies sustainable economic development for farmers and food security for future generation.

4.6 Irrigation Status and Potential

Table 4:16 Taluka wise Irrigated Area

Talukas	2003-04			2013-14		
	Total Cropped Area	Total Irrigated Area	Irrigated Area as a % of Total Cropped Area	Total Cropped Area	Total Irrigated Area	Irrigated Area as a % of Total Cropped Area
Porbandar	65579	8241	12.57	63640	7600	11.94
Ranavav	27166	5224	19.23	21350	3800	17.80
Kutiyana	41260	5744	13.92	34410	10900	31.68
Total	134005	19209	14.33	119400	22300	18.68

(Source: Computed from database of District Statistics Outline, 2010-11)

It can be observed that out of the total geographical area of district, about 7.22%, 8.88% and 10.15% of the area is irrigated in Porbandar, Ranavav and Kutiyana taluka respectively. The irrigated area in Porbandar and Kutiyana taluka nearly covers 12.57% and 13.92% of the respective cropped area. In Ranavav taluka the irrigated portion covers the highest cropped area i.e. 19.23%. Only 14.33% of the cropped area of Porbandar district is irrigated. In the year 2013-14, irrigated area for Kutiyana taluka has only increased to 31.68%, despite decrease in cropped area. In Porbandar and Ranavav taluka the irrigated area for 2013-14 is less compared to 2003-04 area. The cropped area in Porbandar and Ranavav taluka has decreased. Higher the irrigated area as a percentage of total cropped area better is the water management practices, which in turn proves beneficial for agriculture.

Table 4:17 Taluka wise Irrigation Intensity (2013-14)

Taluka	Area under Cultivation (Hectare)	Area under Irrigation (Hectare)	Irrigation Status (% of Area Irrigated)	Area not Under Irrigation (Hectare)	Irrigation Potential (% of Area Un-irrigated)
Porbandar	63640	7600	11.94%	56040	88.05%
Ranavav	21350	3800	17.79%	17550	82.20%
Kutiyana	34410	10900	31.67%	23510	67.27%

(Source: Computed from database of District Statistics Outline, 2013-14)

It may be inferred that in Porbandar and Ranavav taluka 88.05% and 82.20% of the region is un-irrigated. Un-irrigated area is high in Porbandar and Ranavav. In Kutiyana taluka 67.27% area is not irrigated. More than 50% of the area is not irrigated through proper sources of irrigation, which means the fate of agriculture is dependent on the vagaries of nature. Higher the irrigated area, higher is the productivity of agriculture and cultivation will not be dependent on the vagaries of nature.

Table 4:18 Area Irrigated by Crops (2003-04)

Taluka	Total Cereals	Total Pulses	Other Food Crops	Total Non-Food Crops	Irrigated Area
Porbandar	9922	793	1	4605	7258
Ranavav	5133	27	0	1052	4271
Kutiyana	3400	50	0	3105	3083
Total	18455	870	1	8762	14612

(Source: Computed from database of District Statistics Outline, 2010-11)

Irrigation status for cereals, pulses, other food crops and non-food crops is 54%, 91%, 100% and 53% respectively in Porbandar taluka. With respect to Ranavav 28%, 3% and 12% area is irrigated for growing cereals, pulses, and non-food crops respectively. In Kutiyana area of 35% for non-food crops, 18% for cereals and 6% for pulses are irrigated.

4.7 Agriculture Implements

Agriculture implements facilitates in farming. It makes the job of farming easy. Higher level of mechanized farming increases the efficiency of farmers.

Table 4:19 Details of Usage of Agriculture Implements (2007)

Implements	Porbandar	Ranavav	Kutiya
Wooden Plough	2905	104	1231
Iron Plough	8904	2424	3868
“Thadivado karab”	400	1565	143
Indented Plough	4713	2059	1736
Implement for land leveling	5220	1323	2448
Implement for leveling land for paddy cultivation	260	0	0
Implement to sow seeds	10033	2158	3779
Cattle driven Cart	9095	2436	3275
Sugarcane Crusher	0	0	1

(Source: District Statistics Outline, 2010-11)

4.8 Livestock in Porbandar

Livestock enterprises are flourishing business of rural region and are interwoven in socio-economic fabric of villages. Dairy farming is treated as a supplementary occupation to agricultural farming. It provides nutritive food, supplementary income and productive employment for family labour. Crop farming and cattle rearing are considered to be vertical integration, in which a loss in one could work as set-off against the other. Such complementary activity acts as a cushion for both. Milking cattle are like current account, they produce milk for family and cash crop in terms of commercial consumption. Breeding cattle plays the role of savings account, with progeny as interest. Cattle often performed function of banking any time money and insurance (cover against uncertain agro-income). Animals give dung as manure and fuel; eggs, are used as transportation carrier, share the field work load; provide meat, leather and their carcass also fetches a market value due to various applications it has.

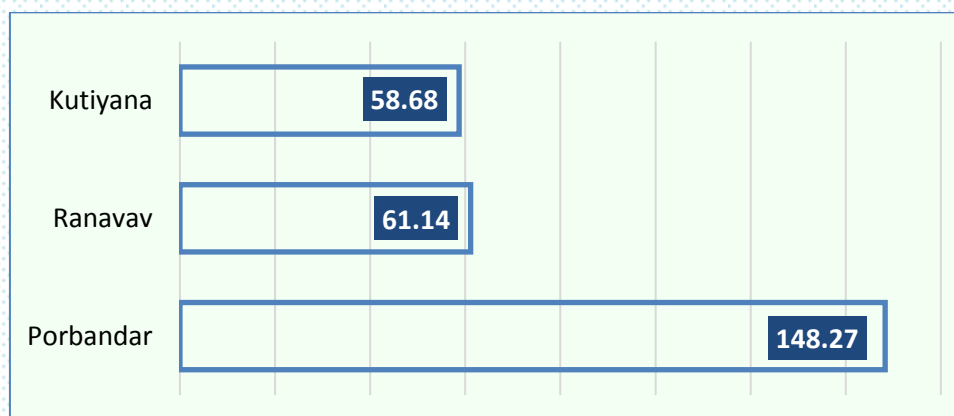
As per the Livestock Census 2007, Porbandar shares 1.01% of livestock of Gujarat. As per the Livestock Census 2012 data, Porbandar shares 0.99% of livestock of Gujarat. With respect to poultry (2012) Porbandar shares 0.06% of poultry of Gujarat.

Table 4:20 Category Wise Number of Livestock (In 1,000s) in Porbandar District

Animals	2007	2012	CAGR
Cow	83.11	81.00	-0.51
Buffalo	105.35	144.99	6.60
Sheep	22.65	22.37	-0.24
Goat	22.33	18.84	-3.34
Horses	0.48	0.33	-7.26
Camel	1.81	0.40	-26.25
Donkey	0.15	0.03	-25.59
Pigs	0.01	0.11	64.98
Poultry	29.37	9.03	-21.01

(Source: District Statistics Outline (2010-12) and Directorate of Animal Husbandry)

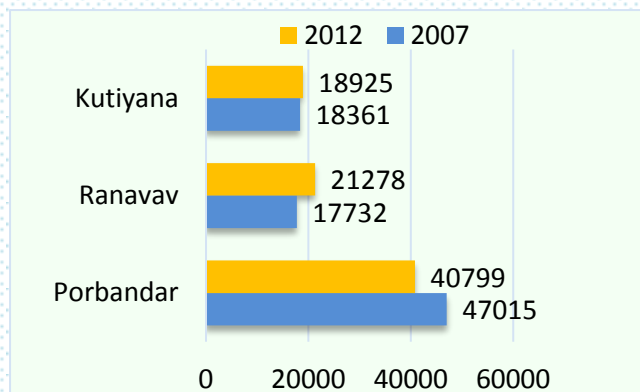
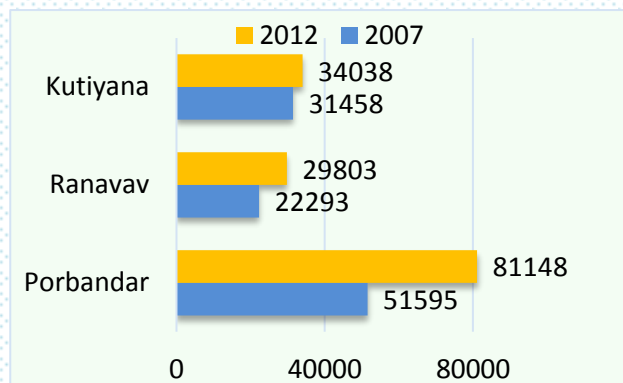
In the duration of five consecutive years, the respective CAGR for cow, buffalo, sheep, goat, horses, camel, donkey, pigs, and poultry is -0.51%, 6.60%, -0.24%, -3.34%, -7.26%, -26.25%, -25.59%, 64.98% and -21.01%. It can be observed that rearing of cow has marginally declined over a period of five years. Domestication of camel, donkey and poultry has drastically declined. Rearing of goat has also decreased. Increase in rearing of buffaloes could be noticed over a period of five years. Rearing of horses has decreased. Highest CAGR was noticed in the case of pigs at 64.98%.

Figure 4.2 Taluka Wise Number of Livestock (In 1,000s) (2012)

(Source: District Statistics Outline-2011-12 and Directorate of Animal Husbandry)

It can be observed that highest numbers of livestock is in Porbandar taluka. More than 50% livestock are in Ranavav and Kutiyana taluka. It can be inferred that Porbandar taluka shares the major portion of cattle of entire district.

Cows and Buffaloes are primary milch animals. People rear them as it provides subsistence source of income. Rearing of milking cattle is often done by women in rural region. It is a part-time retirement free occupation for homemakers. Cows and Buffaloes are considered as best bet against the vagaries of nature like drought, famine and other natural calamities.

Figure 4.3 Number of Cows**Figure 4.4 Number of Buffaloes**

(Source: District Statistics Outline-2011-12)

Taluka wise five years trend in the number of cow shows that it has marginally increased for Kutiyana taluka at CAGR of 0.61%. Higher CAGR is noticed in Ranavav taluka at 3.71%. Minus 2.80% decline in CAGR is noticed for cows in Porbandar taluka. Overall district's CAGR is Minus 0.50%. Kutiyana's decline in number of cows has surpassed the district's decline. It is quite noteworthy that number of buffaloes has increased in all the three talukas in the period of five years. The CAGR increase in number of buffaloes for Porbandar, Ranavav and Kutiyana taluka is 9.48%, 5.98% and 1.59%. The district's CAGR is 6.49%. Porbandar taluka's CAGR in buffaloes surpasses the district's CAGR.

4.9 Institutions Involved In Animal Husbandry

There are many institutions which are involved in varied forms of animal husbandry.

Table 4:21 Animal Husbandry Infrastructure in Porbandar

Units	No.	Units	No.
Mobile Veterinary Dispensary	1	Rural Primary Veterinary Health Care Centers	1
First-Aid Veterinary Centers	7	Veterinary Polyclinic	1
Veterinary Dispensary	11	District Poultry Extension Service Centre	1
Gaushalas	119	Panjarapoles (Registered)	3
District Sheep and Wool Extension Programs	1	Village Milk Producer Cooperative Society	143
Artificial Insemination Centre	21	Veterinary Service Centre Run by Dairy	5
Artificial Insemination Centre run by Dairy	5	Wool Distribution Centers	3
Veterinary Doctors	12	Visitors Met During Village Visit	2455
Veterinary Hospitals	11	Veterinary Hospital VD/BVD	11
Animal Insemination Centre/ Sub-Centers	21	Sheep and Wool Extension Centers	3
Slaughter Houses	1	Animal Market	3
Fish Market	1		

(Source: District Statistics Outline-2010-11 and Nabard-2013-14)

Table 4:22 Details of Beneficiaries of Various Animal Husbandry Schemes Implemented in Porbandar District

Name of the Scheme	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Cattle Shed	11	11	9	9	9	9
Cross Breeding	808	720	615	512	317	252
Artificial Insemination	13298	13602	10160	11242	13247	12012
Animal Vaccination	105031	84021	121774	130196	193236	218191

(Source: Livestock Department, District Panchayat, Porbandar)

It can be inferred that beneficiaries of cattle shed scheme has declined at a CAGR of -3.29%. None of the beneficiary is accounted in the cattle insurance scheme. Decline in beneficiaries was noticed at the rate of -17.65% of CAGR with respect to cross breeding of cattle. -1.68% CAGR was noticed under artificial insemination scheme. 12.96% CAGR was noticed under animal vaccination.

Table 4:23 Details of Work Accomplished by Livestock Department

Work Details	2009-10	2010-11	2011-12	2012-13	2013-14	CAGR %
Animal Healthcare	28612	31994	24610	62405	56323	14.51
Artificial Insemination	13602	10160	11242	13247	12655	-1.43
Samples in Laboratory	1014	1160	1081	1049	1397	6.62
Animal Castration	2477	1905	1853	1947	1814	-6.04
Animal Vaccination	84021	121774	130196	193236	218191	21.03
Animal Healthcare Camp	52	50	50	51	51	-0.39
Educational Workshop on Cattle	50	50	50	50	0	NA
Workshop on Animal Productivity	50	50	50	50	25	-12.94
Health Package (General)	1765	0	0	0	0	NA
Cattle Shed (General)	2	2	2	2	2	0.00
Chaffcutter (General)	8	8	8	13	10	4.56
Health Package (SC)	94	0	0	0	0	NA
Cattle Shed (SC)	9	7	7	7	7	-4.90
Chaffcutter (SC)	17	9	9	15	15	-2.47
Goat Units (SC)	5	2	2	2	2	-16.74

(Source: Livestock Department, Porbandar)

4.10 Animal Healthcare

Animals are treated in the veterinary hospitals for various types of disease. Surgery pertaining to castration is also performed in the hospitals.

Table 4:24 Details of Treatment of Animal Disease and Castration

Year	Indoor Patients	Outdoor Female Patients	Medicines Provided to Animals Without Hospitalization	Castration Operation of Male Patients
2010-11	0	6318	20084	1443
2011-12	2	5289	13715	1853
2012-13	0	7720	43510	1947

(Source: District Statistics Outline-2010-13)

It may be inferred that outdoor female patients increased at a CAGR of 7% in the three years duration. 29.40% and 10.50% is the CAGR with respect to medicines provided to animals without hospitalization and castration operation of male patients respectively.

Table 4:25 Treatment for Non-Contagious Disease

Year	2010-11	2011-12	2012-13
Porbandar	750	1005	894
Ranavav	470	629	728
Kutiyana	223	219	325
Total	1443	1853	1947

(Source: District Statistics Outline-2010-13)

In 2010-11 to 2011-12 for Porbandar, Ranavav there was increase in 34% each for both the talukas. For Kutiyana taluka a decline of 2% was noticed. In the year 2012-13 the increase in number of cattle for treatment for non-contagious disease were 15.73% and 48.40% respectively for Ranavav and Kutiyana taluka. 11.04% decline in treatment of animals was noticed only in Porbandar taluka in the year 2012-13.

Veterinary Institutions are indebted to perform various types of vaccinations for animals.

Table 4:26 Treatment for Non-Contagious Disease

Details	Gujarat	Porbandar	Porbandar's % Against Total
Cases Treated	1429636	59320	-
Castration Performed	244415	1788	3.01
Vaccinations Performed			
Haemonhagic Septicaemia	9994332	44982	15.02
Black Quater	613191	12709	4.24
Anthrax	6770	0	0.00
Foot & Mouth Disease	22493206	129512	43.25
A.R.V.	80832	319	0.11
Enterotoxaemia	1896574	63616	21.24
Sheep pox	53001	0	0.00
Fowl pox	492476	1450	0.48
Ranikhet	2260551	9571	3.20
Mareks	453801	0	0.00
Others	3945270	37310	12.46
Total	42290004	299469	100.00
Animal Covered Artificial Insemination Methods			
Cows	2773622	2086	-
Buffaloes	3123744	15689	-

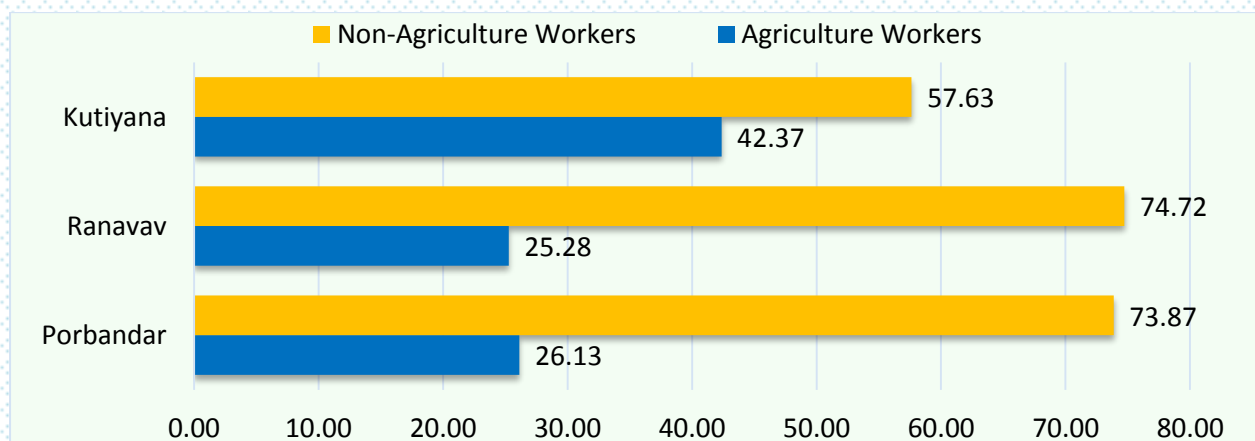
(Source: Directorate of Animal Husbandry, 2012-13)

When compared with Gujarat, Porbandar shares a minuscule percentage in terms of cases treated and castration performed, vaccinations performed and animals covered under artificial insemination method. This share needs to be increase for proper healthcare of animal assets. Highest number of cattle is provided vaccine against foot and mouth disease, followed by Enterotoxaemia and Haemonhagic Septicaemia.

4.11 Livelihood by Agriculture and Animal Husbandry

The eligible workforce of the district is either involved in agriculture activity or other than agriculture activity.

Figure 4.5 % of Workers Involved in Agriculture and Other Sectors (2011)



(Source: District Statistics Outline-2011-12)

It can be observed that more than 50% of the working population in each taluka is involved in non-agricultural activity. In Porbandar, Ranavav and Kutiyana, 73.87%, 74.72% and 57.63% of the working population is actively involved in non-agricultural activity. People have less dependence on agricultural activity per say. 26.13%, 25.28% and 42.37% of working population of Porbandar, Ranavav and Kutiyana are occupied in farming activity. It could be understood that only Kutiyana's working population share more than 40% statistics in agriculture which is being considered as full time occupation. It could be further interpreted that in majority of the talukas, majority of workforce is dependent for livelihood on secondary sector. Porbandar is highly urbanized, followed by Ranavav. Kutiyana shares a mixed shade of agriculture and non-agriculture workers.

Table 4:27 Developments in Animal Husbandry

Taluka	Milk Cooperatives						Milk Collection (in Liters)		
	Societies			Members					
	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Porbandar	65	68	85	5470	5772	5100	25718	28501	49300
Ranavav	23	26	42	917	1412	1890	14302	19742	12936
Kutiyana	55	52	26	3355	3167	910	38732	26202	6448
Total	143	146	153	9742	10351	7900	78752	74454	68684

(Source: District Statistics Outline-2010-13)

Highest numbers of milk cooperative societies were found in Porbandar taluka followed by Ranavav taluka. It clearly reflects that in Porbandar taluka and Ranavav taluka cattle's rearing is on a large scale. Kutiyana taluka has witnessed a downfall in cattle rearing activity. Decrease of -3.93% CAGR was noticed in number of members of milk cooperative societies. Decrease of CAGR of -2.14% in milk collection was noticed in the period of five years in district. It clearly points out that the productivity of cattle should be increased for better food security. More number of milk farmers should be motivated to join in the cooperative societies and number of milk cooperative societies should be increased for centralized processing of milk and offering remunerative prices to milk farmers. Milk farmers collectively sell the milk to cooperative societies. Cooperative societies process it and sell the same under their pre-decided brand name.

Table 4:28 Taluka Wise Details of Milk Production and Sales of Milk (Mt' Tons)

Year	Details	Porbandar	Ranavav	Kutiyana
2008-09	Production	48000	19200	28800
	Sales	31200	12480	18720
2009-10	Production	52000	20800	31200
	Sales	33800	13520	20280
2010-11	Production	58500	23400	35100
	Sales	38025	15210	22815
2011-12	Production	61000	24400	36600
	Sales	39650	15860	23970
2012-13	Production	64000	25600	38400
	Sales	41600	16640	24960
2013-14	Production	68000	27200	40800
	Sales	44200	17680	26520

(Source: Livestock Department, District Panchayat, Porbandar)

It was very surprising to note that both the milk production and sales in six years across Porbandar, Ranavav and Kutiyana taluka, had grown at a CAGR of 5.97%.

Table 4:29 Comparative Details of Taulka across Various Parameters

Details	Porbandar	Ranavav	Kutiyana
% of Milk Cooperative Societies Members of District	64.56	23.92	11.52
% of Milk Collection of District	71.78	18.83	9.39
% of Livestock of District	54.98	22.93	22.10
% of Cows of District	51.06	25.33	23.62
% of Buffalos of District	55.52	20.93	23.54
% of Families with Livestock of District	56.71	21.32	21.97

(Source: Livestock Department, District Panchayat, Porbandar)

It may be inferred that Porbandar is leading in terms of all parameters mentioned above.

Table 4:30 Taluka Wise Percentage of Main and Marginal Workers

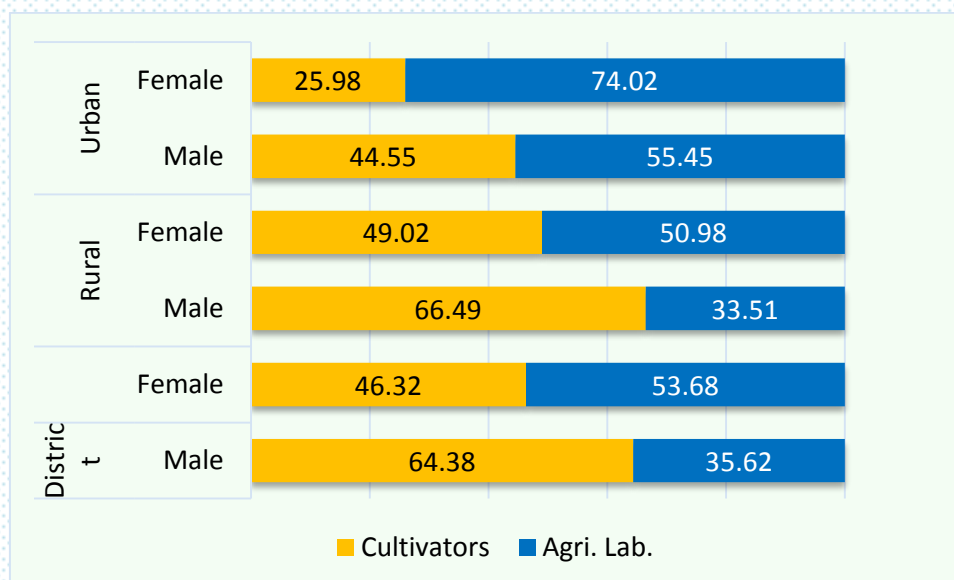
Details	2001		2011		2001	2011
	Main	Marginal	Main	Marginal	%WPR	%WPR
Gujarat	80.10	19.90	82.23	17.77	42.00	41.00
Porbandar	81.75	18.25	83.89	16.11	38.00	39.00
Ranavav	83.84	16.16	85.69	14.31	42.00	39.00
Kutiyana	73.87	26.13	85.89	14.11	49.00	41.00

(Source: Registrar General of India)

Those workers who had worked for the major part of the reference period (i.e. 6 months or more) are termed as Main Workers. Those workers who had not worked for the major part of the reference period (i.e. less than 6 months) are termed as Marginal Workers. In Gujarat in the year 2001, main workers were 80.10% and marginal were 19.90%. In 2011, main and marginal

workers were 82.23% and 17.77%. In the year 2001, it could be observed that in Porbandar taluka 81.75% are main workers and 18.25% marginal workers. In the year 2011, the percentage of main workers is 83.89. In Ranavav taluka the main workers are 83.84 % (2001) which increased to 85.69% (2011). Percentage of marginal workers in Ranavav taluka is 16.16% which declined to 14.31% in 2011. More than 70% workers of Kutiyana taluka has main workers which increased to 85.89% in 2011. The percentage of marginal workers in 2001 in Kutiyana taluka is 26.13% which lowered to 14.11% in 2011. Work participation rate refers to the percentage of total workers (main and marginal) to total population. With respect to Gujarat the %WPR was 42 and 41 for the year 2001 and 2011 respectively. For Porbandar taluka the %WPR improved by 1%, reduced to 3% and 8% respectively for Ranavav and Kutiyana taluka.

Figure 4.6 % of Cultivators and Agriculture Labourers (2011)



(Source: Registrar General of India)

It can be observed that out of the total population engaged in agriculture and allied activities in Porbandar district, about 64.38% male workers and 46.32% female workers are cultivators. It can be explicitly noticed that this workforce is engaged in cultivation of land owned and is involved in effective supervision or direction in cultivation. In the district 35.62% male workers and 53.68% female workers are working as agriculture labourers, who work on another person's land for wages and do not own the land. In the rural and urban area more than 40% male workers and more than 25% female workers are cultivators. It was noted that more than 50% women of rural and urban areas work as agriculture labourers. More than 50% males of urban region do not work as cultivators. In the rural region 33.51% male workers are agriculture labourers.

4.12 Livelihood by Forest Activity

Forest can act as a provider of rich source of natural resources. There exists high commercial demand for various primary forest products and value added forest products. The total geographical area of Gujarat and Porbandar is 1,96,024 (Sq.Kms) and 2,298 (Sq.Kms) respectively.

Figure 4.7 Forest Area district (In Sq.Kms)



(Source: Principal Chief Conservator of Forests & Head of Forest Force, Gujarat State)

It can be inferred that the percentage of forest area to total geographical area for Porbandar district was 12.15% from 2007-08 to 2011-12. In 2012-13 the area was marginally reduced to 11.94%. For Gujarat the percentage of forest area to total geographical area was 9.76% for two consecutive years i.e. 2007-08 and 2008-09. In the year 2009-10 and 2010-11 the forest cover marginally improved to 9.77%. In Gujarat for the year 2011-12 and 2012-13, the forest cover to total geographical area improved from 11.04% to 11.05%. It can be computed that the percentage of district forest area to total forest area of the state was 1.46, which remained constant from 2007-08 to 2010-11. For the year 2011-12 and 2012-13 it declined to 1.29%.

Table 4:31 Porbandar District's Forest Area by Legal Status (In Sq.Kms)

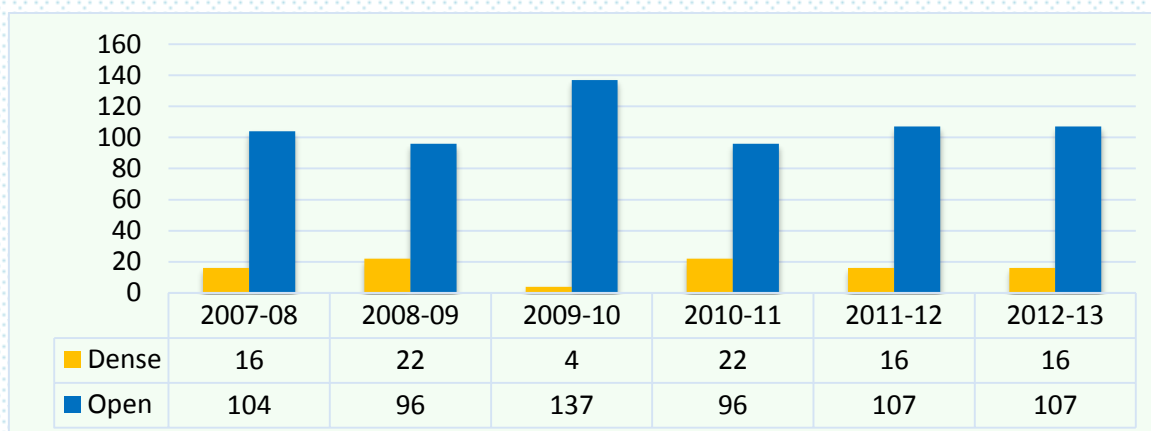
Year	2007-08	2012-13
Reserved Forest	269.30	269.30
Protected Forest	1.72	1.72
Un-classed Forest	8.30	3.25

(Source: Principal Chief Conservator of Forests & Head of Forest Force, Gujarat State)

It can be observed that the total forest area (in Sq.Km) of Porbandar district in 2007-08 is 279.32 which declined to 274.27 in 2012-13. The reserved forest area and protected forest area is 269.30 sq.km and 1.72 sq.km for the year 2007-08 and 2012-13 respectively. Un-classed

forest percentage was 8.30 sq.km for the year 2007-08, which declined to 3.25 sq.km in the year 2012-13.

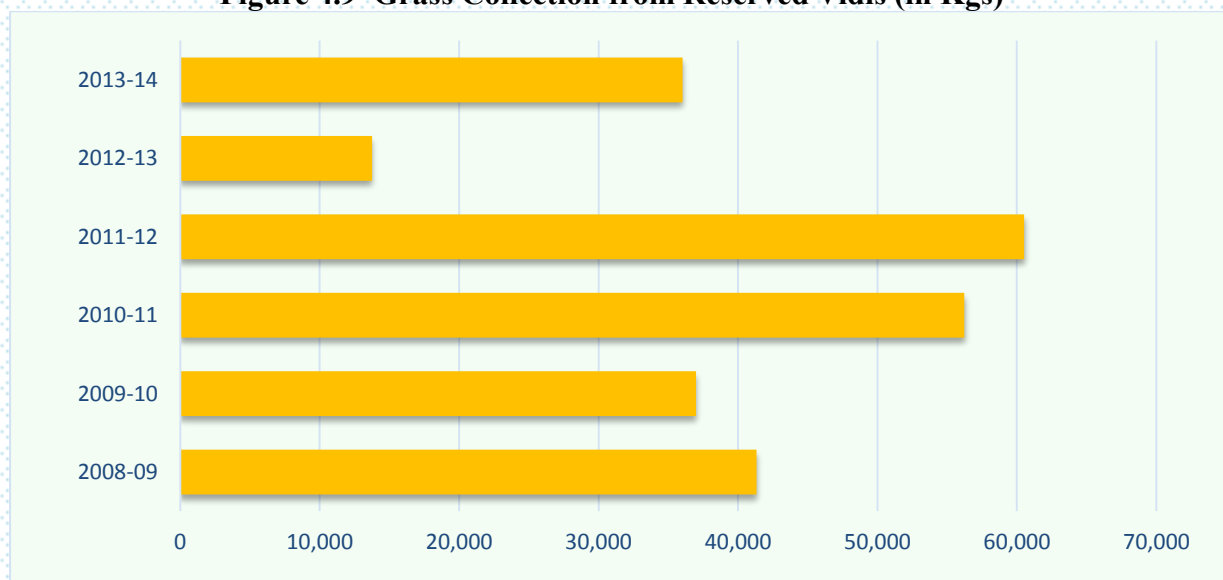
Figure 4.8 District's Dense Forest Cover (In Sq.Kms)



(Source: Principal Chief Conservator of Forests & Head of Forest Force, Gujarat State)

It can be observed that highest area of dense forest was in 2008-09 and 2010-11 which was 22 sq.kms. In the year 2009-10 the number of dense forest area was only 4 sq.kms. In the year 2007-08, 2011-12 and 2012-13 number of dense forest area stood at 16 sq.kms. It is a worrisome matter if the number of dense forest area is reducing, which may act as a potential threat for the wildlife. Highest number of open forest area was in the year 2009-10 at 137 sq.kms. The CAGR of open forest area was 0.48% from the period of 2007-08 to 2012-13.

Figure 4.9 Grass Collection from Reserved Vidis (in Kgs)



(Source: Porbandar Forest Department)

A CAGR of -2.27% was noticed with respect to grass collection from vidis over a period of 6 years i.e. 2008-09 to 2013-14.

4.13 Livelihood By Fisheries

Porbandar has a rich coastline. It is blessed with the huge belt of saline water, which is a potential source of fish breeding and development of ancillary fishing industry. Fish catching and units associated with fishery have a huge scope of development in Porbandar. Major occupation of the 'Kharva' community in Porbandar district is sea-farming. 'Vichuda, Halwa, Boomla, Dara, Dhol, Palla, Tanti, Madra, Khaga, Gandiya, Vam, Sag, Surmai, Chappari, Ravas, Baga, Dai, Perch, Dhoma, Shrimp-Prawns, Bolster, Crab, Squid, Katal, Tuna, Mackrelli, Ranidish, Sol fish' etc, are different types of fishes found in the sea.

Table 4:32 Population of Fishing Community (2007)

Taluka	Male	Female	Children	Total
Porbandar	10231	10143	12485	32859
Ranavav	10	9	12	31
Kutiyana	53	48	44	145
Total	10294	10200	12541	33035

(Source: District Statistics Outline, 2010-11)

It may be inferred that highest population (male, female and children) of fishing community resides in Porbandar taluka, followed by Kutiyana and Ranavav. Total population of children of all the three talukas is more than male and female population of all talukas. Female population of all three talukas is even less than male and children population of all talukas.

Table 4:33 Details of Employment of Fishermen in Primary Fishing and Ancillary Activities (2007)

Taluka	Primary Fish Catching Activity		Fish Selling, Net Making and Repairs and Others
	Full-Time	Part-Time	
Porbandar	3627	67	6854
Ranavav	35	0	3
Kutiyana	7	0	20
Total	3697	67	6877

(Source: District Statistics Outline, 2010-11)

It may be observed that 3627 workers and 167 workers are involved in respective full-time and part-time fish catching activity in Porbandar taluka. Respective 35 and 7 workers in Ranavav

and Kutiyana are exclusively involved in full-time fish catching activity. 6,877 workers of district are involved in ancillary activity of fishing such as fish selling, net making, repairs and other activities.

Table 4:34 Details Pertaining to Fishing Industry

Details	Units	2010-11	2011-12	2012-13	2013-14
Mechanized Boats	Number	4732	4824	4899	2944
Non-Mechanized Boats	Number	133	133	133	133
Active Fishermen	Number	10678	10678	10748*	10748*
Fish Production (Domestic)	Tons	86923	89555	90786	91513
Inland Fish Production	Tons	112	730	744	236
Fishing Cooperative Societies	Number	70	70	71	71
Members in Primary Fishing Cooperative Societies	Number	8524	8524	8575	8575
Principal Amount Repaid in Primary Fishing Cooperative Societies	Rs.	10,47,000	7,21,000	12,51,286	27,59,052

(Source: District Statistics Outline, 2010-11 to 2012-13) [= 2007's Data]*

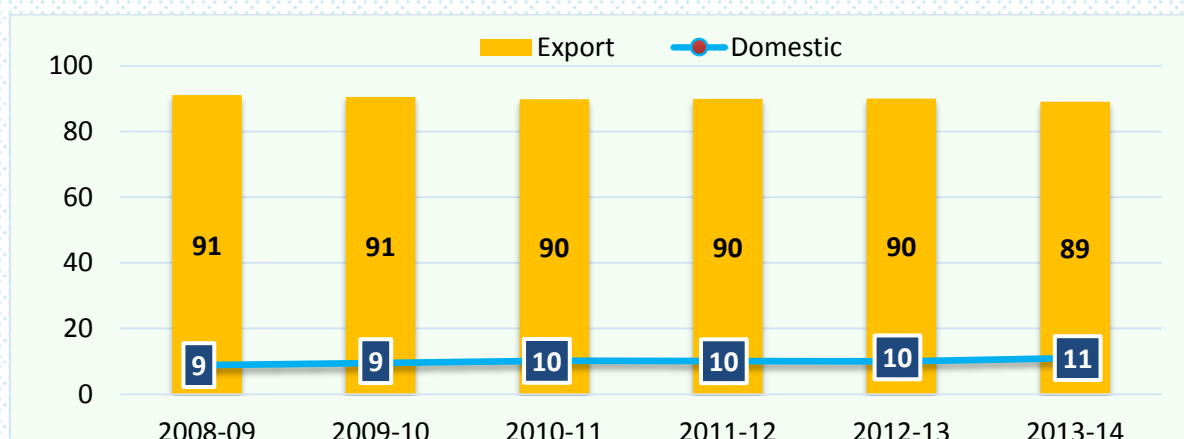
It can be noticed that a decline of CAGR of -11.19% was noticed for mechanized boats. 133 Number of non-mechanized boats remained constant for four consecutive years. 0.16% CAGR of increase in active fishermen was also noticed. 1.29% and 20.48% CAGR was viewed with respective to domestic fish production and international fish production respectively. Number of fishing cooperative society just increased from 70 to 71 over a period of four years. A marginal 0.60% increase in members of primary fishing cooperative societies was noticed over a period of four years. 27.41% CAGR rise was noticed with respect to principal amount repayment in primary fishing cooperative societies. It clearly shows that higher amount of loan disbursement and loan repayment was carried out by fishing cooperative societies.

Table 4:35 Year-Wise Details of Fish Production, Export and Consumption (in MT)

Details	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Production	56383	63412	88610	89553	90786	91513
Export	51383	57412	79610	80553	81786	81513
Domestic Consumption	5000	6000	9000	9000	9000	10000

(Source: Department of Fisheries- Porbandar)

Rise of 8.41% CAGR was witnessed in production of fish over consecutive six year period. 7.99% CAGR was recorded for exports of fish and 12.25% was noticed for domestic fish consumption.

Figure 4.10 Fish Export and Consumption (in Percentage)

(Source: Department of Fisheries- Porbandar)

It may be observed that from 2008-09 to 2009-10 the export of fish has been 91%. 90% consistent exports were noticed for 2010-11 to 2013-14. The exports have fallen to 89% and domestic consumption has increased to 11% for the year 2014-15. Fish and Fisheries products are exported to European Union nations. Fishes are caught by fishermen, washed properly and sent to processing plant. After processing and removing unwanted parts, fishes are exported. 90786 M.T. fish exported during the year 2012-13 (Department of Fisheries, Probandar).

Table 4:36 Production and Sales of Value Added Products Made from Fish

Details	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Fish Powder (in MT)	13556	13232	11824	10123	9430	10009
Sales Value of Fish Powder (in Rs. Lakhs)	1500	2048	1922	1779	1021	2635

(Source: Department of Fisheries- Porbandar)

Value added products tend to fetch remunerative prices than coarse products. Fish powder is a value added product, which not only ensures better prices but also avoids quicker staleness of fish. A decline of -4.93% CAGR was noticed in fish powder over a six years period. 9.85% rise in CAGR of sales value of fish powder was depicted. It clearly indicates that the prices per packet of fish powder were increased despite decline in the production of fish powder. Higher demand and lower supply might have propelled the hike in sales price of fish powder packet. Value added products like Fish Wafers, Fish Rings and Fish Fillet are produced and sold in domestic market (Department of Fisheries, Probandar).

Table 4:37 Details of Yearly Employment of Workers in Fishing Industry

Details	2012-13			2013-14		
	Person	Male	Female	Person	Male	Female
Ice Factory	577	511	66	549	485	64
Freezing Plant	2352	1282	1070	2992	1632	1360
Fish Pulverize	2396	1579	817	2396	1579	817
Fish Mill	146	110	36	146	110	36
Net Making Plant	149	149	0	149	149	0
Service Station	153	153	0	157	157	0
Fish Transport Vehicle	572	572	0	572	572	0

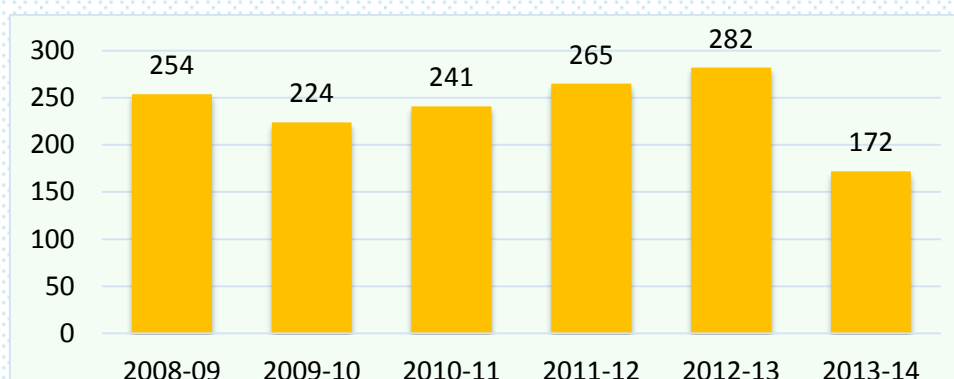
(Source: Department of Fisheries- Porbandar)

It can be observed that -4.85% changes were noticed with respect to total persons working in Ice factory. 27.21% and -2.61% change was identified with respect to persons working in freezing plant and service station. The numbers of persons working in fish pulverize; fish mill, net making and fish transport vehicle remained constant for two consecutive years.

Based on the data of Census 2011, the total population of district is 10,34,931, population in 0-6 years is 1,20,118, so the eligible working population in the district is 9,14,813 people. Of the eligible working population, people employed as main and marginal workers are 3,56,484 and 74,577 respectively. Number of people involved directly and indirectly in fishing sector is 5,971 and 4,121 respectively. In other words 4,31,061 people are involved in agriculture and 10,092 are involved in fisheries, which means 47.12% people are working in agriculture sector and 1.10% people are involved in fisheries.

Various types of training are provided to fishermen. Fish seed rearing training is on rearing fish seed in non-saline water. Fishing craft and gear training is a scientific training on usage of fishing boat and fishing net. Fish handling and preservation training is imparted to male and female on scientific way of transportation of fishes and long term preservation of fishes. Shore mechanic and fisher youth training is for safety at sea and safety in handling fishing gear, including such matters as stability, personal safety, gear and machinery safeguards, lifeboat handling, use of inflatable life rafts. Prawns farming training refers to using saline barren seashore land and brakish water in rearing of prawns or 'Zinga' fishes.

Training is considered important as use of advance technology, caters to higher work efficiency and productivity. This leads to scientific preservation of fishes, resulting in longer shelf life thus availing the benefit of remunerative prices. Fishing in non-saline water has lead to the growth of additional employment opportunities. Receipt of stipend based on the norms of Government.

Figure 4.11 Training Imparted to Fishermen (Participant)

(Source: Department of Fisheries- Porbandar)

It could be observed that there was a reduction at the rate of -6.29% CAGR with respect to the training to the fishermen. This need to be addressed as well-trained fishermen is benefitted with latest knowledge and skills.

Table 4:38 Details on Number and Production of Fish Based Industries

Yr	Ice Factory		Freezing Plant		Fish Pulverize		Fish Mill		Net Making Plant	
	No.	Daily Prod ⁿ	No.	Daily Prod ⁿ	No.	Daily Prod ⁿ	No.	Daily Prod ⁿ	No.	Daily Prod ⁿ
2009-10	88	2023	11	686	7	185	1	40	5	293
2010-11	90	2103	11	686	7	185	1	40	6	323
2011-12	84	2018	11	686	7	125	1	40	6	2.79 Mtn
2012-13	82	1968	12	629	7	125	1	40	7	3.79 Mtn
2013-14	79	1835	14	772	7	125	1	40	7	3.79 Mtn

(Source: Department of Fisheries- Porbandar)

It may be observed that at a CAGR of -2.13% and -1.93% the number of ice factory and daily production, respectively saw a decline. Number of freezing plant saw a growth at a CAGR of 4.94%. Daily production in freezing plant grew at a CAGR of 2.39%. Daily productions in fish pulverize reduced at a CAGR of -7.54%. There was no increase in the number of fish pulverize plant over the period of five years. Daily production in fish mill and number of fish mill remained constant at 40 and 1 respectively. Number of net making plants increased at a CAGR of 6.96%.

4.14 Schemes in Fisheries

In Porbandar district Diesel Value Added Tax (VAT) subsidy of 21% was provided to the fishermen. Under the scheme, during the year 2014-15, Rs. 35 crore spent. Under skill development, training programmes like brackish water aqua-culture training programme for 6

days and SCP (Schedule Caste Program) training program for 10 days was organized (Fisheries Department, Porbandar).

Table 4:39 Statement showing the Provision in Sagarkhedu Yojana Year 2015-16

Activity	Physical
Training and development of Aquaculture in Brakishwater	25
Fisheries training programme (6 months at PBR)	100
Fishing boat-net scheme	1
Providing GPS Tracking to Sagarkhedu	233
Electric Equipment	82
Life Saving Jacket	710
Solar Light	100
4 Inch Gill Net	70
Toilet	120
Manav Kalyan Yojna (Pagadiya sahay)	250
Providing Diesel Subsidy	9520
Housing sahay	17
Development of Investments Cold Storage, Processing Units, Ice Plants and Value Added Machinery	8
Fishing Harbours Maintenance	4
Dredging Facility	2
Providing DAT for Safety at Sea	350

(Source: Director of Fisheries, Porbandar)

4.15 Livelihood by Tourism Activity

Tourism is the largest industries in the world generating 98 billion jobs that is contributing 3% of all employment. Tourism contributes to the government as well as to the local economy. It helps the government to make balance of payment in terms of foreign currency. Tourism can induce local government to make infrastructure improvement such as better water and sewerage systems, road, electricity, telephone and public transport system. This facilities needs to be developed locally in urban as well as rural areas so that tourism can be developed. Good communication, good hotels, good services, skilled labors, technical experts, IT experts etc. Tourism related demands for goods and services, creates new jobs, in particular for youth and women, thus contributing poverty reduction (Tourism Department, Porbandar).

Tourism is a flourishing industry in India and especially for Gujarat. Historical places, pilgrimage places, stunning panorama, educational and cultural richness, ayurvedic affluence, great bio-diversity and distinct flora and fauna of the state are the key attractions for domestic and foreign tourist to visit Gujarat. Gujarat is the land of warmth, heritage and hospitality. It is unique in its geological and topographical landscape (Voyager's World, 2011). Gujarat has immense potential to become a major tourist destination. State has many enchanting tourist places, memorable historic monuments and sacred pilgrimages, depicting the glorious cultural heritage, which can attract both domestic and international travellers. The state has something to offer to the tourists be it, spiritual tourism, well being tourism, business tourism, heritage tourism, sports tourism etc. Gross flow is the sum total of flow at surveyed destinations and that to non-surveyed destinations. The gross flow during the year was 287.88 lakhs. The gross flow was 13.30% higher than flow in 2012-13.

Figure 4.12 Gross Tourist Flow in Gujarat (No. in Lakhs)



(Source: Annual Report, 2013-14)

Porbandar attractions include the famous Kirti Mandir, Rokhadia Hanuman temple, Sudama Mandir, Sandipani Vidyaniketan, Tara Mandir, Bharat Mandir. Kirti Mandir, the birthplace of Mahatma Gandhi holds great historical importance. The place has emerged as one of the major tourist attractions of Porbandar. The Kirti Mandir is situated close to the ancient Haveli belonging to the Gandhi family. Also known as the "Temple of Peace", the Kirti Mandir is counted amongst the popular monuments of the nation. Tara Mandir is one of the popular tourist destinations of Porbandar. There is an overhead round screen inside the Tara Mandir planetarium with celestial bodies depicted on it. The scientific projection of these stars and planets, with the help of special effects, adds to the interest of the viewers. The Sudama Mandir is a beautiful shrine dedicated to Sudama, the best friend and devotee of Lord Krishna.

The temple, located in the center of the Porbandar city, is said to be the only temple in India dedicated to this ardent devotee of Lord Krishna. The Sudama Mandir at Porbandar, constructed between 1902 and 1907, holds a great historic and religious significance. Chowpaty is the famous beach of Porbandar. It is located at a kilometer's distance, from the city. This beautiful beach has various hotels resorts and villas lined up along the water front. The rooms here provide a splendid view of the seafront along with a number of facilities.

The famous Huzoor Mahal is also located along the beach. Chowpaty, the prominent attraction of the Porbandar city, is of great interest to both locals and tourists. Porbandar Bird Sanctuary is situated in the heart of the Porbandar city and spread over an area of about 1 square kilometers. Porbandar Bird Sanctuary of Gujarat is the only bird sanctuary of the state that provides all the legal protection to varied species of birds of those who nests here. One will find a large lake inside the Porbandar Bird Sanctuary of Gujarat that attracts a large number of migratory birds every year. Barda Wildlife Sanctuary lies 15 kilometers away from the Porbandar city and faces the great Arabian Sea. Previously, the forests of Barda Wildlife Sanctuary, Porbandar belonged to the ex-princely state of Ranavav or Porbandar and Jamnagar. Thus it is still known as Rana Barda and Jam Barda. It occupies an area of 192.31 square kilometers area.

The popular food of Porbandar especially in breakfast is Jalebi, Gathiya, Fafda with kadhi and sambharo. Popular food like “*Bajara no Rotalo*”, “*Ringna no Oro*”, “*Sev Tameta nu Sak*”, “*Adad ni Dal*”, “*Kadhi*”, “*khichadi*”, “*chhas*”, “*Papad*”. The most popular food like “*Mori Khajali*”, “*Mashala Khajali*”, “*Mithi Khajali*” and “*Thabli*” makes the complete balanced diet. The famous dance performed by “*Maher*” communities such as “*Maniyaro*” and “*Ras Garba*” with traditional dress (Tourism Department, Porbandar).

The tourist flow at individual business destinations in Porbandar for the year 2013-14 is 2,71,995, which is 0.94% of Gujarat's tourist flow. Leisure tourist in Porbandar district are 638 which is 0.12% of total tourist destinations. The tourist flow at business destinations for 2012-13 and 2013-14 stood at 257914 and 271995 respectively. It represents 5.46% growth rate in flow of tourist for business destinations. In 2012-13 and 2013-14 number of tourists flow at business destinations was 257914 and 271995 respectively. It clearly indicates that the growth rate in number of tourist is 5.46% (Annual Report, 2013-14).

In the year 2013-14 number of tourist visiting Porbandar for business purpose, leisure purpose, spiritual purpose and other purpose are 35672 (1%), 74680(2%), 94195 (1%) and 67448 (1%) respectively (Annual Report, 2013-14).

Table 4:40 Number and Origin of Tourist for Business Destination (2013-14)

Details	Within Gujarat	Other Indian State	NRI	Foreigners	Total
Porbandar	221451	45823	3736	985	271995
Gujarat	11076154	3117287	223732	177817	14594989

(Source: Annual Report, 2013-14)

With respect to business destinations, the tourist origin categorization reflects that in Porbandar, tourist arriving within Gujarat was 81%, arrival from other Indian state was 17%, NRI and Foreigners arrivals in Porbandar was meager 1% and 0.36% respectively. In the holistic aspect it was viewed that footfalls of tourist for business purpose in Gujarat could be demarcated based on arrival from Gujarat itself, other Indian state, NRI and Foreigners were 76%, 21%, 2% and 1% respectively. Porbandar contributes 1.7% in terms of attracting foreigners and NRI tourist for business purpose.

Table 4:41 Number and Origin of Tourist from Other Indian State for Business Destination (2013-14)

Details	Maharashtra	Madhya Pradesh	Rajasthan	Uttar Pradesh/Bihar	West Bengal	Other North/East Indian State	South India	Total
Porbandar	17779	7057	10591	5391	1178	470	3357	45823
Gujarat	1213197	400685	490252	544638	113566	120707	234242	3117287

(Source: Annual Report, 2013-14)

It may be inferred that highest number of tourist from Maharashtra visit Porbandar for business purpose. It can be understood that 39%, 15%, 23%, 12%, 3%, 1% and 7% tourist from Maharashtra, Madhya Pradesh, Rajasthan, Uttar Pradesh/Bihar, West Bengal, Other North/East Indian State, South India respectively visit Porbandar for business purpose. Whereas the respective footfalls in Gujarat from Maharashtra, Madhya Pradesh, Rajasthan, Uttar Pradesh/Bihar, West Bengal, Other North/East Indian State, South India are 39%, 13%, 16%, 17%, 4%, 4% and 8%. Share of Porbandar in terms of attracting business tourist of other state to Gujarat is 0.8%. Porbandar contributes 16.8% in terms of attracting tourist of Other Indian State with respect to destination flow (Annual Report, 2013-14).

Table 4:42 Business Destination: Class-Wise Flow (2013-14)

Details	Luxury	High	Medium	Economy	Total
Porbandar	35672	74680	94195	67448	271995
Gujarat	3297726	2751350	4020450	4525488	14595014

(Source: Annual Report, 2013-14)

It may be inferred that in Porbandar 13%, 27%, 35% and 25% respective business tourist prefer to stay in Luxury, High, Medium and Economy class hotels. Comparison with Gujarat reveals

that 23%, 19%, 28% and 31% business tourist prefer to stay Luxury, High, Medium and Economy class hotels, during their visit to Gujarat.

4.16 Role of Cooperatives

Cooperative plays a very important role in employment generation, poverty alleviation and ensuring food security. Post-Independence, cooperatives assumed a great significance in poverty removal and socio-economic growth. Gujarat is well known as the home to cooperative societies. It is the first state in India which has over fifty cooperative dairies, and it is the second state which has the largest number of cooperative banks after Maharashtra. Further, this state has shown immense growth in development of farmers through agricultural cooperatives. Banking, agricultural and dairy cooperatives also changed their style of functioning according to the technological changes (Gujarat Cooperative Summit, n.d.).

Table 4:43 Details of Number of Cooperatives (2010-11)

Sr. No.	Types of Cooperative Societies	Number of Cooperatives	Number of Members (Cooperatives)	Number of Members (Individuals)
1	At District Level			
	Labour Cooperatives	1	123	-
	Consumer Forum	1	18	53
	Nagraik Cooperative Banks	2	-	5690
	Milk Union	1	12	-
	Total	5	153	5744
2	At Taluka Level			
	Sales-Purchase Union (Total)	3	192	249
3	Primary Agriculture Credit Society (Total)	78	0	18050
4	Primary Non-Agriculture Non- Credit Society			
	Salaried Employees and Credit Cooperative Societies	51	-	7200
	Collective Agriculture Cooperative	22	-	1222
	Dairy	73	3723	-
	Fisheries	65	-	354
	Irrigation	5	-	354
	Ginning	4	-	230
	Oilseed Manufacturing	3	-	405
	Vegetable Manufacturing	23	-	1234
	Consumer	28	-	2180
	Labour Cooperative	123	-	5748

Transport	2	-	102
Housing	106	-	1670
Tree Grower	2	-	102
Tenant Farmers	-	-	-
Gas Producer	1	-	51
Total	599	4068	649735
GRAND TOTAL	685	4413	673778

(Source: Compiled from District Industries Center, District Cooperative Registrar Societies and Assistant Registrar District Cooperative Societies, Porbandar)

As per the 2010-11 data, there are total 685 different types of cooperatives in Porbandar district. The societies which are members of the different cooperatives are 4,413 and the individuals who are members of the varied types of cooperative societies are 6,73,778.

Taluka wise distribution of number of cooperatives is described below.

Table 4:44 Taluka Wise Details of Number of Cooperatives

Cooperative Societies	2009-10		2010-11			2011-12			2012-13			2013-14		
	P	K	P	R	K	P	R	K	P	R	K	P	R	K
Banking	2	0	0	0	0	6	0	0	1	1	2	2	0	0
Fruits and Vegetables	1	1	0	0	0	0	0	2	0	1	1	0	0	0
Poultry	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Housing	1	0	3	0	0	1	0	0	3	0	0	1	0	0
Primary Agriculture	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Group Farming	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Grahak Bhandar	0	0	3	0	0	0	0	1	1	0	0	2	0	0
Labour	0	0	0	1	0	0	1	0	0	0	1	1	1	0
Milk	0	0	0	0	0	5	0	8	27	2	7	0	0	2
Agro Industries	0	0	0	0	0	0	0	0	4	0	0	0	0	0
District Milk Union	0	0	0	0	0	0	0	0	0	0	0	1	0	0

(Source: District Registrar, Cooperative Societies, Porbandar)[P: Porbandar, R= Ranavav, K= Kutiyana]

It may be inferred that number of 'sharafi' societies are 6 and it is the highest in Porbandar taluka. 2 Fruits and Vegetables societies are found in Kutiyana. Only 1 poultry society is in Porbandar taluka. Housing societies are consistently highest, 3 in number in Porbandar taluka. Ranavav does not have any primary agriculture societies. Only 1 each is found in Porbandar and Kutiyana taluka. Group farming society is found only in Porbandar taluka. Grahak bhandar (Consumer Stores) are 3 in Porbandar taluka, which is highest amongst other taluka. Labour society is only 1 in Porbandar and Ranavav taluka. Agro industries societies and fish society

are 4 and 1, that too only in Porbandar taluka. District Milk Union is only which is at district level in Probandar. In the latest 2013-14 year it can be noticed that fruits and vegetables, poultry, primary agriculture societies, group farming, and agro industries are closed down.

For the development of fisheries infrastructure, up-gradation or renovation of Porbandar, Fisheries harbor needs to be developed at the cost of Rs. 10 Crore. About 70 fisheries co-operative societies are operated in the district. Different types of Subsidy on different equipment are provided to poor members of fisheries co-operative societies. The poor members of co-operative societies, prepare different value added products from fish, like fish wafers, fish rings, fish fillet, etc (Fisheries Department, Probandar).

4.17 Employment in Industries, Mining and Ports

Based on the latest statistics of 2009-10, overall description indicates that 41 factories adhere to the reporting rules of district. The initial (manufacturing) capital invested by the factories is Rs.673 crores. It provides employment to 582 people. The value of produced product is Rs.1,083 crores. The worth of value addition incurred by the factories of the district is equivalent to Rs.85 crores. As per 2010-11 data it was noted that industries are flourishing in only in two talukas i.e. Porbandar and Ranavav (Vanana and Miyani). Total land devoted to industries in the district is 27.55 lakh sq.km (Directorate of Economics and Statistics, 2009-10).

The industries in private sector also contribute to the GDP of the district. As per 2011 data of Gujarat, 37546 were the registered factories, of which working factories were 26088, closed units were 11458. Average numbers of workers employed on daily basis were 1387157 and average number of workers per factory was 54. Based on the data of 2011 of private sector, it was noticed that in Porbandar there were 97 total numbers of registered factories, of which 74 factories were actually working. The percentage of working factories were 76% and non-working were 24%. Average numbers of workers employed on daily basis were 4843 and average number of workers per factory was 65 (Directorate of Industrial Safety and Health, 2011). Porbandar district employees more number of average workers per factory when compared with Gujarat's data.

Different types of industries contribute in the development of the district. It provides employment to the local people of district.

Table 4:45 GroupWise Industries-Manufacturing and Service (2008-14)

Sr. No.	Group Name	No. of Unit	Investment (Rs. In Lakh)	Employment
1	Crop And Animal Production, Hunting And Related Service Activities	8	308.60	54
2	Forestry And Logging	1	0.72	1
3	Fishing And Aquaculture	12	427.25	136
4	Mining Of Coal And Lignite	1	30.00	8
5	Extraction Of Crude Petroleum And Natural Gas	7	522.00	62
6	Mining Of Metal Ores	33	485.56	305
7	Other Mining And Quarrying	54	840.45	496
8	Mining Support Service Activities	2	3.50	4
9	Manufacture Of Food Products	60	8606.80	2195
10	Manufacture Of Beverages	46	1034.97	321
11	Manufacture Of Textiles	46	1528.75	481
12	Manufacture Of Wearing Apparel	68	43.79	90
13	Manufacture Of Leather And Related Products	4	11.04	7
14	Manufacture Of Wood And Products Of Wood And Cork, Except Furniture, Manufacture Of Articles Of Straw And Plaiting Materials	11	43.28	65
15	Manufacture Of Paper And Paper Products	7	137.02	77
16	Printing And Reproduction Of Recorded Media	5	33.57	9
17	Manufacture Of Coke And Refined Petroleum Products	12	261.13	100
18	Manufacture Of Chemicals And Chemical Products	7	1183.37	39
19	Manufacture Of Rubber And Plastics Products	18	1201.33	206
20	Manufacture Of Other Non-Metallic Mineral Products	52	971.36	533
21	Manufacture Of Basic Metals	6	200.18	49
22	Manufacture Of Fabricated Metal Products, Except Machinery And Equipment	13	200.85	72
23	Manufacture Of Computer, Electronic And Optical Products	2	42.01	7
24	Manufacture Of Electrical Equipment	6	8.52	12
25	Manufacture Of Machinery And Equipment And E.C.	15	719.18	300
26	Manufacture Of Other Transport Equipment	9	139.07	97
27	Manufacture Of Furniture	1	4.00	4
28	Other Manufacturing	3	78.61	15
29	Repair And Installation Of Machinery And Equipment	34	111.58	70

30	Electricity, Gas, Steam And Air Conditioning Supply	16	7157.62	33
31	Waste Collection, Treatment And Disposal Activities, Materials Recovery	2	8.06	11
32	Construction Of Buildings	1	92.00	45
33	Civil Engineering	4	154.00	106
34	Specialized Construction Activities	13	31.33	37
35	Wholesale And Retail Trade And Repair Of Motor Vehicles And Motorcycles	22	74.02	43
36	Wholesale Trade, Except Of Motor Vehicle And Motorcycles	9	62.70	21
37	Retail Trade, Except For Motor Vehicles And Motorcycles	37	119.70	57
38	Land Transport And Transport Via Pipelines	2	26.00	4
39	Warehousing And Support Activities For Transportation	3	67.00	12
40	Postal And Courier Activities	1	5.00	4
41	Accommodation	2	302.04	38
42	Motion Picture, Video And Television Programme Production, Sound Recording And Music Publishing Activities	4	13.50	9
43	Telecommunications	10	5.80	13
44	Computer Programming, Consultancy And Related Activities	1	0.56	1
45	Information Service Activities	4	41.37	36
46	Architecture And Engineering Activities, Technical Testing And Analysis	2	17.60	9
47	Scientific Research And Development	1	180.00	10
48	Other Professional, Scientific And Technical Activities	19	275.33	39
49	Veterinary Activities	1	200.00	10
50	Other Administrative, Office Support And Other Business Support Activities	23	68.66	34
51	Public Administration And Defense, Compulsory Social Security.	1	1.00	1
52	Social Work Activities Without Accommodation	1	21.00	1
53	Repair Of Computers And Personal And Household Goods	48	54.13	51
54	Other Personal Service Activities	36	101.49	44
Total		806	28258.40	6484

(Source: District Industries Centre, Porbandar)

As per EM-II Report from 01/01/1990 to 15/12/2015 there are total 54 types of industries and 806 total numbers of firms in the industries. Consolidated investment is Rs.28,258.40 lakhs. The firms have generated employment to the tune of 6,484.

It may be inferred from Enterprise Memorandum report for manufacturing unit that from date 01/01/1190 to 15/12/2015, there are total 324, 66 and 7 micro, small and medium enterprises,

respectively. Highest employment of 2,396 was generated by small enterprises. Highest monetary investment was of Rs.7,326.12 in medium enterprises.

It may be inferred from Enterprise Memorandum report for service unit that from date 01/01/1190 to 15/12/2015 there are total 381 and 28 micro and small units respectively. Total employment generated by the micro and small units is 1,057.

Table 4:46 Taluka and Year Wise Details of Units, Investment and Employment (Rural)

Porbandar											
Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	0	3	8	10	14	28	6	4	9	3	85
Investment	0	400.47	851.50	651.70	1495.36	814.01	598.74	684.40	1026.92	1979.95	8503.05
Employment	0	276	59	75	83	51	130	9	65	38	786
Ranavav											
Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	3	16	0	23	30	34	61	26	27	6	226
Investment	108	522.91	0	287.20	960.62	602.52	1370.28	3283.90	654.50	456.47	8246.4
Employment	30	192	0	122	237	336	604	490	180	62	2253
Kutiyana											
Particulars	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	0	1	0	1	0	1	1	3	2	2	11
Investment	0	21	0	215	0	8	1	102	114.60	73	534.6
Employment	0	1	0	19	0	10	1	3	8	31	73

(Source: District Industries Centre, Porbandar)

It may be inferred that from Enterprise Memorandum report from 01/01/1190 to 15/12/2015 in Porbandar taluka, number of units have declined from 28 to 3, investment in units have increased at a CAGR of 19.43% and the employment has decreased at -19.77%. In Ranavav highest numbers of units were 61 in 2012-13 which reduced to 6 in 2015-16, the level of

investment increased at a CAGR of 15.50%. Status of employment was quite volatile from 604 to 62. In Kutiyana taluka total numbers of units were 11, investments were 534.6 and employment was 73.

Table 4:47 Taluka and Year Wise Details of Units, Investment and Employment (Urban)

Porbandar										
Particulars	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	83	4	10	41	36	24	30	54	31	313
Investment	28.24	27.02	1158.57	2279.25	714.96	1979.52	780.30	1321.31	509.27	8798.44
Employment	83	13	117	339	306	488	303	896	94	2639
Ranavav										
Particulars	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	0	6	1	14	0	3	14	8	30	76
Investment	0	2.44	1.20	21.21	0	8	341.65	74.95	166.90	616.35
Employment	0	8	1	14	0	29	94	36	134	316
Kutiyana										
Particulars	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Units	0	0	15	1	1	0	2	5	1	25
Investment	0	0	11.60	10	1.30	0	90	77.60	160	350.5
Employment	0	0	20	24	1	0	11	29	3	88

(Source: District Industries Centre, Porbandar)

In Porbandar taluka units declined at a CAGR of -10.12%, investment increased at a CAGR of 37.90% and employment increased at a CAGR of 1.39%. In Ranavav taluka employment increased at a CAGR of 22.28%, investment and employment rose at a CAGR of 59.92% and 42.23% respectively. In Kutiyana taluka total numbers of units were 25, with an investment of 350.5 and employment of 88.

DISTRICT HUMAN DEVELOPMENT REPORT: PORBANDAR

Table 4:48 Investment & Employment of Micro, Small & Medium Enterprises Part-1 (Rs.In Lakhs)

Year	Micro			Small			Medium			Total		
	Units	Invt	Employment	Units	Invt	Employment	Units	Invt	Employment	Units	Invt	Employment
09-10	14	216.50	172	8	1468	625	-	-	-	22	1684.50	797
10-11	33	407.20	303	8	1809.42	475	-	-	-	41	2216.62	778
11-12	75	889.55	520	14	2276.50	439	2	2534	350	91	5700.05	1309
12-13	52	564.10	282	4	1107.00	122	-	-	-	56	1671.10	404
13-14	70	916.58	514	15	2150.98	220	2	1806	367	87	4873.56	1101
Total	244	2993.93	1791	59	8811.90	1881	4	4340	717	297	16145.83	4389
I/E	1.67			4.68			6.05			3.68		

(Source: District Industries Center, Porbandar)

Investment to employment (I/E) ratio refers to the employment generated in per lakh of investments. In the period of five consecutive years the Micro, Small and Medium enterprises, have generated I/E ratio of 1.67, 4.68 and 6.05 respectively. Medium enterprises have been more efficient in generating highest employment i.e. 6.05 times of the total investment made. Overall the employment generated is 3.68 times of the investment.

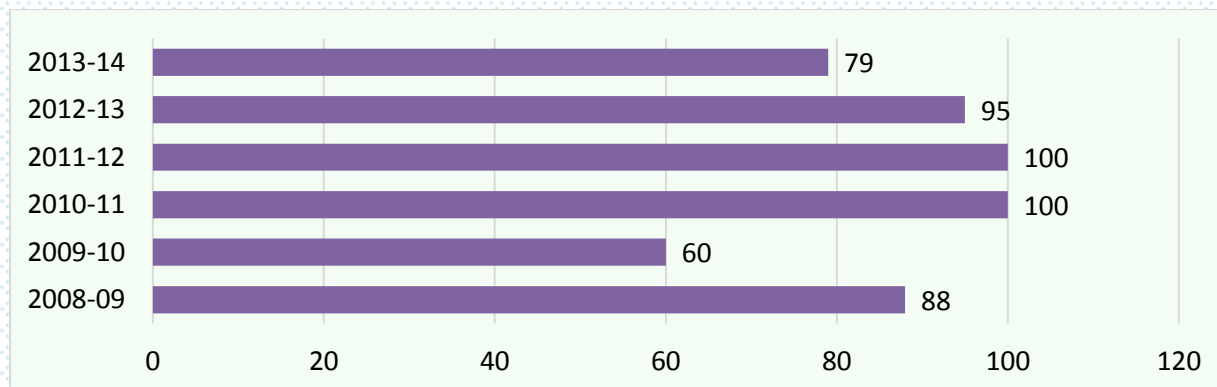
Table 4:49 Investment & Employment Of Micro, Small & Medium Enterprises Part-2 (Rs.In Lakhs)

Year	Micro			Small			Medium			Total		
	Units	Invt	Employment	Units	Invt	Employment	Units	Invt	Employment	Units	Invt	Employment
09-10	54	551.57	231	5	880.5	58	1	985	65	60	2417.07	354
10-11	86	443.36	336	13	2852	186	1	1713	175	100	5008.36	697
11-12	90	533.7	438	10	1779.25	266	0	0	0	100	2312.95	704
12-13	84	1092.78	534	10	1899.93	370	1	1195.87	348	95	4188.58	1252
13-14	54	722.24	414	24	3928.01	495	1	632.00	1	79	5282.25	910
Total	368	3343.65	1953	62	11339.69	1375	4	4525.87	589	434	19209.21	3917
I/E	1.71			8.25			7.68			4.90		

(Source: District Industries Center)

In the period of five consecutive years the Micro, Small and Medium enterprises, have generated I/E ratio of 1.71, 8.25 and 7.68 respectively. Medium enterprises have been more efficient in generating highest employment i.e. 7.68 times of the total investment made. Overall the employment generated is 4.90 times of the investment.

Figure 4.13 Number of MSMEs in the District



(Source: District Industries Center)

It may be observed that highest numbers of MSMEs were in the year 2010-11 i.e. 100, which remained constant even for 2011-12. A CAGR decline of -1.78% was noticed in the number of MSMEs. It is a matter of serious investigation to come out with the reasons of downfall in the number of MSME units.

Table 4:50 Details of Registration of Business (2014)

Taluka	Companies Act, 1956		Factories Act, 1948		Shops and Commercial Establishment Act		Societies Registration Act		Khadi and Village Industries Board		Directorate of Industries Act	
	No.	Closed	No.	Closed	No.	Closed	No.	Closed	No.	Closed	No.	Closed
Porbandar	117	6	62	33	5655	19	707	0	2	0	289	0
Ranavav	3	0	0	0	0	0	217	0	2	0	282	0
Kutiyana	0	0	0	0	0	0	208	0	0	0	21	0

(Source: District Industries Center, Porbandar)

6,832 number and 504 number of units are operating in different categories, in Porbandar and Ranavav taluka, respectively. In Kutiyana taluka 208 societies and 21 industries are operating under cooperative sector and industries sector respectively. In Porbandar taluka large number of shops (5,655) is operating. In Ranavav taluka highest number of factories (282) is working. It is noteworthy that none of the unit is closed-down in the taluka. In Porbandar taluka total 58 different types of units are closed down. More number of units should be encouraged in the

areas of Khadi and Village industries. Revival of closed unit must be encouraged to boost the secondary sector.

Table 4:51 Employment in Firms of Porbandar's Mahanagarpalika

Year	Firms Without Servants	Firms With Servants	Total Number of Salaried Persons
2010-11	4585	880	2800
2011-12	4416	1177	3901
2012-13	4528	1198	4006
2013-14	4336	911	4145

(Source: Nagarpalika, Porbandar)

A CAGR decline in number of firms without servants and with servants were 1.39% and 0.87% respectively. A CAGR of 10.30% was noted with respect to total number of salaried persons.

A mineral is a naturally occurring substance. Porbandar is endowed with the rich reservoir of minerals such as limestone, chalk, bauxite, marl, laterite, building limestone, blackstrap, sand and mud. Productions of minerals in the district are as follows.

Table 4:52 Mineral Production in the District (Production in MT)

Minerals	2010-11	2011-12	2012-13	2013-14	2014-15	CAGR (%)
	Primary					
Limestone	4117845	2426857	3467042	3986322	3541849	-2.97
Chalk	142890	154324	157113	113085	110781	-4.96
Bauxite	38070	67724	188016	198108	177580	36.07
Marl	604276	469679	1107037	226687	14333	-52.68
Laterite	5847	13190	19170	500	0	Stopped
	Secondary					
Building Limestone	1637746	2221093	222591	1714348	1109100	-7.50
Blackstrap	494298	101554	323754	131493	129600	-23.49
Sand	571304	719059	801718	547686	403500	-6.72
Ordinary Clay	82567	277512	197188	138915	150333	12.73

(Source: Geological Department, 2010-14)

It may be observed that excavation of bauxite has increased more than 30% and excavation of Laterite has been completely stopped in the year 2014-15. Mining of blackstrap has decreased by -23.49%. Mining of ordinary clay has grown at the rate of 12.73%. Excavation for chalk and limestone has also reduced.

Table 4:53 Mineral Producing Units and Average Number of Workers in Units

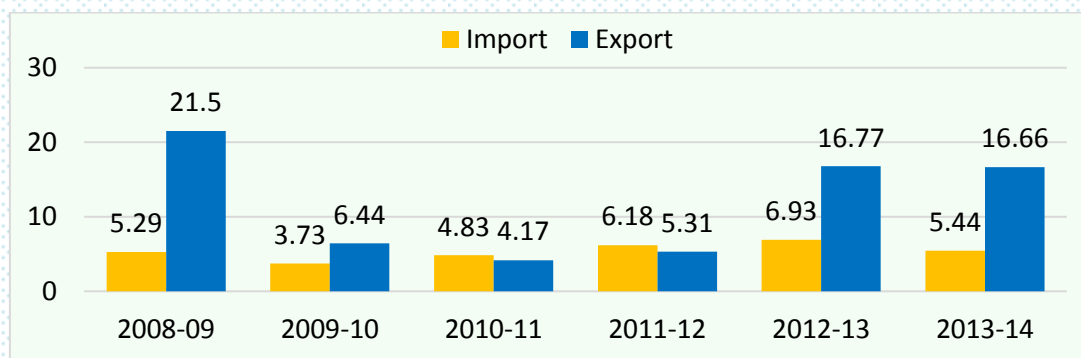
Name of the Mineral	Licensed Units					Average Number of Workers Employed				
	10-11	11-12	12-13	13-14	14-15	10-11	11-12	12-13	13-14	14-15
Limestone	121	118	118	116	114	35116	24895	33996	39863	35418
Chalk	121	118	118	114	111	1322	877	900	700	633
Bauxite	6	6	6	6	6	3050	698	1949	1981	1973
Marl	1	1	1	1	1	3407	1500	5535	1133	71
Laterite	1	1	1	1	1	109	366	532	14	0
Building Limestone	261	254	262	228	218	12109	16910	11126	8571	5545
Blackstrap	16	21	21	23	23	1167	2860	1582	657	648
Sand	44	43	52	77	48	1407	3055	805	548	403
Ordinary Clay	5	7	8	8	6	921	885	241	174	150
Total	577	569	587	574	528	58608	52046	56666	53641	44841

(Source: Geological Department, 2010-14)

A CAGR (%) of licensed units based on minerals has decreased by -1.76% over a period of five years. In the consecutive five years, there is a decline of -5.21% in the average number of workers employed in the mineral-based industries. Largest numbers of units are of building limestone, limestone and chalk.

A Port refers to a town or city with a harbour or access to navigable water where ships load or unload. Sea ports play an important role in facilitating trade and commerce. They provide a service to many other industrial sectors and are nodal points of inter-modal logistic chains of key importance for the sustainable growth of transport. The details pertaining to total import and exports of district is mentioned below.

Figure 4.14 Details of Imports and Exports (In Lakh Tons)



(Source: Gujarat Maritime Board)

It is noticed that exports have declined at a CAGR of -4.16% and imports have increase at a CAGR of 0.47%. Rise in exports ensures more foreign exchange. Increase in imports leads to higher foreign currency flow. The income (in Rs. Crore) of customs department in the year

2008-09, 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14 were 19.91, 11.43, 9.61, 11.04, 19.38 and 19.05 respectively. A CAGR decline of -0.73% was found in the income of customs department of Porbandar (Gujarat Maritime Board, n.d.).

Table 4:54 Details of Imports at Ports through Steamer and Ships

Name of Commodities	Quantity (MT)		
	2010-11	2012-13	2013-14
Coal	395395	608845	458898
Liquefied Petroleum Gas Mixer	57772	63763	60074
Dry Dates	29903	20236	24767

(Source: Gujarat Maritime Board, Porbandar)

Porbandar district mainly imports coal, liquefied petroleum gas mixer and dry dates. Total imports for 2010-11, 2012-13 and 2013-14 is 4,83,070, 6,92,844 and 5,43,739 MT respectively. The imports have increased at a CAGR of 4.02%. It is further noted that there is increase of 16.07%, 3.98% and decrease of -17.18% in import of coal, LPG mixer and dry dates respectively.

Table 4:55 Details of Exports at Ports through Steamer and Ships

Name of Commodities	Quantity (MT)		
	2010-11	2012-13	2013-14
Cement	148631	382305	333717
Cement Clinker	75100	24851	212873
Bauxite	139113	119469	1039655
Onion	116525	0	5994
Soda Ash	34588	32414	43941
Soyabean	3024	9263	3641
Salt	0	9600	25847
Wheat	0	2096	0
Turmeric	0	761	0
SOD Sulphate	0	24410	0
Others	353	0	0

(Source: Gujarat Maritime Board, Porbandar)

Major exports from Porbandar district through steamer, are cement, cement clinker, bauxite, onion, soda ash, soyabean, salt, wheat, turmeric, sodium sulphate and others. Total exports through steamer and ships for 2010-11, 2012-13 and 2013-14 is 4,17,334, 16,79,869 and 16,65,668 MT respectively. Overall exports through steamer and ships have increased at a CAGR of 58.62%. Individual exports for cement, cement clinker, bauxite, soda ash and soyabean through steamer and ships increased at a CAGR is 30.95%, 41.52%, 95.51%, 8.30% and 6.38%. Decline in exports of onion through steamer was 94.86%. It indicates that there is a huge potential to export bauxite and cement clinker. Commodities like salt, wheat, turmeric, sodium sulphate and other items were not exported on consistent basis through steamer. The

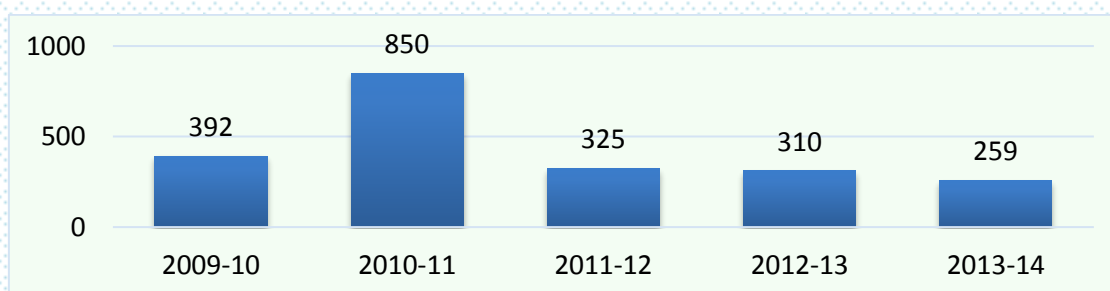
basket of commodities should be expanded to earn handsome foreign currency and an export through sea-route is economical.

4.18 Schemes and Programmes

Costal Sagar Khedu Yojana

A unique twelve point flagship program amounting to Rs. 11,000 crore for Eleventh Five Year Plan focuses attention in an integrated manner on the developmental issues of 60 lakh population living in 3000 villages of 38 coastal talukas in 13 districts. This program addresses special problems to improve quality of life and HDI in coastal areas, especially fisherman population. It takes a holistic and integrated view that people living in the coastal area play a distinctive role not only in the ecosystem but in the preservation of the ecosystem. The focus areas include capacity building and training, up-gradation of technology in traditional professions, specific and time bound action plan for improving wage and self-employment, educational facilities, health infrastructure, drinking water, housing, salinity ingress, electrification and water conservation, creation of infrastructure and coastal security (Gujarat Information, n.d.). It may be inferred that there is a decline of -7.95% with respect to achievement under 'Costal Sagar Khedu Yojana'.

Figure 4.15 Achievements Under 'Costal Sagar Khedu Yojana'



(Source: Fisheries Department Porbandar.)

Janta Insurance Scheme (Janta Bima Yojana)

The Janata Bima Yojana is an insurance cover drafted with the aim of offering a simple Package Policy to farmers - marginal and small labour class and rural households principally involved in agriculture and allied activities and people engaged in unorganized sectors of urban economy, so that under one cover they can have insurance protection for their dwelling (building) and household contents against fire group of perils including flood, lightening, storm and earthquake and burglary. Proposer and his/her spouse are also covered for personal accident.

Table 4:56 Janta Vima Yojana

Year	Cases Applied	Sanctioned Cases	Non-Sanctioned Cases	Amount Disbursed (Rs.)
2009-10	34	14	20	1400000
2010-11	42	10	32	1000000
2011-12	25	10	15	1000000
2012-13	19	11	8	1100000
2013-14	13	3	3	300000
CAGR (%)	-17.49	-26.52	-31.57	-26.52

(Source: Government Labour Department, Porbandar)

It can be observed that there is a decline in CAGR of -17.49% with respect to cases applied. Number of cases sanctioned, and non-sanctioned has also declined at -26.52% and -31.57% respectively. Disbursement of amount is reduced at CAGR of -26.25%.

Mission Manglam Yojana

‘Mission Mangalam’ aims to bring the critical mass of resources to address poverty by creating a single platform for stakeholders like Banks, Industry Partners, Micro Finance Institutes and Skill Imparting Institutions, etc. to deliver desired outcomes. While building social business enterprises, the concept of ‘Mission Mangalam’ envisages integration of Self Help groups and their federations into the value chain of investors. Leveraging upon Industry partnerships and corporate MoUs, ‘the firm’ goes to the community rather than people migrating to the firm. Improving demand and quality of rural products, thereby creating a market for these in urban segments. Inclusion of modern technology and processes which result in inverting the economies of scale. Linking local initiatives to international markets. Mass empowerment through ownership of assets (means of production) with producers / producer groups.

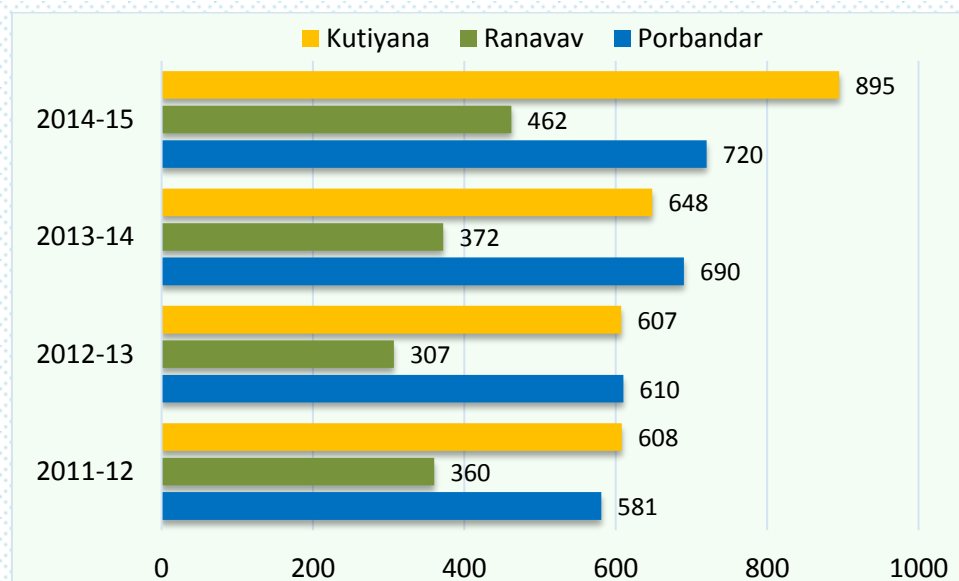
Table 4:57 Details of Target and Achievement Under Mission Manglam

Taluka	Total No. of SHGs	Target SHGs Formation	Achievement SHGs Formation	No. of Villages	Village Saturated	Graded SHGs	Revolving Fund given to SHGs	Applications Sent to Bank	Approved Applications	Approved Amount (Rs. In Lakh)
Porbandar	895	206	109	75	52	792	774	69	65	65
Ranavav	462	0	29	29	29	439	399	81	73	73
kutiyana	720	17	11	45	45	708	650	106	52	52
Total	2077	223	149	149	126	1939	1823	256	190	190

(Source: District Gram Vikas Agency, Porbandar)

It may be inferred that in the district total number of groups formed are 2,077. The target was 223 against which the achievement is 149. Ranavav taluka has been way ahead in accomplishment of the formation of 29 SHGs against the target of 0. Total 74 groups are yet to be formed. Number of graded groups in district is 1,939. Out of graded SHGs 1,823 groups have been given revolving fund. Approved cash credit limit for the district is Rs.190 lakh. Highest cash credit limit of Rs.73 lakh was granted to Ranavav's SHGs.

Figure 4.16 Number of Details of SHGs Working in Porbandar District



(Source: District Gram Vikas Agency, Porbandar)

It may be inferred that in Kutiyana, Ranavav and Porbandar taluka the number of SHG have increased at a CAGR of 10.15 %, 6.44% and 5.51% respectively. Increase in the number of SHGs suggests self-employment of people.

MNREGA Yojana

The Mahatma Gandhi National Rural Guarantee Act (MNREGA) is a law whereby any adult who applies for employment in rural areas has to be given work on local public works within 15 days. If employment is not given, an unemployment allowance has to be paid. The employment guarantee subject to a limit of 100 days per household per year. Not that MGNREGA is a law and not just a scheme. The main objective of NREGA is to protect rural households from poverty and hunger. MGNREGA can also serve other objectives: Generating productive assets, protecting the environment, empowering Women, reducing rural urban migration and fostering social equity among others. Thus MGNREGA is not just an employment scheme: it is a tool of Economic and social change in rural areas.

4.19 Success Stories

Box 4.1 Scheme: Economic Development Committee Yojana

Shri Devjibhai Lakhamanbhai Makvana (Mistri) used to stay in Khambhala village of Ranavav Taluka of Porbandar district, and used to do stray labor works. He faced several problems in getting work – assignments because he did not have any tools of his own to do his work. Further, he had acquired Tuberculosis and did not have money for medical treatment. The days were becoming difficult in terms of health and finance. Once he was called at the Forest Range Office of Ranavav range where the issues were discussed in some details. He told that he was quite proficient in doing welding works; and that if he gets a welding machine, he would do very well by taking up welding works in the near-by areas for repairing/ welding of farm implements etc. An Eco Development Committee was already formed in the Office of this Forest Range where there was provision to provide such works to individuals. In view of that, with sanction of appropriate authority, (i) One welding machine of 250 APM, (ii) Conar Cable 20 meters, (iii) Cut off machine with 14” blade, (iv) 4” anger grinder, (v) 13 mm electric drill, (vi) Blade 12X1/2 HHS, (vii) Big Welding holder, (viii) MS welding rod 3.15 mm, (ix) 2 Copper Links, (x) JK Drill set 1/8, 9/64, 5/16 and (xi) 4” X 6” DC Vrill were provided to Shri Devjibhai Lakhamanbhai Makavana (mistri) of Khambhala during the year 2013 – 14 to become self employed. On discussing this with Shri Devjibhai Lakhamanbhai Makavana (mistri) after some time, he said that on getting these equipments with help from the Yojana for Eco Development Committee, he keeps on getting assignments of various welding works like that of farm implements from areas around his place; and he earned Rs.7500 to Rs.8000 per month. This has removed his financial problems to run his household and his medical treatment. He is able to live a good life now. Thus, the assistance under Eco Development Committee yojana has proved a blessing for Shri Devjibhai Lakhamanbhai Makavana (mistri) of Khambhala.

(Source: Field Visit)

Box 4.2 Jay Santoshi Sakhi Mandal: Handloom and Weaving Activity

Jay Santoshi Sakhi Mandal of Roghada village in Kutiyana taluka of Porbandar district is working since 11.11.2009. There are ten members in the Mandal with Raniben Rathod as its Chairperson and Secretary is Kiran ben Rathod.

Raniben Rathod, the chairperson of the Sakhi Mandal said while giving the details of progress made by the Mandal that before about 2.5 years, Anganwadi worker and a social worker, active at Taluka for Sakhi mandals, came to meet us at village; and they organized our neighborhood and

explained the objective, benefits and relevance of Sakhi Mandals. In the next meeting, the Sakhi Mandal was formed and one member was elected as



chairperson and one as secretary. The name was Jay Santoshi Sakhi Mandal. In this meeting, they decided to save and pull Rs.50 per member per month in the monthly meeting; and record the same in Saving Register. The saving, then, was to be deposited in the Saving Bank Account to be opened in the name of Sakhi Mandal's name in the Dena Bank branch at Kutiyana. The minutes were recorded in a separate Register of meetings of the Mandal.



The social worker who came from Taluka level, then, explained and trained us as to how the record keeping was to be done with regard to the Savings and Minutes in Registers properly. We, for the first six months, continued with regular monthly meetings and monthly savings deposited in bank account; and the Registers were correctly maintained. The Taluka level worker and the bank official,

then, visited us and checked our records for its correctness etc., and our Mandal was given a grading. After that, Rs.5000 was deposited by Taluka level authorities in the Saving Bank Account of Jay Santoshi Sakhi Mandal as Revolving Fund. The Taluka level authorities had again visited us for explaining the advantage of use of this Revolving Fund for the internal lending among the members to take up economic activities, and become independent.

All members held a meeting to discuss the possibilities to take up economic activities, and we decided to go for handlooms/ weaving activity. In the initial stage, we brought the raw material from the adjacent places and sold in our village. Looking to the good

response, the raw material was then purchased from Rajkot on whole sale price to scale up the business. We started getting good income from this work. Now, we are able to sell the goods even by remaining in the village itself.



At present, each one of us is able to earn about Rs.3000 – 4000 per month by doing this handloom/ weaving activity, and its retail sale from here. While talking on the benefits of forming



Sakhi Mandal, Chairperson Raniben Rathod says that we have become economically self reliant and at the same time, the living standard of the family has also gone up. The level of literacy has also gone up in the family because this Mandal has made us indirectly aware of importance of education. The children are now getting better education. Social and economic progress of the members has become possible by getting employment at door step, and now we can even deal with banks without being dependent on any one. We, now, attend the Gram Panchayat's Gram Sabhas and have also become members of a few committees, and thus have become a

part of the progress of the village.

Talking about the Mission Mangalam Yojana of the State Govt., Raniben, the Chairperson of Mandal, said that we were sanctioned a Cash Credit of Rs.50000 by Dena Bank under Mission Mangalam, which has helped us in successfully scaling up the retail selling business of products made from handloom and weaving activities. We have become economically independent by taking advantage of this Scheme. We are able to educate our children in a better way and we, now, need not depend and borrow small money from any one. We are thankful to the State Govt. and also to the Gujarat Livelihood Promotion Company Limited for providing an opportunity to us at village level to form Sakhi Mandals and make progress. She believes that this Scheme will prove to be a blessing for the economic, academic and social development of women.

(Source: Field Visit)

Box 4.3 Shradhdha Sakhi Mandal: Scrapped Goods Activity

Shradhdha Sakhi Mandal of Biladi village in Kutiyana taluka of Porbandar district is working since 30.08.2008. There are ten members in the Mandal with Boricha Savitaben Sardulbhai as its Chairperson.

Borich Savitaben Sardulbhai, the chairperson of the Sakhi Mandal said while giving the details of progress made by the Mandal that before about before 5 years, Anganwadi worker and a social worker, active at Taluka for Sakhi mandals, came to meet us at village; and they organized ladies staying in our neighborhood and explained the objective, benefits and relevance of Sakhi Mandals. In the next meeting, the Sakhi Mandal was formed; and one member was elected as chairperson and one as secretary. The name of the Mandal was selected as Shradhdha Sakhi Mandal.



In this meeting, it was decided to save and pull Rs.50 per member per month in the monthly meeting; and record the same in Saving Register. The saving, then, was to be deposited in the Saving Bank Account to be opened in the name of Shradhdha Sakhi Mandal's name in the Dena Bank branch at Kutiyana. The detailed minutes were recorded in a separate Register



of meetings of the Mandal.

In the next meeting, Mission Mangalam official came to address us with regard to record keeping and maintenance of Registers etc. We, for the first six months, continued with regular monthly meetings and monthly savings deposited in bank account; and the all Registers were correctly maintained. The Taluka level worker and the bank official, then, visited us and checked our records for its

correctness etc.; and our Mandal was given a grading. After that, Rs.5000 was deposited by Taluka level authorities in the Saving Bank Account of Shradhdha Sakhi Mandal as Revolving Fund. The Taluka level authorities had again visited us for explaining the advantage of use of this Revolving Fund for the internal lending among the members to take up economic activities, and become independent.

All members held a meeting to discuss the possibilities to take up economic activities, and since most of the members were engaged in dealing with scraped goods, it was decided to work collectively. Rs. 50000 was sanctioned a limit of Cash Credit during Gareeb Kalyan Mela under Mission Mangalam Yojana. We used to sell scraped goods in a hand cart but with help of the Cash Credit of Rs.50000, we purchased a three wheeler tempo that has made us work very easy.

While talking on the benefits of forming Sakhi Mandal, Chairperson says that we have become economically self reliant and at the same time, the living standard of the family has also gone up. The level of literacy has also gone up in the family because this Mandal has made us indirectly aware of importance of education. The children are now getting better education. Social and economic progress of the members has become possible by getting employment at door step, and now we can even deal with banks without being dependent on any one. We, now, attend the Gram Panchayat's Gram Sabhas and have also become members of a few committees, and thus have become a part of the progress of the village.



Talking about the Mission Mangalam Yojana of the State Govt., Borich Savitaben Sardulbhai, the Chairperson of Mandal, said that we were sanctioned a Cash Credit of Rs.50000 by Dena Bank under Mission Mangalam, which has helped us in becoming economically independent by taking advantage of this Scheme. We are able to educate our children in a better way and we, now, need not depend and borrow small money from any one. We are thankful to the State Govt., for providing an opportunity to us at village level to form Sakhi Mandals and make progress. She believes that this Scheme will prove to be a blessing for the economic, academic and social development of women.

(Source: Field Visit)

Box 4.4 Veravali Sakhi Mandal: Washing Powder

Veravali Sakhi Mandal of Jamara village in Kutiyana taluka of Porbandar district is working since 09.02.2010. There are ten members in the Mandal with Karangia Jashuben Pharadasbhai as its Chairperson.

Karangia Jashuben Pharadasbhai, the chairperson of the Sakhi Mandal said while giving the details of progress made by the Mandal that before about before 3 years, Anganwadi worker and a social worker, active at Taluka for Sakhi mandals, came to meet us at village; and they organized ladies staying in our neighborhood and explained the objective, benefits and relevance of Sakhi Mandals. In the next meeting, the Sakhi Mandal was formed; and one member was elected as chairperson and one as secretary. The name was mandal was selected as Veravali Sakhi Mandal. In this meeting, it was decided to save and pull Rs. 30 per member per month in the monthly meeting; and record the same in Saving Register. The saving, then, was to be deposited in the Saving Bank Account to be opened in the name of Veravali Sakhi Mandal's name in the Mahiyari branch of Dena Bank. The detailed minutes were recorded in a separate Register of meetings of the Mandal.

In the next meeting, Mission Mangalam official came to address us with regard to record keeping and maintenance of Registers etc. We, for the first six months, continued with regular monthly meetings and monthly savings deposited in bank account; and the all Registers were correctly maintained. The Taluka level worker and the bank official, then, visited us and checked our records for its correctness etc.; and our Mandal was given a grading. After that, Rs.5000 was deposited by Taluka level authorities in the Saving Bank Account of Shradhdha Sakhi Mandal as Revolving Fund. The Taluka level authorities had again visited us for explaining the advantage of use of this Revolving Fund for the internal lending among the members to take up economic activities, and become independent.

Rs. 5000 were given to the Mandal as Revolving Fund for taking up economic activities by the women members and for internal lending among members. All members held a meeting on this issue and decided to make Washing Powder. This required training. We talked on this topic with the Cluster Coordinator of Mission Mangalam Yojana. We took training to manufacture this product. Initially we produced the quantity needed for our families and some samples were given to neighbors to evaluate our performance.

On getting good response, the Mandal was sanctioned a Cash Credit of Rs. 50000 by Dena Bank, Mahiyari branch during Gareeb Kalyan Mela under Mission Mangalam Yojana. We decided to bring the raw material from Upleta. We ultimately produced the washing powder. We started



selling the Washing Powder in our area and the response was heartening. We slowly increased our area of selling to the places around because the return was good.

At present, members earn about Rs.1500 to 2500 per month from this business of washing powder. We are now financially independent and our standard of living of our families has come up. Mandals have led to our social progress. We are able to be self employed.

Talking about the Mission Mangalam Yojana of the State Govt., Karangiya Jashuben Pharadasbhai, the Chairperson of Mandal, said that we were sanctioned a Cash Credit of Rs.50000 under Mission Mangalam Yojana and we are determined to use it appropriately to make desired progress with this help. We are thankful to the State Govt., for providing an opportunity to us at village level to form Sakhi Mandals and make progress.

(Source: Field Visit)

Box 4.5 Om Sakhi Mandal: Fishing Net

Svarnim Jayanti Gram Svarojagar Yojana was launched by the Central Govt., on 01 April 1999 with a view to creating sustainable employment for the poor in the rural areas of our nation. The intention of Svarnim Jayanti Gram Svarojagar Yojana was to provide employment through Self Help Groups (SHG) in rural areas. The SHGs were organized based on the expertise and the interest of groups of people so that their capacity can be scaled up. For the rural poor, Svarnim Jayanti Gram Svarojagar Yojana has come into being to tackle the issue of self employment.

Svarnim Jayanti Gram Svarojagar Yojana targeted the BLP families for organizing the SHGs to be given Govt., assistance and the Bank credit. Income generation was kept in focus while making intensive efforts to bring these SHGs above BPL.

Success Story : Navibandar

Navibandar is a place about 35 km from Porbandar city and is located in Porbandar district. Porbandar has 80 km of sea shore. It is along Arabian Sea on the Western Sea shore of Gujarat state. Navibandar has a population of 1100 persons. Most of the residents are fishermen and belong to the Kharava community.

Formation of Om Sakhi Mandal

On 26 May 2009, Om Sakhi Mandal was formed with 15 women members of Navibandar. This is the SHG of all BPL members. A regular monthly saving of Rs.50 per member was initiated in regularly held monthly meetings of the SHG, A sum of Rs.10000 was released by the Govt., to the SHG as Revolving Fund. The use of this Revolving Fund and the Savings

is made for internal lending and the needs of the members. The Revolving Fund has also been used to increase the capital resources after taking the Skill Development training.

Linking the SHG with Mission Mangalam

Mission Mangalam is the Scheme implemented with the objective of Women Empowerment and poverty alleviation. After being linked with this Scheme, Om Sakhi Mandal has increased its savings and has started following the Panch Sootr (Five Principles i.e., Regular Meetings, Regular Savings, Internal lending, Recovery of the lending, and Updating all books of SHGs like Registers); they have understood the power of group formation. Under Mission Mangalam, they have been imparted Skill Development Training and guidance has been given for initiating economic activities.

Training for Value Addition

Om Sakhi Mandal has received training from the Fisheries College at Veraval. They have obtained knowledge of how to make different fish products from variety of fishes; and how to add value to that to make it salable in the market; and they have also learnt how to make pickles, powers and chips from the fish – which they never did before.

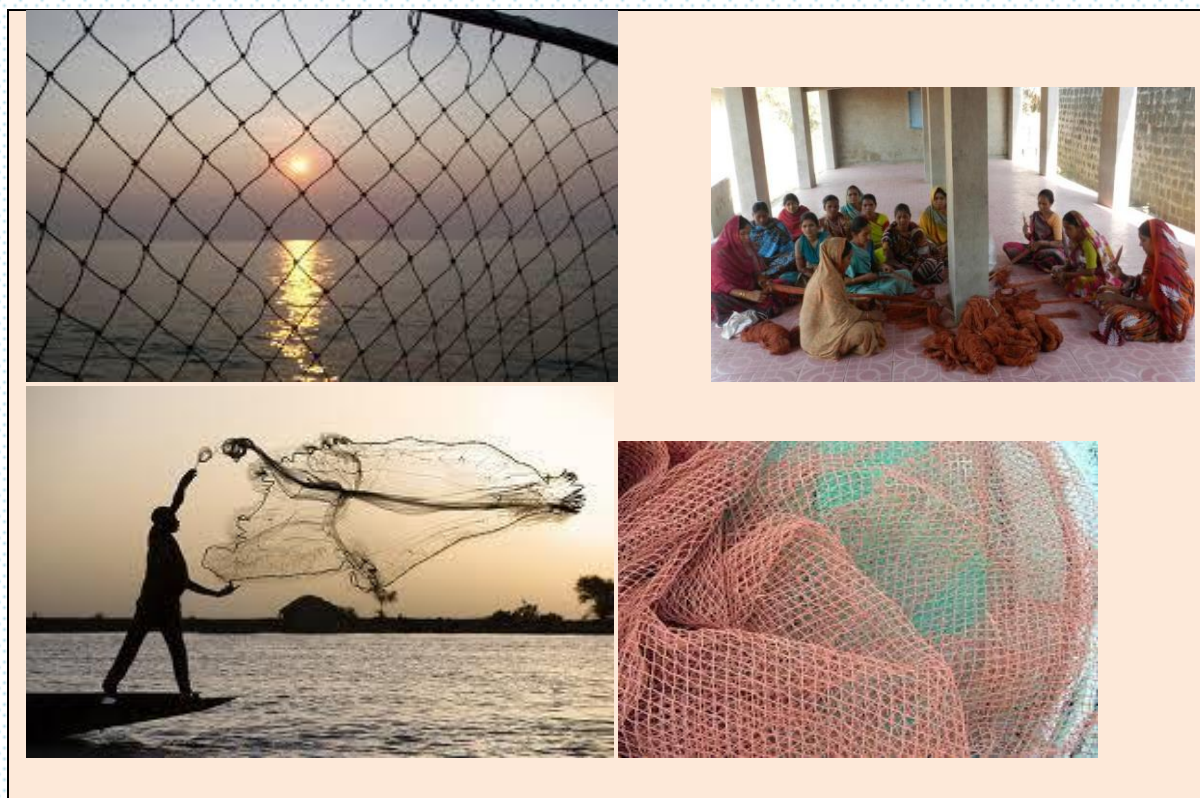
Making the Fishing Net

Fishing net is the important tool for the fishermen to get income. People of Navibandar used to purchase these nets from wither Okha or Veraval which were far from their place. At that time, they had to pay higher prices for these nets, and transportation cost was also to be borne by them. In absence of its availability in the local market, the nets used to cost high for them. After getting amalgamated with Mission Mangalam, Om Sakhi Mandal started weaving Fishing Nets at their own place for which they had received training. Now, they do not have to go anywhere for this purpose. They are able to cater to the needs not only that of the members, but also that of outsiders. Women members of this SHG are engaged in this. The local market absorbs the full production of this SHG. This income generation activity proved a paying proposition.

Scheme Based Assistance

During Gareeb Kalyan Mela in the year 2012 – 13, a Micro credit of Rs.50000 was released to Om Sakhi Mandal that was used to manufacture the fishing nets, and under Svarnim Jayanti Gram Svarojagar Yojana, they were sanctioned a loan of Rs.2.5 lakh, of which Rs.1.25 lakh was as subsidy under SGSY. This helped them in scaling up the production of nets and the activities stood better organized. They manufacture fishing nets during their spare time. Due to this activity, per head income of the members ranges between Rs.2000 to Rs.6000 per month.

The increase in income due to this Income Generating activity has helped these women in financial needs of their family and this collective work has added to their skills. They have become self reliant and have found a new direction of life due to sustainable income.



(Source: Field Visit)

Box 4.6 Barda Lion Jonpur Breeding Centre

Barda forest area under Porbandar Forest Division occupies a very important place as compared to Gir and Girnar Forest Area of Saurashtra. Barda Protected Forest Area is situated between 21.40-21.55 North Longitude and 69.40 Latitude. The area of Barda protected forest falling under the talukas of Porbandar and Ranavav under Porbandar District are known as Rana Barda Area since the princely state time and the forest area under Bhanvad taluka of Devbumi Dwarka District is known as Jam Darda. These areas have been declared as Reserved Forest Area during 1965 and 1968. During its settlement under the government rules the rights and benefits have been awarded to the cattle rearers residing in that area and these cattle rearers are residing in these areas since princely state time.

During princely state time, with a view to establish the drinking water sources, small sixe lakes such as Doraghuna Dam, Chhapiya Lake, Sankaroja Lake and Aabhapara Lake etc. were constructed. Barda Forest Area is considered as an important forest area since state times due to available vegetation and forest animal population there. Considering the Geographical Topography and available vegetation and forest animals available in Barda Protected Forest Arewa and for developing the same further and opting this area as alternate relocation for Asian Lions, Government of Gujarat vide their Notification No. GHKH/21/79/WLD/1079/82068/P/2 dated 12/02/1979 has declared 192.33 Sq.Kms area of Barda Forest as Barda Forest Animal Protected Forest.

(Source: Forest Department, Porbandar)

Box 4.7 Lion Ginpool Center

Location : Bhukhbara Nesh, Round: Sat Virda, Range: Ranavav

180.25 Sq Kms of Barda Forest Reserve Area has been declared as 'Barda Forest Animal Protected Forest Area' on 12/02/1979 with a view to create an alternative locations for lions. Lion jinpool centre is established at Barda Protected Forest with a view to protecting and developing Asiatic Lion Gins and Lion Enclosure and Lion Animal House etc have been made at Bhaukhbara Nesh, Sat Virda Round under Ranavav Range.

Lion Animal House Unit 1 and Unit 2 have been structured for this Lion Ginpool Centre. In both these units Animal House, Crawl, Service Shed, Loafing Ground and Lion Utility Areas are located. In addition to this Big Enclosure for Lion has been located in 30 Hectares of area. All the needs of lions in this enclosure has been inspected by experts and this area has been found suitable for lions.

Then on 13/10/2014, following 2 pairs of lions were relocated here from Sasan Gir Forest Animal Department.

Sr No	Name of Male	Age (Appx)	Name of Female	Age (Appx)
1	Yuvraj	3-3.5 years	Sarita	2.5-3 Years
2	Nagraj	7-8 years	Parvati	3 years

They are fed mutton daily supplied from Sakkarbagh zoo of Junagadh. Their health and other related matters are being regularly checked by veterinary doctor and other experts respectively. And forester, forest guard and trackers remain present always to take care of them.

Female lion Parvate gave birth to 4 kittens on 01/11/2015. The weight of these 4 kittens are very less at the time of birth. 2 of these 4 kittens died on 05/11/2015. The surviving 2 kittens one male and one female are found completely in healthy conditions with present weight of more than 5 kgs. Thus, bringing lions to Barda Forest Area, maintaining them here and birth of kittens by female lion is matter of prestige for Porbandar Forest Division.

Dipda, Zarakh, Fox, Lokdi, Wild Cat, Nolio etc carnivorous animals are found in Barda Protected Forest. The herbivorous animals like Nilgai, Bhund and Sarisrup and many kinds of birds are also found in this forest area. Hence, Barda Protected Forest is important location for animal world next to Gir and Girnar.

As GOG vide their resolution dated 22/10/2001 wanted to relocate the cattle rearers from this area we have on 08/10/2007 submitted the proposal through higher authorities to the government for relocation of cattle rearers from this area.

(Source: Forest Department, Porbandar)

Box 4.8 Chittal Breeding Centre (Barda Forest Animal Area)

Location : Sat Virda Nesh, Round: Sat Virda, Range: Ranavav

Chittal Deer breeding centre to relocate Chittal Deer was started in the year 2002-2003 at Sat Virda, Barda Protected Forest Area to create prey base for lions as a first step to relocate lions. Five enclosures are made for Chittals and Chittals are released to open forest from enclosures at regular intervals for natural prey by lions.

(Source: Forest Department, Porbandar)

Box 4.6 Sabar Breeding Centre (Barda Forest Animal Area)

Location: Dhoranghuna, Round: Modpar, Range: Bhanvad

Sabar Deer breeding centre to relocate Sabar Deer was started in the year 2007-2008 at Kileshwar, Dhora Ghuna Area to create prey base for lions as a first step to relocate lions. Sabar Animal House and enclosures are prepared for Sabar and Sabar are released to open forest at regular intervals as natural prey for lions.

(Source: Forest Department, Porbandar)

4.20 SWOC Analysis

Strength

- 67.45% is the net cropped area of Kutiyana taluka.
- 25.54% area of Ranavav taluka is forest areas.
- 70% area of land holding is more than 2 hectares.
- Yield in for jowar, bajara, wheat, other crops, gram, groundnut, palm, mango, chicku, onion and tomato was highest compared to Gujarat's yield.
- Cropping intensity for Porbandar taluka is highest for the year 2013-14 when compared to different taluka's cropping intensity. It is 226.52%.
- CAGR growth of 6.60% of buffaloes depicts potential for dairying in the district.
- Porbandar taluka shares the major portion of cattle of entire district.
- Highest 45.84% of working population of Kutiyana is occupied in farming activity.
- Large number of fishermen is involved in full-time fish catching activity.
- 20.48% CAGR was viewed with respect to international fish production.
- Fish production increased to 8.41% CAGR. Fish exports recorded a CAGR of 7.99% and domestic consumption grew at CAGR of 12.25%.
- Fish freezing plant grew at a CAGR of 2.39%.
- Total number of MSMEs is 397.
- Chemical and chlorine mineral products are found highest in district.
- Medium enterprises generate highest employment i.e. 6.05 times of total investment.
- Porbandar taluka has highest number of shops and Ranavav has highest number of factories.
- An import of dry dates has reduced by 17.18% as date palm production picked up momentum in the district.
- An export through steamer and ships has increased at a CAGR of 58.62%.

Weakness

- More than 50% area of all taluka is not irrigated through proper sources.
- Yield of cotton is lower in district when compared to state.
- More than 50% women of rural and urban areas work as agriculture labourers.
- Decline of CAGR of 11.19% was noticed for mechanized boats.
- Fishing cooperative society increased from 70 to 71 over 4 years and increase in members is just 0.60%.
- There was a reduction at the rate of 6.29% CAGR with respect to training imparted to fishermen.
- Some of processing cooperative societies like fruits and vegetables, poultry, fish etc were closed down.
- Non-working factories are 24%.
- 58 different types of units are closed down in Porbandar taluka.

Opportunities

- Yield of maize has increased but it was cultivated for two consecutive years only.
- Diversification in cultivation of Porbandar district was seen in terms of oil-seeds like seasmum.
- Yield of cabbage, lemon, limes, papaya and other fruits have increased in Porbandar district.
- Cattle Insurance (minimizes risk) can be promoted to boost cattle rearing.
- Artificial Insemination and Cross-breeding for more and productive progeny.
- More than 50% of working population in each taluka is involved in non-agricultural activity.
- Numbers of net making plants have increased at a CAGR of 6.96%.
- Business tourist prefers to stay in Medium class hotels.
- More number of beneficiaries should be enrolled under 'Costal Sagar Khedu Yojana'.
- Under Brackish Water aquaculture, prawns can be cultivated/ farming of prawns can be developed in the district.

Threats

- Fluctuating production in food crops and non-food crops is a threat to food security and remunerative prices.
- Farmers have stopped the cultivation of chilly and fenugreek.
- Only 14.33% of the cropped area of Porbandar district is irrigated.
- Increase of meager 0.30% CAGR was noticed in number of members of milk cooperative societies.
- Productivity per cattle is low as the increase in milk collection is at the rate of 0.96% CAGR.
- There is less number of milk cooperative societies.
- Dense forest area is reducing, which may act as a potential threat for wild-life.
- Decline of 2.13% and 1.93% in number of ice-factory and daily production of fish based industries saw a decline.
- Attraction of leisure tourist and NRI and foreign tourist for business purpose is less.
- Employment in service sector is only in education sector.
- There are no large units.
- Mining of bauxite, laterite is more than 40%.
- Exports have declined at a CAGR of 4.16% and imports have increased at a CAGR of 0.47%.
- Pollution by other industries, fishing during monsoon season, use of low mess-sized (less than 40 mm) code-end in the net during fishing by fishermen and crossing of international maritime boundary line (IMBL) by fishermen.

4.21 Way Ahead

Agriculture

Diversification of cultivating sesam oilseeds must be promoted in addition to groundnut, as its yield is highest and offers remunerative prices. Cultivation of maize, chilly, fenugreeks must be encouraged as its cultivation was stopped despite good yield. Man-made irrigation should be promoted in more than 50% cropped which is void of irrigation facility. This will lead more land under cultivation and cropping intensity will also rise. As more than 50% of the eligible working population is involved in non-agricultural activity there is scope to develop tiny units either agro-based or non-agro based.

Livestock

Rearing of cows and buffaloes should be encouraged. Productivity per animal can be improved by adoption of timely artificial insemination and other breeding activities. Milk farmers must be motivated and supported to carry out the same. Risk is higher in the case of animal husbandry which should be mitigated by encouraging cattle owners to opt for cattle insurance scheme. More number of milk cooperative societies should be formed for collective milk collection and remunerative prices can be offered to milk farmers. Value added milk products should be promoted.

Fisheries

For the development of fisheries infrastructure, up gradation/renovation of Porbandar Fisheries harbor is required to be developed at the cost of rupees 10 crore. About 70 fisheries co-operative societies are operated in the district. Different types of subsidy on different equipment are provided to poor members of fisheries co-operative. Under Brackish Water aquaculture, prawns can be cultivated/ farming of prawns can be developed in the district societies.

Development of fisheries in the district is mainly obstructed due to water pollution created by industries, which should be addressed soon. Fishing during monsoon season and usage of low mesh-sized (less than 40 mm) mesh-end in the net, during fishing should also be solved, in order to make fishing activity more effective. Crossing of International Maritime Boundary Line (IMBL) by fishermen is a threat which can be removed by proper imparting proper training to the fishermen.

Tourism

The main obstruction comprises of no good place to stay like budget hotels such as one star, two star three stars. There should be budget hotels, good infrastructure and cleanliness, sea and costal transport. The hotels must have basic amenities to provide the tourist which will help in contributing to the economy. There is lack of public amenities such as clean toilets, lack of proper roads, and connectivity to popular destination. Transports system like car, rickshaw, and buses are very poor. Security for women is very important for the tourist. To overcome this problem district should build budget hotels so that needs of the tourist is satisfied, to provide easy and good transport, government should encourage hoteliers by giving them tax subsidies, land should be easily available to construct hotels, way side amenities, public toilets. Security problem should be tightened so that no unwanted accident happens. Transport system like rickshaw, car and other vehicles which the tourist will use must be in good shape and with reasonable fares.

Tourism related demands for goods and services, creates new jobs, in particular for youth and women, thus contributing poverty reduction. Number of activities should be increase for example light and sound show should be introduce, tourist circuit should be identified , Craft bazaar should be encourage, multiplex and malls, Multi diagnostic and multi specialty hospitals are the essentials requirements. Need good communication, good hotels, good services, skilled labors, technical experts, IT experts etc. The major problem of these industries is skill escort, guides, local craftsmanship, making of wood ship (Jahaj), fish aquarium box, confectionery bakery industries, by organizing training for the same, employment opportunities can be generated.

As far as infrastructure is concern there are good facilities like good food, rich culture, beautiful historical monuments and long coastal areas, spirituality and diversity etc. To attract the tourist following facilities should be added like sign ages, good road to popular places, hygienic cafe areas, malls, health club, beach development, museum, water parks, zoo, multiplex, hovercraft(sea transport), land transport, train frequencies plus multi connectivity cities which are important from the view point of art, culture and tourist sports. Local tourist bus facilities should be introduced. Horse riding, camel riding and Heritage sites should be uplifted. Major industries like fertilizer industries, cement industries, mining industries, fishing industries and farm tourism should be encouraged so that the local economy can be boosted. Three gates which leads to Porbandar city should be develop on costal highways, National highway and state highway. In order to boost tourism the government on time to time basis should review polices and make significant changes for the betterment of tourism sector.

Industries

More number of units in the area of Khadi and Village Industries must be encouraged. Revival of closed unit must be done to boost the secondary sector.

Port

Trade can be attracted by developing port based industry like Saurashtra Cement Ltd., Saurashtra Chemical Ltd. etc. in the proximities of Porbandar port. District Administration as well as Government of Gujarat should make an effort to develop port based Industry. Presently port is neither connected with four lane road nor connected with Broad Gauge Rail. The land dispute which is going on between Revenue and Port department must be quickly resolved to set up railway line facility. It must be well connected with Broad Gauge Railway and four track road which will not only facilitate trade but it will also increase the quantum of trade. Port is facing constraint of land. It was observed that there is no sufficient land available with port to store Import / Export cargo and land which was in the name of port / port department should be transferred in the name of Gujarat Maritime Board as soon as possible to accommodate more users and to attract port based industry. Port is looking after many works of fishing activities. Therefore, handling of cargo and fishing must be bifurcated to efficiently utilize port resources in optimal way. Trade can be enhanced by providing night navigation through dedicated LPG terminal, hinter land connectivity by rail and road, and dedicated container terminal for fish products and other products which can be imported / exported to / from Porbandar Port.

Commercial operations are being disturbed because of defense vessels and LPG vessels considering safety norms. In this regard Eastern Break Water must be used for proposed defense activity only. Through Public Private Partnership (PPP) Model and port policy a dedicated terminal for LPG vessels can be developed where need of IOCL, BPCL, HPCL, and other LPG distribution company can be satisfied and resulting emplacement and trade will be enhanced. Porbandar Port is exclusively handling bulk commodities and government should take up initiative to develop dedicated container terminal to cater to the need of industries which will result in saving the transportation cost of goods, which can be implemented through PPP Model.



CHAPTER 5

**POVERTY, FOOD SECURITY
AND VULNERABILITY**



Chapter 5 Poverty, Food Security and Vulnerability

5.1 Introduction

India's poverty rate is set to decline from 51% of the population in 1990 to 24%, over the next five years. That translates to around 188 million more people meeting a minimum subsistence standard of \$ 1.25 a day. Removing poverty is clearly the most important of the goals, as it has clear linkage to the other MDGs (Millennium Development Goals).

State-wise data is also released by National Sample Survey which shows state-wise poverty estimates for 2004-05 and 2011-12. It shows that while there is a decrease in poverty for almost all states, there are wide inter-state disparities in the percentage of poor below the poverty line and the rate at which poverty levels are declining. In Gujarat, state the decline in the poverty is by 15.2% which is less than India. In India the decrease in the poverty is by 21.9%.

Using satellite imagery and concept of spatial poverty (highly correlated with economic poverty), one comes across a range of insights that will help to take the discussion away from the domain of irrelevancy. The highest-poverty districts ring the boundary between Gujarat and the neighbouring states of Maharashtra, Madhya Pradesh and Rajasthan. These districts towards the North, Northeast, South and Southeast account for a large tribal population, mostly uncultivated or uncultivable land, and generally poor water resources. Most importantly, each of these districts is landlocked, as opposed to most other districts in Gujarat. Whether it is Dangs, Panchmahal, Banaskantha, Dahod or any other border district, the intensity of poverty tends to be higher than in the rest of the state. Gujarat's economy is largely supported by trade, and districts near the coast both contribute to and benefit from that trade. On the other hand, districts away from the coast are impacted not just by the poor quality of cultivable land but also the distance from local and national trading centres.

The chapter focuses on the analytical aspects based on the poverty. Various aspects of poverty like income, land holding features, housing conditions, sanitation conditions, literacy, means of livelihood etc has been discussed in this chapter. The aspects of food security as well as vulnerability are analyzed in the chapter

5.2 Poverty

Government of India initiated project to carry out Socio Economic Survey to prepare the list of Below Poverty Line families in the country. Commissioner of Rural Development, Government of Gujarat decided to use latest technology tools to achieve maximum accuracy and transparency. Department has decided to scan all the survey forms to maintain records. It

was also decided that instead of making data entry manually, scan forms should be converted to build up the database of all surveyed families. On the request of Commissioner, Rural Development, National Informatics Centre Services Incorporated, New Delhi; has arranged demonstration of various scanning solutions by private vendor. Over 68.65 lakh households were individually visited and surveyed. Total 19 parameters were captured which indicate the social and economic status of each family. Out of these, 13 parameters are used to generate score of each family as per the guidelines of Government of India. Each parameter can have score ranging from 0 to 4. Thus each family gets his score out of 52.

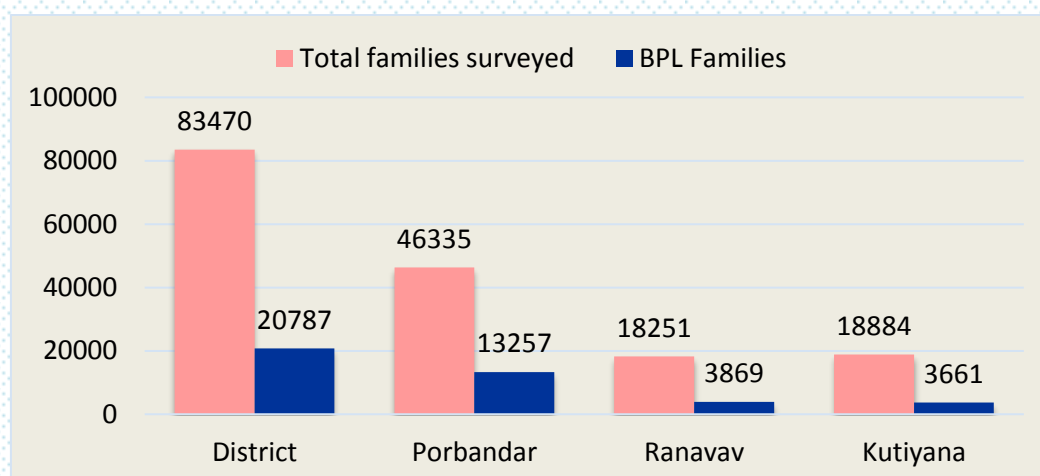
The state government has decided the cut of score as follows,

Score between 0 –16: Very Poor Family

Score between 17-20: Poor Family

In Porbandar district 83305 families were surveyed of which, 20634 (25.13%) families turned out to be poor. Below mentioned chart shows the total number of BPL families in various talukas.

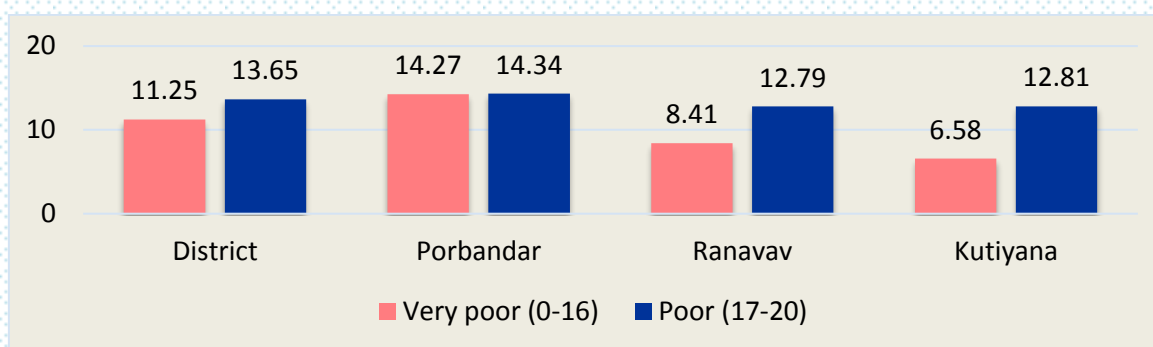
Figure 5.1 BPL Families out of Total Families Surveyed (2014-2015)



(Source: - Database of Commissionerate of Rural Development, Gujarat)

The number of BPL families are highest in Porbandar taluka when compared to other 2 taluka. Porbandar taluka has the highest number of BPL families with 13257 from the surveyed families of 46335.

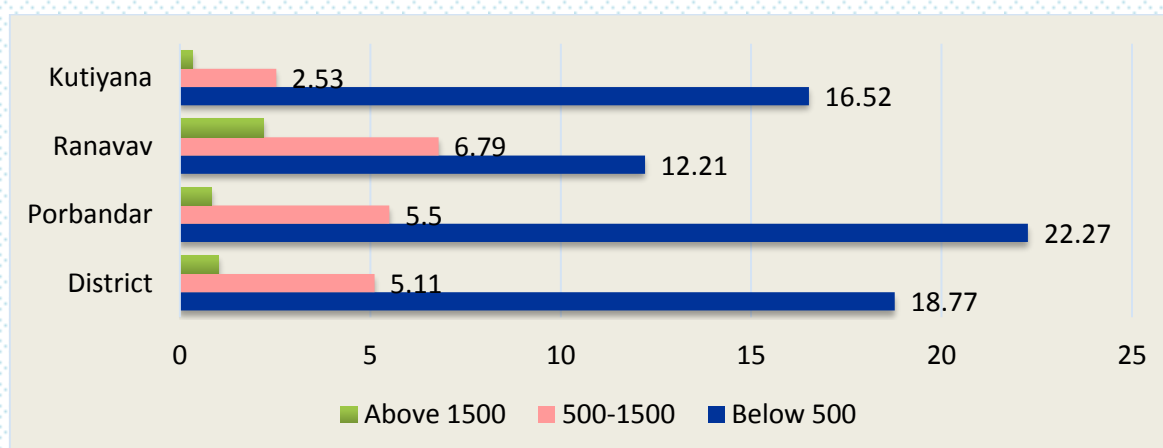
Below mentioned chart shows the percentage of very poor and poor families.

Figure 5.2 Percentage of Very Poor and Poor Families (2014-2015)

(Source: - Database of Commissinerate of Rural Development, Gujarat)

Very poor families are more in Porbandar taluka i.e 14.27% when compared to Ranavav and Kutiyana talukas. Porbandar taluka has high number of very poor families when compared to whole of the district. Poor families with score of 17-20 are also high in porbandar taluka. In Ranavav and kutiyana taluka poor families are high when compared to very poor families.

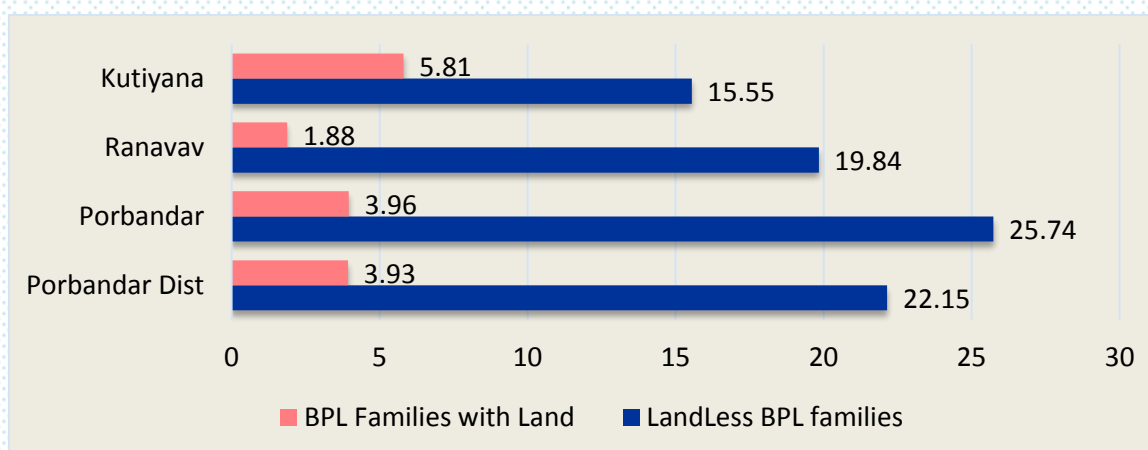
Below mentioned chart shows the percentage of BPL families according to their average monthly income.

Figure 5.3 Average Monthly Income of BPL List 2014-2015 (%)

(Source: - Database of Commissinerate of Rural Development, Gujarat)

Maximum number of BPL families with the monthly income less than Rs500 is seen in Porbandar Taluka. It is quite more than the district percentage of 18.77%. In the income level of Rs.500 to Rs.1500 BPL families in Ranavav taluka are 6.79% which is higher than the district's at 5.11%. It is followed by Porbandar taluka at 5.50% and Kutiyana at 2.53%. In the income level of above Rs.1500, Ranavav taluka has maximum BPL families of 2.19% followed by Porbandar at 0.84% and Kutiyana at 0.34%. The district percentage is 1.02%.

Below mentioned chart shows the land holding features of BPL families with percentage of landless BPL families and the percentage of families with land.

Figure 5.4 Land Holding Features of BPL Families 2014-2015 (%)

(Source: - Database of Commissinerate of Rural Development, Gujarat)

In Porbandar district the percentage of BPL families without land is 22.15%. Out of the three talukas of Porbandar district percentage of landless BPL families when compared to district is highest in Porbandar taluka at 25.74%. This is followed by Ranavav at 19.84% and Kutiyana at 15.55%.

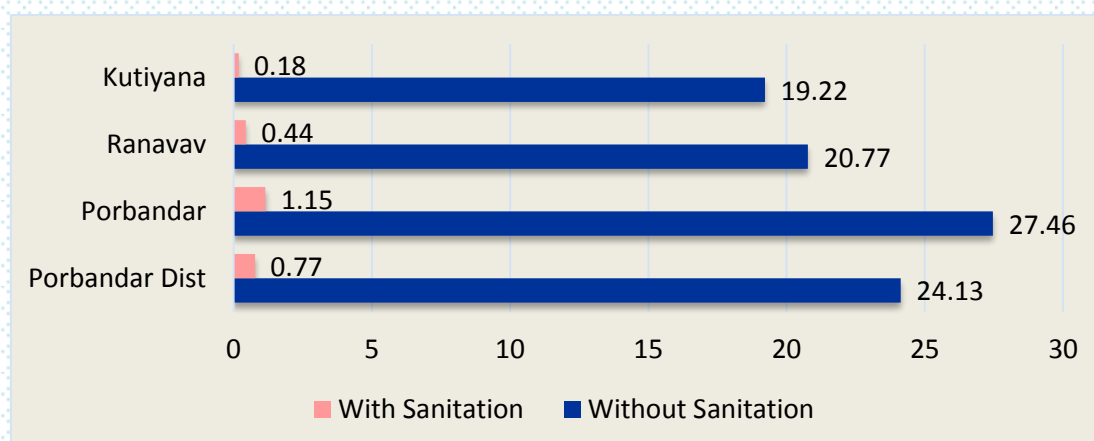
Table 5.1 Percentage of BPL Families Having Various Types of Housing Conditions 2014-2015

Name of the District / Taluka	Houseless		Kacha		Others	
	0-16	17-20	0-16	17-20	0-16	17-20
Porbandar District	3.78	2.99	6.09	6.71	1.39	3.96
Porbandar Taluka	4.88	2.75	7.75	7.23	1.65	4.35
Ranavav	3.07	3.78	4.44	6.04	0.90	2.98
Kutiyana	1.74	2.81	3.61	6.10	1.22	3.91

(Source: - Database of Commissinerate of Rural Development, Gujarat)

The percentage of houseless BPL families are more in the category of very poor in Porbandar taluka at 4.88 when compared to other two talukas. In other two talukas houseless BPL families are less in the category of very poor when compared to poor category. Kacha houses by BPL families are high in Porbandar taluka. 7% of the BPL families in both the category stay in kacha houses in Porbandar taluka. In Ranavav and Kutiyana talukas kacha houses are more in poor category of BPL families when compared to very poor category.

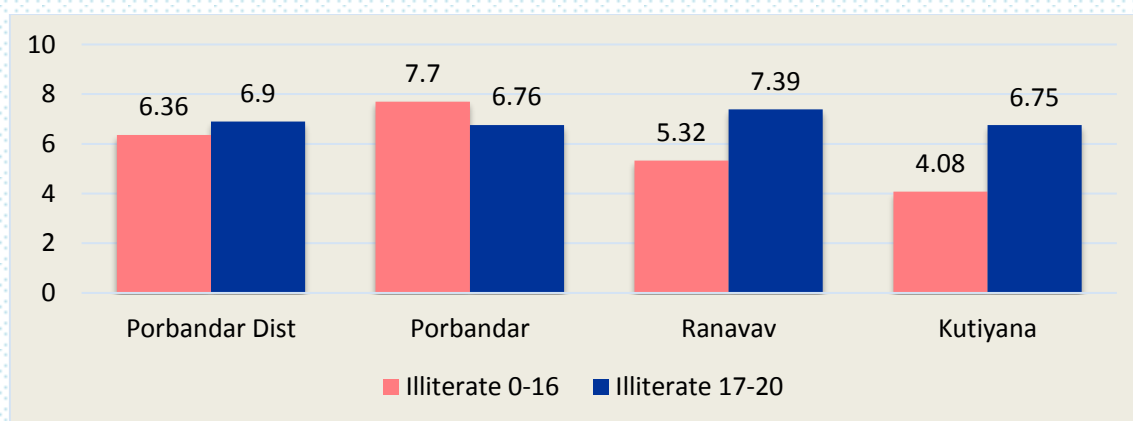
Below mentioned chart shows talukawise percentage of BPL houses having sanitation facilities.

Figure 5.5 Sanitation Condition of BPL Families 2014-2015

(Source: - Database of Commissinerate of Rural Development, Gujarat)

Majority of the BPL families in the district do not have sanitation facilities. In the taluka maximum percentage of BPL families without sanitation facilities is in Porbandar taluka with 27.46% followed by Ranavav taluka with 20.77%. Kutiyana taluka has the least of all the three taluka. The district percentage is at 24.13%.

Below mentioned chart shows the percentage of literacy rate among the BPL families.

Figure 5.6 Literacy Level of BPL Families 2014-2015

(Source: - Database of Commissinerate of Rural Development, Gujarat)

Majority of the BPL families are literate. Maximum percentage of illiterate in the category of 0-16 is in Porbandar taluka at 7.7 which is followed by Ranavav at 5.32 and least is in Kutiyana at 4.08. Illiterate in the category of 17-20 are high in Ranavav with 7.39% and rest of the two taluka the illiterates are hovering around 6%.

Below mentioned table shows the percentage of household labour force among the BPL families.

Table 5.2 Percentage of Household Labour Force Among BPL Families 2014-2015

Dist/Taluka	Female and Child Labour	Adult Female and No Child Labour	Adult Male Labour	Others
Porbandar Dist	1.16	2.29	15.59	2.17
Porbandar	1.07	2.51	17.14	2.04
Ranavav	1.22	2.26	12.56	2.59
Kutiyana	1.33	1.80	12.95	2.08

(Source: - Database of Commissinerate of Rural Development, Gujarat)

The majority of the BPL families have Adult Male Labours (AML). In the district 15% of the BPL families surveyed are AML. In the three taluka the highest number of these categories is in Porbandar at 17% and Ranavav and Kutiyana has 12% each. The percentage of Female and Child Labour (FCL) is less in the district. In the district it is 1.16%. In various talukas it is 1.07%, 1.22 % and 1.33% respectively for Porbandar Ranavav and Kutiyana. The category of Adult Female and No Child Labour (AFNCL) is higher when compare to FCL. All the four regions i.e. of district and taluka is at 2% except Kutiyana at 1.80%.

Below mentioned table shows the percentage of major livelihood i.e. of casual labour and subsistence cultivators.

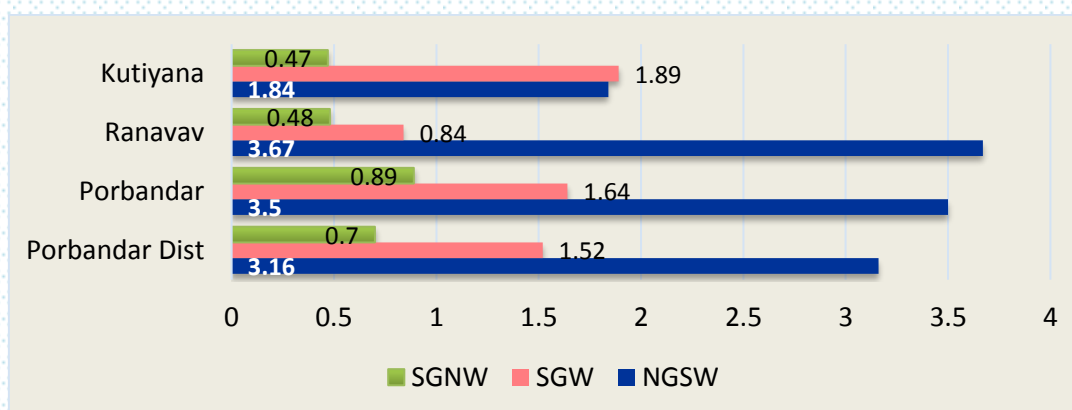
Table 5.3 Percentages of BPL Families with Casual Labour and Subsistence Cultivators 2014-2015

Dist/Taluka	Casual Lab	Sub Cul
Porbandar Dist	22.77	1.41
Porbandar	26.64	1.25
Ranavav	19.65	0.79
Kutiyana	16.27	2.40

(Source: - Database of Commissinerate of Rural Development, Gujarat)

The percentage of casual labour is highest in the Porbandar taluka followed by Ranavav at 19% and Kutiyana at 16%. The district percentage of casual labour among BPL families is 22%. Subsistence Cultivators is lowest in Ranavav at 0.79%. It is highest in Kutiyana at 2.40% and in Porbandar taluka it is at 1.25%. The district percentage of subsistence cultivators in BPL families is at 1.41%.

Below mentioned chart shows the conditions of children in percentage.

Figure 5.7 Condition of Children in Percentage 2014-2015

(Source: - Database of Commissinerate of Rural Development, Gujarat)

(NGSW – Not Going School and Working, SGW – School Going and Working, SGNW – School Going and Not Working)

In Porbandar district the percentage of children who are not going to school and working is higher when compared to school going and not working. In the district 3.16% is the percentage of children who are going to school and working. The percentage of school going and not working children is only 0.7%. In the taluka of Ranavav it is seen that the highest percentage of children who are not going to school and working are 3.67% followed by Porbandar taluka at 3.5%. In Ranavav taluka the percentage of children who are school going and not working is only 0.48%. The highest percentage of this category of children is in Porbandar taluka at 0.89%.

Below mentioned table shows the indebtedness dimensions in percentage

Table 5.4 Indebtedness Dimensions of BPL Families 2014-2015

Dist/Taluka	Daily Purpose from Informal Sources	Production purpose from Informal Sources	Borrowings from Institutional Agencies	No Indebtedness and Possess Assets
Porbandar Dist	16.31	2.87	1.68	4.06
Porbandar	20.95	2.98	1.3	3.37
Ranavav	11.42	2.94	2.72	4.12
Kutiyana	9.62	2.48	1.6	5.68

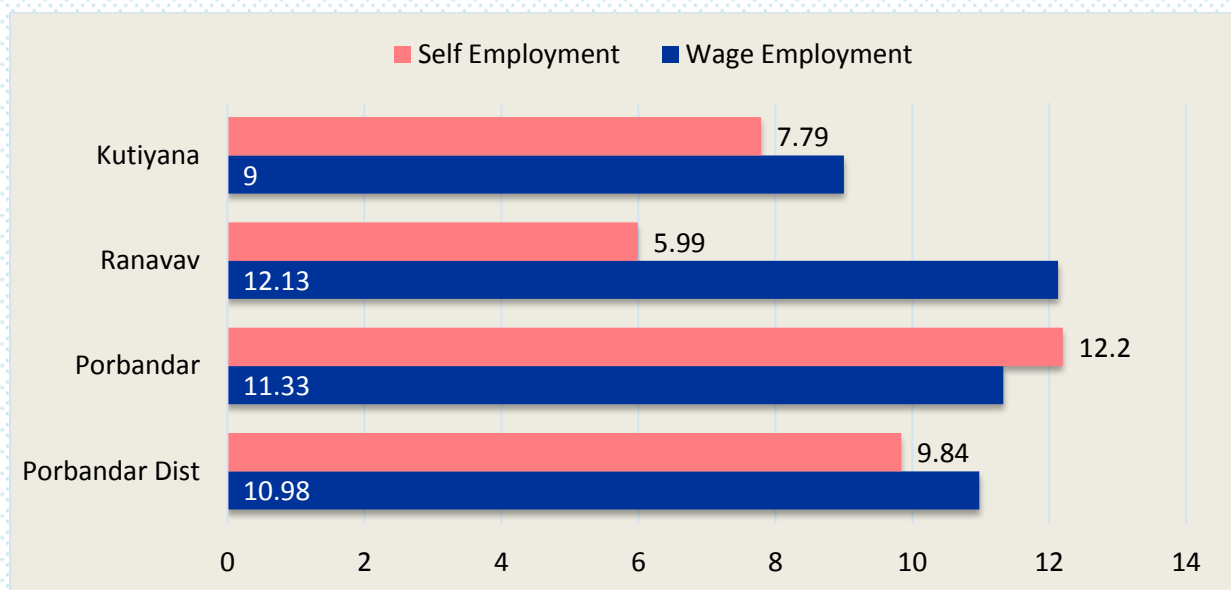
(Source: - Database of Commissinerate of Rural Development, Gujarat)

The majority of people take the amount from the informal sources for the daily purpose. In the Porbandar taluka DPIS is highest at 20.91% which is followed by Ranavav at 11.42% and Kutiyana at 9.62%. The whole district percentage is at 16.27% which is less when compared to Porbandar taluka. The amount from informal sources for the purpose of production is on the lesser side. Borrowings from the institutional or formal sources are highest in Ranavav at

2.72% followed by Kutiyana at 1.6% and Porbandar taluka at just 1.3%. The whole district percentage is at 1.68%. The persons with no indebtedness and possesses assets is highest in Kutiyana at 5.68% followed by Ranavav at 4.12% and Porbandar taluka at 3.37%. The whole district NIPA is at 4.06%

Below mentioned chart shows the major sources of preference of assistances in percentage

Figure 5.8 Major Assistance Preference of BPL Families in Percentage (2014-2015)



(Source: - Database of Commissinerate of Rural Development, Gujarat)

The major sources of assistance are wage employment. In Porbandar district the assistance from wage employment is 10.98% which is lower when compared to Porbandar taluka at 11.33% and Ranavav at 12.13%. Kutiyana is low at 9%. If seen on self employment Porbandar taluka is higher at 12.20% followed by the district at 9.8% and Kutiyana and Ranavav is at 7.79% and 5.99% respectively.

5.3 Food Security

In September last year, Parliament passed the Food Security Act that gave legal entitlement to highly subsidised foodgrains to two-thirds of the country's population. The ordinance was, however, issued in July 2013. The Gujarat government, which previously had reservations about the food security law, has sought one year extension for implementing the legislation. The food security in the BPL families has been shown in the table below. It shows the percentage of BPL families according to the food security.

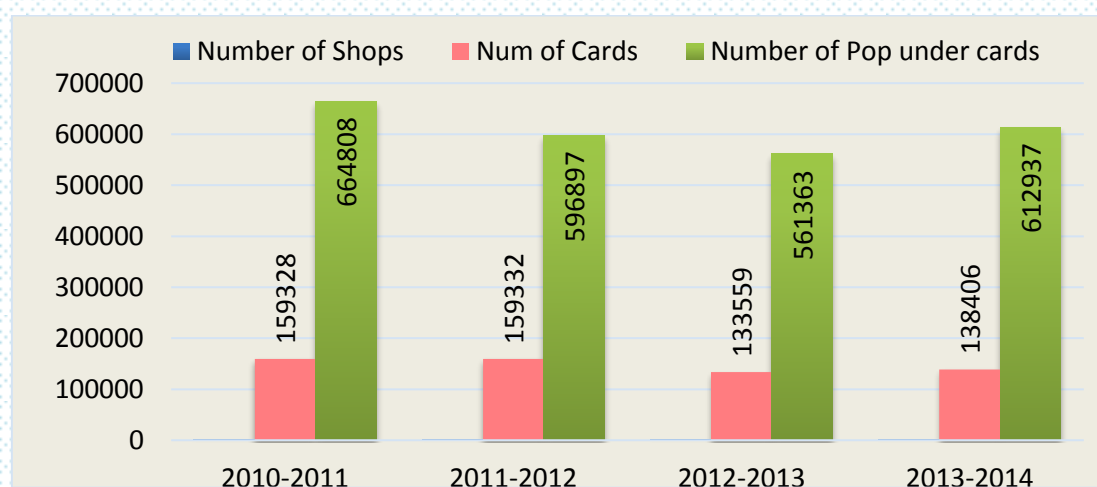
Table 5.5 Percentage of BPL Families as per Food Security 2014-2015

Dist/Taluka	<1Meal/Day	1Meal/Day <1Meal Occasionally	1Meal/Day throughout year	2 Meal/D ay with Occasional Shortage	Enough Food for Year
Porbandar Dist	2.50	4.09	2.35	8.70	7.27
Porbandar	3.52	4.83	2.45	11.28	6.53
Ranavav	1.02	3.12	2.99	5.20	8.88
Kutiyana	1.42	3.22	1.49	5.74	7.52

(Source: - Database of Commissinerate of Rural Development, Gujarat)

As per the data the percentage of families who are just able to have less than 1 meal per day are not even 3% in the district. The highest number of families who are able to manage less than 1 square meal per day is in Porbandar taluka with 3.52% followed by Ranavav at 1.02% and Kutiyana at 1.42%. The majority of the families have enough food throughout the year. The highest percentage of families with enough food throughout the year is in Ranavav taluka with 8.88% followed by Kutiyana with 7.52. Ranavav taluka is at 6.53%. Overall district is at 7.27% which is marginally less when compared to Kutiyana.

The distribution of required commodities like sugar, wheat, rice is done through the fair price shops to the card holders. This is done under Public Distribution System. The number of fair price shops in Porbandar district and number of cards and population is shown in the chart below.

Figure 5.9 Number of Fair Price Shops and Number of Cards

(Source – District Statistical Abstract 2010-2011, 2011-2012, 2012-2013, 2013-2014)

From the above chart in the previous 4 years there has been very marginal increase in number of shops in the year 2011-2012. Regarding the cards there has been marginal increase in the

year 2011-2012 but in the year 2012-2013 there has been reduction in the cards from 159332 to 133559. The reason of the same may be due to increase in the annual income of the families or migration. In the year 2013-2014 there has been increase in the number of cards. The number of population served by fair price shops has reduced over the last 4 years. In the year 2010-2011 the population was 664808 which reduced to 612937 in the year 2013-2014. The CAGR has reduced by 2% in case of population served by fair price shops.

5.4 Vulnerability

Vulnerability is the state of being open to injury. Vulnerability can be termed as deprivation from well being, likelihood resilience, self protection and societal security. As Porbandar district is located on the coastal areas, it has high coastal vulnerability. The effect of climatic changes will be seen in this section and how the citizen of this area are affected will be dealt in this section. Apart from that issues related to crime and violence and condition of migrants will be looked in this section.

5.4.1 Coastal Vulnerability

In view of the enhanced operational tempo along the coast of Gujarat due to the growing maritime security challenges, there is requirement of gradually enhancing infrastructure. Due to this vulnerability INS Sardar Patel, the latest naval base of Indian Navy, has been commissioned in Porbandar on May 9, 2015. This would also improve the logistic support being provided to the Indian Navy units deployed in the Northern Arabian Sea, including along the International Maritime Boundary Line with Pakistan. The creation of considerable infrastructure along the coastline makes them vulnerable from sea, not only during hostilities but also during peacetime.

In the latest incident on 31st December 2014, in a midnight operation in the high seas, a Pakistani fishing boat said to be carrying explosives was intercepted by the Indian Coast Guard off the coast of Porbandar, but the vessel exploded and caught fire before sinking along with four occupants.

Seeing to the coastal vulnerability, The Indian Coast Guard commissioned ICGS Ankit and three high-speed interceptor boats at Porbandar on 14th May 2015. This is part of ongoing efforts by the Indian Coast Guard to strengthen coastal security mechanism. It will also help to augment patrolling and prevent illicit activities such as infiltration; smuggling and illegal fishing. With the commissioning of these four ships, the force level of Coast Guard had increased to 116 ships and boats.

5.4.2 Disaster Management

A catastrophe, mishap, calamity in any area, arising from natural or manmade causes which results in substantial loss of life or human suffering, damage destruction of property, environment, and is of such a nature or magnitude has to be beyond the coping capacity of the community of the affected area.

Table 5.6 History of Disaster in Porbandar District

Sr.No	Nature of Disaster	Number of Times Porbandar affected by such disaster	Years of disaster
1	Flood	3	1983, 2007, 2013
2	Cyclone	10	1918, 1962, 1975, 1976, 1978, 1981, 1982-83, 1998, 2005, 2006
3	Earthquake	1	2001
4	Drought	5	1987-1988, 1998-1999, 1999-2000, 2000-2001, 2002-2003

(Source- District Emergency Operation Center)

Porbandar district is located at sea shore area. The district is in disaster-Prone area. The risk and possible impact which can be actualized from these hazards ranges from minor impacts affecting one village to events impacting larger than the state alone.

As mentioned in the above table district is highly prone to cyclone and sea surge. Natural disaster cannot stop but we can mitigate its impact by awareness generation, capacity building, preparedness and plan out work for disaster management. In Porbandar district administration continuous to organize training and awareness generation activity for Government officer, students and teachers. Also there is ongoing project like Disaster Risk Management Program, Gujarat School Safety Program, National Cyclone Risk Mitigation Project which is dealing with disaster management and make safer place for human being

5.4.3 Climatic changes

Majority of the rural area are dependent on agriculture for their livelihood. In India monsoon or climate plays a major role in cultivation. The table below shows the number of days of rainfall in the district and in various taluka and the total rainfall during the last 4 years.

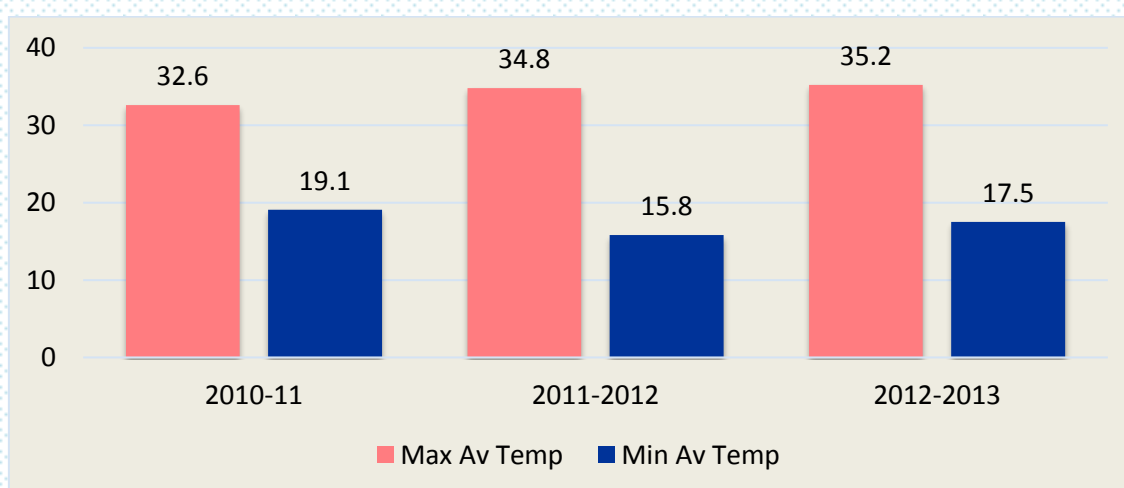
Table 5.7 Talukawise Rainfall

Dist/Taluka	2010-2011		2011-2012		2012-2013		2013-2014	
	days of Rainfall	Rainfall (M.M)	days of Rainfall	Rainfall (M.M)	days of Rainfall	Rainfall (M.M)	days of Rainfall	Rainfall (M.M)
Porbandar Dist	120	3728	120	3728	85	697	82	2675
Porbandar	46	970	46	970	30	211	25	645
Ranavav	39	1272	39	1272	27	220	33	985
Kutiyana	35	1486	35	1486	28	266	24	1045

(Source – District Statistical Abstract 2010-2011 to 2013-2014)

In the above table of the rainfall one can see a drastic fluctuation in the quantity of rainfall. The first 2 years 2010-2011 and 2011-2012 has witnessed the same quantity of rainfall. But in the year 2012-2013 there was a drastic fall in the number of days of rainfall and the quantity of rainfall. In the district from 3728 MM of rainfall in the year 2011-2012, the rainfall was only 697 MM in the year 2012-2013. In the previous year 2013-2014 again there was a high quantity of rainfall. Increased from 697MM to 2675 MM. In all the 3 talukas, Kutiyana has witnessed the maximum rainfall when compared to other two taluka across all the four years. The least quantity of rainfall has been witnessed by Porbandar taluka in all the four years. The solution of having more rainfall can be through more tree plantations.

The fluctuations in the maximum and minimum temperatures are also seen. The below mentioned chart shows the maximum and minimum average temperatures of Porbandar district.

Figure 5.10 Maximum and Minimum Average Temperature (in Centigrade) of Porbandar District

(Source – District Statistical Abstract 2010-2011, 2011-2012, 2012-2013)

In the above chart the average maximum temperature has been increasing over the 3 years in the year 2010-2011 the average maximum temperature is 32.6 which increased to 34.8 in 2011-

2012 and to 35.2 in the year 2012-2013. Though Porbandar is located on the banks of sea then also because of global warming the average maximum temperature has increased. There is a fall in the year 2011-2012 in the average minimum temperature. From 19.1 in the year 2010-2011 in reduced to 15.8 in the year 2011-2012. In the year 2012-2013 the rise is seen in the average minimum temperature. It increased from 15.8 to 17.5

5.4.4 Crime and Violence

India's criminal courts acquitted over a million defendants in 1999, more than the next 48 surveyed countries combined. The US has six times as many prisoners as India, despite India having four times as many people. Indian children grow up quickly. There is a strong relationship between crime, violence and insecurity, and thus should demand the attention and see how crime and violence harm the human development of the state, district and taluka. Below mentioned table shows various types of crime which has happened at Porbandar taluka for the previous 5 years. Another table shows the crimes of Gujarat state.

Table 5.8 Various Incidences of Crimes Reported in Porbandar District

Type of Crimes	2009	2010	2011	2012	2013
Murder	11	9	10	18	12
Robbery	4	2	3	8	5
Burglary	44	26	30	51	24
Theft	76	49	76	67	65
Riots	11	9	13	7	21
Criminal breach of trust	19	9	26	10	12
Cheating	6	16	10	12	10
Hurt	97	83	82	68	86
Death by negligence	63	38	41	49	41
Other IPC Crime	553	531	459	491	441
Total	973	875	872	896	838

(Source: Crime in India Statistics 2009 to 2013)

Table 5.9 Incidences of Crimes Reported in Gujarat State

Type of Crimes	2009	2013
Murder	1020	1118
Robbery	1420	1429
Burglary	4488	4980
Theft	19669	15313
Riots	1539	1715
Criminal breach of trust	1256	1172
Cheating	1014	1324
Hurt	9456	9917
Death by negligence	5178	5864
Other IPC Crime	60758	100638
Total	115183	157435

(Crime in India Statistics 2009, 2013)

Seeing the above data over the last five years there has been a decrease in the total number of crimes. It has reduced from 973 in 2009 to 838 in 2013. It has reduced by 2.9% CAGR. If the same is compared with that of Gujarat, it seems that there has been an increase in crimes. The crime has increased by 6.45% CAGR. Thus when compared to Gujarat, Porbandar district has done a fair job in curbing the crime. In Porbandar district the majority of crimes are under the head of theft, Hurt and death by negligence. In the year 2010 cases of theft had reduced drastically from 76 to 49 but again in 3 years of period increased to 65 in the year 2013.

The security should be properly given to women. The crimes against women in Porbandar district has increased over the period of time. The table below shows the crimes against women in Porbandar district and in Gujarat state

Table 5.10 Incidences of Crimes Reported Against Women in Porbandar District

Type of Crimes	2009	2010	2011	2012	2013
Kidnaping	17	9	9	7	14
Rape	3	2	6	10	6
Dowry Death	0	1	0	1	0
Molestation	2	4	1	8	6
Sexual Harr	2	3	1	0	0
Cruelty by Hus and Relatives	53	69	84	73	79
Total	77	88	101	99	105

(Crime in India Statistics 2009, 2010, 2011, 2012, 2013)

Table 5.11 Incidences of Crimes Reported Against Women in Gujarat State

Type of Crimes	2009	2013
Kidnaping	1162	2230
Rape	433	732
Dowry Death	24	29
Molestation	727	1243
Sexual Harr	114	77
Cruelty by Hus and Relatives	5506	7812
Total	7966	12123

(Source - Crime in India Statistics 2009, 2013)

Overall the data explains that the crime against women and awareness among women has increased in the district and in the state. In Gujarat state it has increased by 8.76% CAGR. In Porbandar district it has increased by 6.40% CAGR which is comparatively less to Gujarat state. The majority of the crimes which happens against women are under the head of cruelty by husband and relatives and kidnapping. To nullify the domestic violence in the district, police station based support center for women has been set up and the special helpline 181 Abhayam

has been implemented in the district. There are very less cases of sexual harassment, dowry deaths and molestation in Porbandar district.

For dealing with these crimes the state and district adequate police is required and police stations and proper functioning of police department and judicial system. The table below shows the information regarding the police department and the judicial system.

Table 5.12 Details of Police and Judicial System in Porbandar district

Particulars	2010- 2011	2011- 2012	2012- 2013	2013- 2014
Total number of Policemen	961	959	960	975
total number of Policestations	27	24	24	24
Pending Cases in Court	23959	14359	18961	17817
Completed cases	11907	2162	9522	10710

(Source – District Statistical Abstract 2010-2011 to 2013-2014)

The police force in porbandar district has increased over the last 4 years. The police force has increased from 961 to 975 in the year 2010-2011 and 2013-2014 respectively. The total number of police stations has decreased by 3 from 27 in the year 2010-2011 to 24 in the year 2013-2014. Though the police station has reduced the number of police force has increased. There has been a reduction in the pending cases in the court of Porbandar. In the year 2010-2011 the amount of pending cases were 23959 which reduced to 17817 in the year 2013-2014. The reduction is by 7.14% CAGR. The number of completed cases has reduced from 11907 in the year 2010-2011 to 10710 in the year 2013-2014. The completed cases has reduced over the period of time by 2.61% CAGR

5.4.5 Water management

Clean water without any impurities should be supplied to everybody. Porbandar is located on the banks of sea, thus the water which is directly available is not appropriate for drinking. For the same the district water supply office has put in various efforts of filtration, from building new infrastructure like handpump, check dams to provide pure water to households through taps.

The below mentioned table shows the percentage of household water connection of total house holds

Table 5.13 Details of Household Water Connections in Porbandar District 2013-2014

Taluka/Dist	Total House Hold	No of household water connection	% of household water connection
Porbandar Dist	60776	36066	59.34
Porbandar	32829	16985	51.74
Ranavav	11784	8335	70.73
Kutiyana	16163	10746	66.49

(Source – District Water and Sanitation Unit)

In the above table almost 60% of households have proper water connection in the district. Among the talukas Ranavav has the maximum number of households with water connection. It has 70.73% followed by Kutiyana taluka at 66.49% and the least water connections at the household is in Porbandar taluka at 51.74%.

For water filtration, the water and sanitation unit of porbandar has set up water filters at various regions of Porbandar. At various regions of Porbandar district depending on various water capacities, the department has set up sand filters for purifying water and for supplying pure water to the household. The table below shows previous 5 years data regarding the supply of pure water in Liters Per Capita per Day (LPCD) to rural areas.

Table 5.14 Talukawise Demand and Supply of Drinking Water (D= Demand, S= Supply)

Taluka/Dist	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	D	S	D	S	D	S	D	S	D	S
Porbandar Dist	20.27	20.27	20.62	20.62	20.98	20.98	21.34	12.19	21.71	21.71
Porbandar	11.32	11.32	11.52	11.52	11.72	11.72	11.92	6.81	12.13	12.13
Ranavav	4.24	4.24	4.31	4.31	4.39	4.39	4.46	2.55	4.54	4.54
Kutiyana	4.71	4.71	4.79	4.79	4.87	4.87	4.96	2.83	5.04	5.04

(Source – District water and Sanitation Unit)

In the rural area of the district maximum demand of drinking water is in Porbandar taluka which is around 11-12 LPCD. Ranavav and Kutiyana talukas demand of drinking water is between 4-5 LPCD. In the above 5 years only 2012-2013 was the year when the department was not able to provide the demanded water.

The main source of drinking water for rural and urban area is three dams, namely Fodara dam, Khambada dam, Sorthi dam. The capacity of the three dams are mentioned in the table below

Table 5.15 Details of Major Dams in Porbandar Irrigation Division

Name of the Dam	Dam Capacity (MCFT)	Current availability	Usage till
Sorthi	257.89	0	Empty
Advana	92.08	0	Empty
Saran	59.62	0	Empty

(Source – District Irrigation Division)

From the above data, the water availability in the dam is not there. Thus the demand for water for irrigation purpose has to be meet from check dams.

Table 5.16 Talukawise Check Dams in Porbandar Irrigation Division

Taluka	No of Checkdams	Capacity (MCFT)
Porbandar	81	14.58
Ranavav	84	17.70
Kutiyana	147	63.03

(Source – District Irrigation Division)

In the above table Kutiyana taluka has highest number of check dams for irrigation purpose.

5.5 Transport

Transport is any device used to move an item from one location to another. Common forms of transportation include planes, trains, automobiles and other two-wheel devices such as bikes or motorcycles. As per 2013-13 statistics, 187 villages of the district are equipped with bus service. 153 villages receive direct bus services from state transport (Road Transport Office, 2012).

The details of road and infrastructure facility available in the district are as follows.

Table 5.17 Key Statistics on Infrastructure

Details	2010-11	2011-12	2012-13	CAGR (%)
Number of Roads	67	60	76	4.29
Route (Kms)	10226	8960	10108.77	-0.38
Average Distance of Road (Kms)	152.62	149.33	133	-4.48
Average Daily Service (Kms)	21995	24556	24934	4.27
Average Number of Vehicles Running of the Road	50	56	53	1.96
Average Daily Income (Rs.)	317904	390649	470000	13.92
Daily Consumption of Diesel Oil (Kms)	3903	4345	4512	4.95
Average Number of Daily Passengers	10062	11802	13370	9.94
Daily Average Distance Travelled Per Passengers	57.97	57.23	56.71	-0.73

(Source: Road Transport Office)

The status of railway is as follows.

The details of Kacha and Pakka roads is mentioned in the table.

Table 5.18 Details of Pukka and Kacha Roads (in Kms) (2010-11)

Taluka	Under Government Public Construction		Under District Panchayat		Total	
	Pukka	Kacha	Pukka	Kacha	Pukka	Kacha
Porbandar	161.18	0.00	301.35	43.10	462.53	43.10
Ranavav	33.39	0.00	138.92	18.50	172.31	18.50
Kutiyana	91.33	2.50	164.10	5.40	255.43	7.90
Total	285.90	2.50	604.37	67.00	890.27	69.50

(Source: Compiled from Road and Building -State & Panchayat)

It can be noticed that total construction of 'pakka and kacha' roads under government public construction is 288.40 km. The length of 'pukka and kacha' road under the government scheme is 285.90 km and 2.50 km respectively. Considering the length-wise aspect, construction of 'pukka' road is highest in Porbandar taluka, followed by Kutiyana and Ranavav. Only in Kutiyana taluka 'kacha' road is being constructed, under the government scheme. Under the onus of district panchayat total construction of 'pukka and kacha' roads is 671.37 km. The length of 'pukka and kacha' road under the district panchayat scheme is 604.37 km and 67.00 km respectively. Considering the length-wise aspect, construction of 'pukka' road is highest in Porbandar taluka, followed by Kutiyana and Ranavav. District Panchayat constructs highest number of 'kacha' road in Porbandar taluka, followed by Ranavav and Kutiyana taluka. Consolidated length of 'pukka and kacha' road in district is 890.27 km and 69.50 km, under the two different types of schemes. The data of 2013-14 revealed that total construction of 'pukka and kacha' road in the district is 586.87 km and 70.40 km, under government and panchayat scheme (Road and Building, 2013-14).

The National Highways Authority of India (NHAI) is the nodal agency responsible for building, upgrading and maintaining most of the national highways network. It operates under the Ministry of Road Transport and Highways. The National Highways Development Project (NHDP) is a major effort to expand and upgrade the network of highways. NHAI often uses a public-private partnership model for highway development, maintenance and toll-collection.

Table 5.19 Details of Numbers of Different Types of Roads

Taluka	National Highway	Main Roads of District	Village Roads	Total
Porbandar	1	5	93	99
Ranavav	-	3	30	33
Kutiyana	-	2	40	42
Total	1	10	163	174

(Source: Compiled from Road and Building -State & Panchayat)

It can be observed that national highway is constructed in Porbandar taluka only, which is 1,116 meter in length. Total number of main roads in the district is ten, with the total length of 72.62 km (Minimum 14.82 km and maximum 35.20 km). Total number of village roads in the district is 163 with a minimum length of 80.20 km and maximum length of 268.00 km. Total number of roads including national highway, main district roads and village roads is 174, with the length of 657.27 km.

Nagarpalika is also actively involved in the construction of 'pukka and kacha' roads.

Table 5.20 Details of Roads Constructed by Nagarpalika (Length in Kms)

Nagarpalika	2010-11		2013-14	
	Pukka	Kacha	Pukka	Kacha
Porbandar	112.79	26.43	135.46	3.77
Ranavav	50.00	10.00	55.00	5.00
Kutiyana	10.50	4.59	10.50	4.59

(Source: Nagarpalika, Porbandar)

A change of 20.10%, 10.00%, 0.00% and 55.17% is noticed in the construction of 'pukka' roads in Porbandar, Ranavav, Kutiyana. With respect to 'kacha' road a change of -85.74%, -50.00%, 0.00% is witnessed Porbandar, Ranavav, Kutiyana respectively. A decline in the construction of 'kacha' road indicates that Nagarpalika emphasizes the construction of 'pukka' roads, which is positive for good infrastructure.

5.6 Communications

Table 5.21 Details Pertaining to Post Offices (2013-14)

Taluka	Post Offices			Letter Boxes	Postman	Number of Villages Without Post-Offices
	Main	Sub	Branches			
Porbandar	1	12	40	136	30	30
Ranavav	0	4	14	46	3	29
Kutiyana	0	2	23	64	3	18
Total	1	18	77	246	36	77

(Source: Post Office, Porbandar)

In Porbandar district, the main post office is in Porbandar taluka, number of sub centers are 18 and branches are 77. Highest sub-centers and branches are in Porbandar taluka. Total number of letterboxes across the district is 246. In the district, 36 active postal workers are actively involved in the post distribution work. 77 villages across the district are void of post office services. Increase in the number of post-offices in the district will be beneficial for the inhabitants of the district.

5.7 Banking and Public Finance

Banks plays a major role in the upliftment of the industries in the region and thus leading to the development of people. The number of scheduled commercial banks in the district and the amount of deposits and credit tells the growth of the district. The table below shows the data.

Table 5.22 Talukawise Network and Outreach of Banks

Taluka/Dist	Comm. Banks	Coopert Banks	Rural Banks	Comm. Banks	Coopert Banks	Rural Banks	Comm. Banks	Coopert Banks	Rural Banks
	2010-2011			2012-2013			2013-2014		
Porbandar Dist	55	9	7	56	8	14	55	8	13
Porbandar	44	5	7	44	4	11	43	4	10
Ranavav	6	2	0	7	2	2	7	2	2
Kutiyana	5	2	0	5	2	1	5	2	1

(District Statistical Abstract 2010-2011, 2012-2013, 2013-2014)

Total number of banks in Porbandar district including the commercial, cooperative and rural banks has remained the same in the three years. Scheduled commercial banks are more in the district. The maximum number of banks is there in Porbandar taluka followed by Ranavav and Kutiyana. Regarding the cooperative banks very less number is seen in the district. In Porbandar taluka five cooperative banks were there in the year 2010-2011 which reduced to four in the year 2012-2013. In Ranavav and Kutiyana taluka each has two cooperative banks. Regarding the rural banks in the year 2010-2011 there were seven banks in Porbandar taluka and no banks in Ranavav and Kutiyana taluka. in the year 2012-2013 rural banks in Porbandar taluka increased to 11 and in Ranavav two banks and in Kutiyana one new rural banks were opened.

Potential Linked Credit Plans (PLP) is prepared by National Bank for Agriculture and Rural Development (NABARD) in respect of every district. PLP is intended to provide insight on the potential in a district for development in different sectors of the rural economy. It is a road map for banks for extending credit to important sectors and various developmental agencies for providing necessary infrastructure and linkage support towards development of various sectors (Nabard, 2013-14).

Table 5.23 Sector Wise PLP Projections

Sector	2012-13	2016-17	CAGR (%)	Ranking (CAGR)
Plantation and Horticulture	403.38	1496.21	29.97	1
Forestry and Wasteland Development	24.3	69.37	23.34	2
Renewable Sources of Energy and Waste Utilization	5	11.95	19.04	3
Other Activities	702	1654.7	18.71	4
Animal Husbandry-Dairy Development	391.5	733.82	13.39	5
Water Resources	1167	2163.55	13.14	6
Agro and Food Processing Sector	189	349.65	13.09	7
Storage Godown & Market Yard	791.25	1461.49	13.06	8
Crop Production, Maintenance & Marketing	30676	53689.48	11.85	9
Fisheries	35349.5	58518.9	10.61	10
Animal Husbandry-Poultry Development	29.03	42.17	7.75	11
Other Priority Sector (OPS)	12641.25	17924.81	7.23	12
Land Development	2458.8	3406.16	6.74	13
Animal Husbandry-Sheep and Goat Development	70.2	86.04	4.15	14
MSME sector including Agro processing sector	3640.5	3628.05	-0.07	15
Farm Mechanization	6468.5	1963.88	-21.21	16

(Source: Computed from DLP of NABARD 2013 for Porbandar District)

Below mentioned table shows the amount of deposit and the amount of credit or lending provided by various banks to the people.

Table 5.24 Amount of Deposits by Various Banks

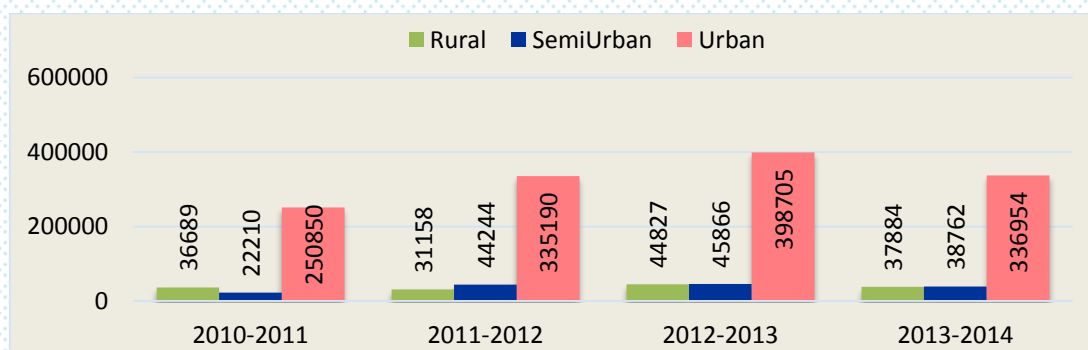
Agency	Amount of deposit (Rs.lakh)				
	31-Mar-10	31-Mar-11	31-Mar-12	Growth (%)	Share(%)
Commercial Banks	25603502	27954629	30116007	7.73	97.22
Regional Rural Bank	301415	364203	437432	20.11	1.42
Cooperative Banks	332663	399716	421038	5.33	1.36
All Agencies	26237580	28718545	30974477	7.86	100

(Source: DLP of NABARD 2013 for Porbandar District)

As on 31st March 2012, Commercial Banks had the maximum share of deposits (97.22%) in total deposits including Private Sector Banks. The share of the Cooperative Banks and Saurashtra Gramin Bank was at 1.42% & 1.36% respectively. The share of the all banks deposits at the end of March, 2012 has increased by 7.86% over March, 2011's end position. Total deposits of Commercial Banks, Saurashtra Gramin Bank and both Cooperative Banks have been recorded at Rs. 3011.60 Cr, Rs. 43.74 Cr & Rs.42.10 Cr respectively. The table shows that commercial banks command higher share in terms of deposits i.e. 97.22%. People prefer to invest more in commercial banks as its branches grow at 7.73%, so banking facilities are easily available. A noteworthy point was seen in Regional Rural Banks, though it grew by 20.11%, but its share in deposits is just 1.42%. It clearly indicates that people have higher level

of faith in the commercial banks than non-commercial banks. Despite of huge network of cooperative bank in the district their share was found less than 2%. The reason behind fewer deposits in cooperative banks and credit societies was that the cooperative banks were not allowed to open deposit accounts of government organizations, corporations as well as Panchayati Raj Institutes and hence they keep their deposits in the commercial banks. Secondly the cooperative banks have less branch network in urban area in comparison to commercial banks, where the quantum of deposits is always many times more than the rural areas.

Figure 5.11 Deposits (In Lakhs) of Scheduled Commercial banks in Porbandar District



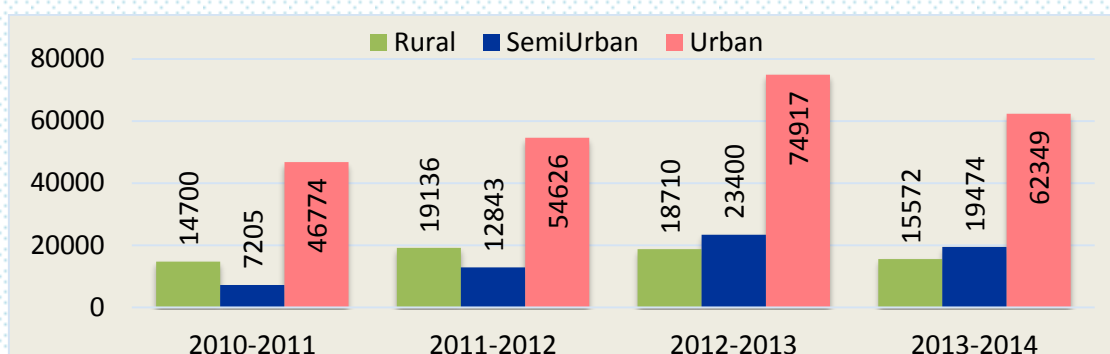
(District Statistical Abstract 20110-2011 to 2013-2014)

Table 5.25 Amount of Loans by Various Banks

Agency	Amount of loans (Rs.in lakh)				
	31-Mar-10	31-Mar-11	31-Mar-12	Growth (%)	Share (%)
Commercial Banks	5180154	5782096	6365295	10.09	77.19
Regional Rural Bank	157195	189179	224769	18.81	18.81
Cooperative Banks	375946	380890	274265	-27.99	4.00
All Agencies	5713295	6452165	6864329	6.39	100.00

(Source: DLP of NABARD 2013 for Porbandar District)

The loans outstanding of all the agencies as on 31st March 2012 showed handsome increase of 6.39 % over loans outstanding as on 31st March 2011. Commercial Banks and Saurashtra Gramin Bank recorded a growth of 10.09 & 18.81 percent respectively. Both cooperative banks together however have recorded negative growth at 27.99 %. Total loan outstanding at March, 2012 end by Commercial Banks, both Cooperative Banks and Saurashtra Gramin Bank have been recorded at Rs. 636.52 Cr, Rs. 22.47 Cr & Rs.27.42 Cr respectively. From the table it may be inferred that commercial banks have highest share in terms of providing loans. Least share is of cooperative banks.

Figure 5.12 Credit (In Lakhs) of Scheduled Commercial Banks in Porbandar District

(District Statistical Abstract 20110-2011, 2011-2012, 2012-2013, 2013-2014)

In the previous four years the maximum increase of deposits is seen in the year 2012-2013. Overall in the rural area the deposit has increased from 36,689 lakhs in 2010-2011 to 37,884 lakhs in the year 2013-2014. In the year 2011-2012 there has been reduction in deposits but again in the year 2012-2013 there has been the hike in deposits. Overall in the four years deposits has risen by 0.8% CAGR. In the semi urban area the increase is on the higher side. It has increased by 14.94% CAGR. In the first 3 years there has been increase in the deposits but in the previous year i.e 2013-2014 there has been a decline in the deposits. In the urban area also the trend is just like semi-urban. In the first three years there has been increase in the deposits, but in the year 2013-2014 the decrease is seen. Over the four years in the urban area deposits has increased by 7.66% CAGR

In case of credits in the rural area there has been a fluctuation over the years. In the year 2011-2012 increase is there, but then there has been a decrease in credits. Overall in the four years there has been a minor increase in the rural area. The bank credit has increased by 1.45% CAGR. In the semi-urban the trend of bank credits is on the positive side for first three years and in the year 2013-2014 there has been a decrease in the credit. The increase in the bank credits over the four years is at 28.22% CAGR. That shows that in the last four years the banks has provided more of loans to the people for their financial use. In the urban area the trend is just like semi-urban. The first three years has seen an increase in credits and in the last year there has been a decline. Overall there has been an increase of 7.45% CAGR.

Table 5.26 Cash Deposit (CD) Ratio

Agency	31-Mar-10	31-Mar-11	31-Mar-12
Commercial Banks	20.23	20.68	21.14
Regional Rural Bank	52.15	91.94	51.38
Cooperative Banks	113.01	120.31	46.66
All Agencies	21.78	22.47	22.16

(Source: DLP of NABARD 2013 for Porbandar District)

The CD ratio of district at March, 2012 end has been recorded at 22.16 % showing negative growth of 0.31 % over March, 2010 end but remained constant between 22 to 23 %. The CD ratios of the GSCARDB, DCCB & Saurashtra Gramin Bank are appearing very high mainly because of limited deposits which they possess and very small portion of advancing to the extent of maximum 10 % leaving 90 % advancing done by the Commercial Banks. Though Commercial Banks made major share of advancing in the district it is appearing quite small resulting in average CD ratio of all the Commercial Banks comes at 21.14 %. Unless Commercial Banks make major headway in advancing portfolio as Cooperative Banks and Gramin Bank have their own funding limitation it is unlikely to improve the low CD Ratio of the Porbandar. Another major reason attributed for low CD Ratio is very high NRI deposits in the district. There is the need to announce some special consideration from Government side like land at nominal rent, tax holiday etc which can attract big size industries particularly having export potential to the district. Since Porbandar is all weather port, this is expected to boost export of finished goods to external countries and earn valuable foreign exchange.

Table 5.27 Sector Wise Performance under Annual Credit Plans (Percentage Achievement)

Sector	2009-10	2010-11	2011-12	Average
Crop Loan	77.44	77.94	93.97	83.12
Term Loan (Agr)	144.14	63.69	61.08	89.64
Total Agri.Credit	123.41	67.43	72.28	87.71
Non-Farm Sector	73.66	37.33	65.25	58.75
Other Priority Sector	75.86	77.67	87.00	80.18
Total Priority Sector	116.08	67.22	74.02	85.77

(Source: DLP of NABARD 2013 for Porbandar District)

The achievement under Annual Credit Plan for 2011-12 has been poor, not achieved the target envisaged for the year 2011-12. Performance of Commercial Banks, Cooperative Banks (both) and Saurashtra Gramin Bank have been registered at 105.19, 55.80 and 55.19 percent respectively. Compared to previous two years recorded performance this can be considered very good achievement. However much is required to be done for the agricultural term loan, non farm sector and crop loans. These are core areas and better advancing will help in improving the otherwise low Cash Deposit ratio of the district.

5.8 Schemes and programs/Success Stories for Poor and vulnerable Families and for water management

The schemes and various programs for implemented by the central and state government plays a vital role in upliftment of the vulnerable and backward families. The following are the details

of the schemes and the programs which has been implemented at Porbandar district by the state governments.

5.8.1 Schemes and Programs/success stories for poor and vulnerable families

Table 5.28 Schemes under Social Welfare Services

Sr.No	Name of the Scheme/Program	Brief Description of the scheme/program
1	Schemes under District Rural Development Agency	District Rural Development Agency (DRDA) has traditionally been the principal organ at the District level to oversee the implementation of the anti-poverty programmes of the Ministry of Rural Development.
2	Schemes under Gujarat Scheduled Caste Development Corporation	GSCDC has been the main organ to implement the schemes for the scheduled caste.
3	Vajpayee bankable Yojana	This scheme provides self employment opportunity to educated unemployed and artisans. This scheme covers activities in industry, business and services sector.
4	Indira Awaas Yojana	The Indira Awaas Yojana aims at helping rural people below the poverty-line (BPL) belonging to SCs/STs, freed bonded labourers and non-SC/ST categories in construction of dwelling units and upgradation of existing unserviceable kacha houses by providing assistance in the form of full grant.
5	Saint Surdas Scheme	Scheme for financial assistance to severely Disable persons.
6	Indira Gandhi National Disability Pension Scheme (IGNDPS)	Scheme for financial assistance to severely Disable persons.
7	Scheme for Posthetic aid and Appliance to disable persons	Scheme for Posthetic aid and Appliance to disable persons is implemented with a view to minimize the disability of the disable persons and to bring easiness in obtaining employment and to provide vocational materials to disable persons.
8	Financial Assistance Scheme	Provide self employment to the disable persons and to increase the production
9	Free Travel in State Road Transport Buses(GSRTC) for disable persons	The State Government has implemented this scheme for the purpose of giving financial relief in the expenditure of bus travel to the disable persons for medical treatment of the children, social work, for educational purpose and for other works.
10	Widow assistance scheme for employment	Widow assistance scheme is for providing employment schemes for the widow women.
11	Assistance to disable widows for house construction	Housing Assistance of Rs. 40,000/- for construction of house for disable widows has been sanctioned vide Social Justice and Empowerment Department.
12	Aid for doctor and advocate	Socially and academically backward people can get the loan of 40000.

13	Manav Garima	For self employment of socially educationally and financially backward people can get an aid of Rs3000 for instrument.
14	Pandit Deendayal Housing Scheme	Candidates belonging to socially/ educationally/ economically backward castes, Minority communities, and the progressive communities/ the moving tribes who live (BPL) below poverty line.
15	Kunvarbai Nu Mameru	A sum of Rs.10000 per bride is sanctioned as assistance to a woman as Mameru for Kunvarbai, belonging to any family living Below Poverty Line.

The above table mentions the brief schemes for poor and vulnerable families. The same schemes and programs are explained and the work done under the schemes are explained below.

Housing Schemes

Housing is one of the basic requirements for human survival. For a shelterless person, possession of a house brings about a profound change in his existence, endowing him with an identity, thus integrating him with his immediate social milieu.

Indira Aawas Yojana

With a view to meeting the housing needs of the rural poor, Indira Awaas Yojana (IAY) was launched in May 1985 as a sub-scheme of Jawahar Rozgar Yojana. It is being implemented as an independent scheme since 1st January 1996.

The Indira Awaas Yojana aims at helping rural people below the poverty-line (BPL) belonging to SCs/STs, freed bonded labourers and non-SC/ST categories in construction of dwelling units and upgradation of existing unserviceable kacha houses by providing assistance in the form of full grant. From 1995-96, the IAY benefits have been extended to widows or next-of-kin of defence personnel killed in action. Benefits have also been extended to ex-servicemen and retired members of the paramilitary forces as long as they fulfil the normal eligibility conditions of Indira Awaas Yojana. Three per cent of funds are reserved for the disabled persons living below the poverty-line in rural areas. Since 2006-07, IAY funds are also being earmarked for minorities.

The performance of this scheme at Porbandar district has been shown in the table below. The below mentioned table shows the number of new houses constructed under IAY scheme.

Table 5.29 Performance of Indira Aawas Yogana

Dist/Taluka	2011-2012	2014-2015
Porbandar Dist	120	124
Porbandar	1	99
Ranavav	13	15
Kutiyana	106	10

(Source – Ministry of Rural Development, Indira Aawas Yogana)

In the above table the target which was given to the district has been almost achieved. In the year 2011-2012 there was no target but then also Porbandar district was able to construct 120 houses in the whole district with major focus on Kutiyana taluka. In Kutiyana taluka 106 houses were constructed, in Ranavav it was 13 and in Porbandar 1. In the year 2014-2015 the target which was given was of 150 houses and district was able to reach 124 houses. Majority of the construction was done in Porbandar taluka followed by Ranavav and Kutiyana.

Pandit Deendayal Housing Scheme

Candidates belonging to socially/ educationally/ economically backward castes, Minority communities, and the progressive communities/ the moving tribes who live (BPL) below poverty line and who do not have a residence are given assistance of Rs.45000 to construct a house. A limit of Rs.27000 and Rs.36000 as annual income is set for the rural and the urban area, respectively. Under this Scheme, assistance is given to those who have been allotted a plot of 100 Sq.Yards, or have purchased open land, or who have ownership under Ravala rights system. Priority is given to build residential colonies of persons belonging to BPL category, who are from extremely backward communities/ the moving tribes. One residential colony was constructed during the year 2012 -13

The assistance is also given to individuals and not only for the colonies. During last year, two residential colonies and individuals were also covered, details of which are as shown below.

Table 5.30 Performance of Pandit Deendayal Housing Scheme

Year	No. of families benefited	Financial assistance (Rs.)
2012 – 13	110	Rs. 38.41 lakh.
2013-2014	17	4.65 lakh

(Source – Department of Social Welfare)

Schemes for Disabled persons

Saint Surdas Scheme

This scheme is for providing financial assistance for persons who are severely disabled. The benefit can be availed under following circumstances

- The applicant must be in the age group of below 64 years.
- The persons who have more than 80% or above handicapness.
- The income of the family of the beneficiary should be upto the score of 16 in the BPL list for rural areas and to the beneficiaries of urban areas, one who possesses the BPL beneficiary mark as per the guidelines of Urban Development.
- The beneficiary above the age of 21 years who does not have son.
- Who is a permanent resident of Gujarat since 10 years.
- Must be a holder of Disable Identity Card issued by the State Government.

The kind of advantage which disabled can get from this scheme is as under:-

- Rs. 200/- PM to the Disable applicant of below 17 years of age.
- Rs. 400/- PM to the Disable applicant of the age group of 18 to 64.

The assistance is paid to the applicant at his home through Money order or credited to their bank or post office account.

The assistance will be ceased in the following circumstances.

- When the applicant completes 64 years of age.
- When the son of the applicant attains the age of 21 years.

In Porbandar this scheme has been implemented and has been a success. In the initial years there has been heavy amount given to disabled person. Once the majority of the disabled has been covered under this scheme, then slowly the amount spent under this scheme has been reduced.

Table 5.31 Performance of Saint Surdas Scheme

Year	Amount Sanctioned (Lakhs)	Num of Beneficiaries
2009-2010	44.2	1056
2010-2011	47.13	1124
2011-2012	21.93	1118
2012-2013	24.63	1107
2013-2014	11.31	1109
2014-2015	48.60	1072
2015-2016	42.8	1112

(Source – District Social Security office)

In the year 2009-2010 the number of amount sanctioned is 44.2 lakhs and majority of the disabled has been covered. In the next year the amount sanctioned was on a higher side when compared to 2009-2010. In the year 2010-2011 it increased to 47.13 lakhs. Then for the next 3 years the amount sanctioned has seen a drastic fall and number of beneficiaries has been almost constant. In the year 2014-2015 and in 2015-2016 the amount sanctioned has raised.

Scheme for Prosthetic aid and Appliance to disable persons

This scheme is for providing appliance to disable persons is implemented with a view to minimize the disability of the disable persons and to bring easiness in obtaining employment and to provide vocational materials to disable persons

Following are the rules for availing this scheme

- Applicants aged 5 (five) to 50 are eligible.
- Persons having more than 40% disability.
- Deaf, Blind, MR and disable persons,
- The Annual income of the family should not be more than Rs.47000/-. In rural area and Rs.68000/-in urban area.
- Domicile of the person must be Gujarat.
- Must be a holder of disable Identity Card

The assistances which are provided to disabled persons are as under:-

- For artificial limbs – Ghodi, Calipers, Tricycles, Bicycles, Wheel Chairs are given to disable persons.
- For self-employment, Hand Cart, Sewing machine, material for shoe-making, carpentry, electric repairing, tools for Computer repairing, embroidery machine are given.
- Hearing Aid and other material assistance to Deaf persons.
- Musical instruments for Blind persons.
- Above financial material assistance is given upto a limit of Rs. 6,000/-.
- Application Forms are available from the District Social Defence Office at free of cost.
- The applicants should submit their applications to the District Social Defence Officer.

The number of beneficiaries and amount sanctioned under this scheme is as under.

Table 5.32 Performance of Scheme for Posthetic Aid and Appliance to Disable Persons

Year	Amount Sanctioned (Lakhs)	Num of Beneficiaries
2009-2010	2.97	118
2010-2011	4.71	183
2011-2012	0.80	96
2012-2013	1.00	23
2013-2014	10.55	284
2014-2015	10.04	272
2015-2016	4.78	128

(Source – District Social Security office)

In the year 2009-2010 the amount sanctioned were 2.97 lakhs which increased to 10.55 lakhs over the period of 5 years. Thus the amount which has been sanctioned during 5 years has increased at 28% CAGR. In 2 years i.e., 2011-2012 and 2012-2013 the amount sanctioned were reduced. In the year 2014-2015 the amount sanctioned increased to 10 Lakhs and in the year 2015-2016 it has reduced to 4.78 Lakhs

Financial Assistance Scheme for disabled (Scholarship)

Gujarat Minority Finance and Development Corporation has been appointed as Nodal Agency for handling the work of Schemes for financial assistance for the disabled. The below mentioned schemes of financial assistance are implemented by this Agency

- Up to Rs. 3.00 lakh for small business and self employment.
- Rs. 7.50 lakh for higher education and vocational training in India and Rs.15.00 lakh for higher education in foreign countries.
- Up to Rs. 5.00 lakh for development of agriculture,
- Rs. 5.00 lakh for purchase of vehicles for hiring purpose,
- Up to Rs. 3.50 lakhs assistance to mentally retarded persons.

Income Criteria (Annual) :

- Rural areas – Rs. 1,60,000/-
- Urban areas – Rs. 2,00,000/-

The performance of the said scheme in Porbandar is as under.

Table 5.33 Performance of Financial Assistance Scheme for Disabled (Scholarship)

Year	Amount Sanctioned (Lakhs)	Num of Beneficiaries
2009-2010	4.80	362
2010-2011	4.59	342
2011-2012	4.79	356
2012-2013	4.05	328
2013-2014	4.94	381
2014-2015	4.24	330
2015-2016	4.55	384

(Source – District Social Security office)

In the table above the amount sanctioned and the number of beneficiaries has remained flat. There is no drastic movements in both the variables. Every year the amount sanctioned is between 4.50-5.00 lakhs and the number of beneficiaries is also from 450-500. The highest year in which the amount is sanctioned is 2013-2014 with 4.94 lakhs and number of beneficiaries is highest in the year 2015-2016 at 384. Over the period of 5 years the increase is very nominal under this scheme.

Palak Mata Pita Scheme

This scheme is especially for the orphanage child. The amount is given to the guardian of the child for fulfilling the education and other social expenses. Under this scheme the orphanage child's guardian gets Rs1000/month.

Table 5.34 Performance of Palak Mata Pita Scheme

Year	Amount Sanctioned (Lakhs)	Num of Beneficiaries
2013-2014	0.34	3
2015-2016	1.54	36

(Source – District Social Security office)

In the year 2015-2016 more number of beneficiaries is there under this scheme which shows a positive sign.

5.8.2 Schemes and programs/success stories regarding water management

Porbandar is located on the banks of Indian Ocean. The quantum of rainfall at the district is less when compared to other nearby districts. Thus the rain water gets dried up easily and the problem of drinking water is faced by Porbandar district. Thus the district office and especially the district water supply and sanitation department has put in the efforts for providing drinking water to the people of the district.

The brief description of the schemes which has been implemented in the district is as under

Table 5.35 Basic Schemes for Water Management at Porbandar District

Sr. No	Name of the Scheme	Particulars
1	Lakhter-Dwarka Trunk pipe line (Phase 1)	Construction of pipeline, filter plant, pump house is constructed for connecting major villages of all the 3 talukas.
2	Mahi-Narmada Pipeline	This pipeline will offtake from Adavan and Jamjodpur Linkage of around 47 different villages under advan is carried out and from Jamjodpur 39 villages has been linked though pipeline.
3	Chaya water yogana	Various tanks and water filtration plant has been developed in Chaya city.
4	Porbandar, Ranavav and Kutiyana water yogana	Various tanks and water filtration plant has been developed in Porbandar, Ranavav and Kutiyana city.

(Source – District Water and Sanitation Department)

Thus, through various pipeline constructions the district is trying to fulfill the demand of drinking water. Under the Porbandar Phase-1, Porbandar group phase-2, Ranavav group phase-2 and Kutiyana group phase-2, 130 villages and four cities are linked with the water schemes. In the year 2012-2013 there was an acute shortage of water due to less rainfall, but then also the district was able to fulfill the demand of water by providing Narmada water to the houses.

For the purpose of irrigation the panchayat irrigation division has set up 120 check dams throughout the district. The details of the same is as under

Table 5.36 Talukawise Details of Check Dams at Panchyat level

District/Taluka	No. of Check Dams	Capacity
Porbandar Dist	120	72.15 M.CU.M
Porbandar	61	40.33 M.CU.M
Ranavav	30	17.55 M.CU.M
Kutiyana	29	14.27 M.CU.M

(Source – Panchayat Irrigation Division)

Maximum numbers of checkdams are available in Porbandar taluka. It has 61 checkdams followed by Ranavav with 30 and Kutiyana with 29. The total capacity of checkdams in Porbandar district is 72.15 M.CU.M

Below mentioned table shows the check dams for salinity control.

Table 5.37 Talukawise Check Dams in Porbandar Salinity Control Division

District/Taluka	No. of Check Dams	Capacity (MCFT)
Porbandar	16	25.58
Ranavav	9	6.46
Kutiyana	14	32.26

(Source – Salinity Control Division, Porbandar)

In the above table the check dams for salinity control are maximum in Porbandar taluka but the capacity is more in Kutiyana taluka when compared to Porbandar taluka.

Below mentioned table shows various work which has been completed under various schemes towards water management.

Table 5.38 Details of Schemes for *Water Management*

Sr. No	Name of the Scheme	Particulars		Total Amount
1	Chaya water Yogana	Place of Water Tank	Capacity	3102.71 Lakhs
		Javantrigada	30 Lakhs Liter	
		Highway zone	15 Lakhs Liter and 2 Lakhs Liter	
		Khieshwar Mahadev	5 Lakhs Liter and 5 Lakhs Liter	
		Main town	20 Lakhs Liter and 5 lakhs Liter	
		Omkareshwar	5 Lakhs Liter	
2	Porbandar Water Yogana	Place of Water Tank	Capacity	2618.36 Lakhs
		Javantrigada	20 Lakhs Liter	
		Juribagh	12 Lakhs Liter and 7 Lakhs Liter	
		Bokhira	11 Lakhs Liter and 7 Lakhs Liter	
		Shahid Chawk	11 Lakhs Liter and 5 lakhs Liter	
		Natwarniwas	10 Lakhs Liter and 6 Lakhs Liter	
		Kadiya Plot	9 Lakhs Liter and 5 lakhs Liter	
		Subhashnagar	5 Lakhs Liter and 3 lakhs Liter	
3	Ranavav Water Yogana	Place of Water Tank	Capacity	2115.61 Lakhs
		Jamnagar Road	20 Lakhs Liter	
		Ranavav Town	12 Lakhs Liter	
		Jadeshwar	5 Lakhs Liter	
		Aditiyana town	25 Lakhs Liter and 5 lakhs Liter	
		Near Court	5 Lakhs Liter	
4	Kutiyana Water Yogana	Place of Water Tank	Capacity	926.68 Lakhs
		Kalindri	20 Lakhs Liter	
		Kutiyana city zone 2	4 Lakhs Liter	
		Kutiyana city zone 3	3 Lakhs Liter	
		Kutiyana city zone 4	Lakhs Liter	

(Source – District water and sanitation department)

Thus seeing to the above table it depicts that the district water and sanitation unit has tried to fulfil the demand of drinking water. The total expenditure on these constructions is 5691.92 Lakhs

Seeing to various schemes for drinking water majority of the villages has been covered under the schemes so that people are able to get drinking water. This is shown with the table below:

Table 5.39 Talukawise details of Villages under Different Water Management Schemes

Dist/Taluka	Total villages	Villages under Group Yogana	Villages under personal pipeline	Villages under the Handpump scheme	Villages under simple well Yogana
Porbandar Dist	179	146	1	20	12
Porbandar	74	73	00	00	1
Ranavav	59	28	00	20	11
Kutiyana	46	45	1	00	00

(Source – District water and Sanitation unit)

From the above table all the villages are covered under different schemes of drinking water. Maximum numbers of villages are covered under various Group Yojana

5.9 Success stories regarding social welfare

Box 5.1 Success Stories Regarding Indira Aavas Yogana

Village : Modhavada
 Taluka/ District : Porbandar
 Name of Sarpanch: Shri Valiben Dulabhai Modhavadiya
 Name of Talati : Rasikbhai B. Khant
 Beneficiary's name: Gosvami Ramaben Maganavanbhai (Widow)

About 27 North of Porbandar, Modhavada village is located with about 4000 persons residing there belonging to Mer, Brahmin, Rabari, Devipoojak and Bavaji communities. They generally do some business or are engaged in agriculture. Shri Valiben Dulabhai Modhavadiya is the Sarpanch and Shri Rasikbhai B. Khant is the Talati cum Secretary of the Village.

The story

She stay at Modhavada with family. Her husband did work as a laborer till he fell sick and it was found that he had a malign tumor in his brain. He died after three years. Her son was just 8 years old and then did not have a house to stay - she constructed a small hut and started staying there. She once met the Secretary to Gram Panchayat and applied for assistance for a house. She was given a plot of 100 Sq. yards and during 2012 – 13; she was given assistance to build a house, now she stays in that house. She got employment as a laborer and her son is reading in class IX today. It is due to this assistance that her son is able to concentrate on studies and is in class IX and that she, a widow, is able to stay nicely in her own house today,

after her husband's demise. All her relatives behave with respect shown to them. She expresses her heart-felt thanks for extending to me such assistance to live a respectful life.

Village : Rana Kandorana

Taluka : Ranavav

District : Porbandar

Name of Sarpanch: Shri Jeevatiben Lakhabhai Bhutia

Name of Talati :N.M.Chavada

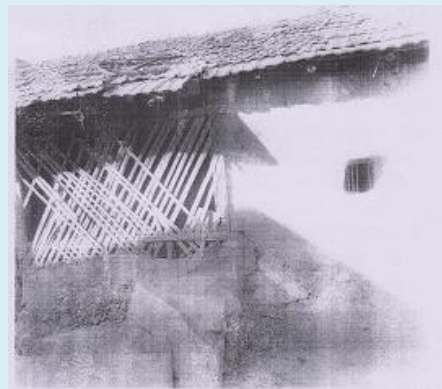
Beneficiary's name: Jayaniben Savdas Parmar

Rana Kandora is a village 15 kilometer East of Ranavav Taluka place with population of 7962 persons belonging to Mer, Brahmin, Rabari, Devipoojak and Bavaji communities. They are generally engaged in some business or in agriculture. Shri Jeevatiben Lakhabhai Bhutia is the Sarpanch and N.M.Chavada is the Talati cum Secretary of the Village.

The story

The beneficiary of Indira Avas Yojana, Jayaniben Savadas Parmar, stays in this village for past 25 years and Devipoojak by caste. She is a widow of 30 years of age. Her husband died before five years and had brought up her children by doing labor work. After she could build this house, her elder daughter Rekha goes to school and is reading in Class III, and Pooja, the younger daughter is in class I. She is glad that her daughters are admitted now in a school. Since then did not have any property, used to stay in a hut on Rana Kandorana – Khirsara road. She used to sell fish. They did not have a house and the monsoons used to be difficult times. Gram Panchayat gave her a plot of 100 Sq.Yards during 2013 – 14, and Ranavav Taluka Panchayat gave assistance of Rs.70000 to build a house on it. From NAREGA, she got Rs.5000 to prepare land for a toilet and she, from Nirmal Bharat Yojana, got Rs.4600 to construct the same.

Her entire family lives a better life in this house due to Indira Avas Yojana. This has earned them good reputation in business also. There were many difficulties when this house was not there, particularly for education of daughters. She and her family stays very comfortably in this house and they find their schooling easy and she finds this substantially helpful in her business also.



Box 5.2 Upliftment of Maiyarri Village of Kutiyana Taluka with the Initiative of

Sarpanch

From gram-panchayat to parliament when the elected members talk about development of a village or city it is usually funded from government's grant. In 'Maiyarri' village of Kutiyana taluka, the development of village took place not only from government's grant but its development is funded by young and dynamic 'Sarpanch' of the village, through his personal sources of fund. The 'Sarpanch' has become a source of inspiration and acts as a role model for other administrator of the village. Total population of the 'Maiyarri' village is 4,500, but the village has all grassroots basic facilities in addition to the security and safety measures. The quick development of the village is not because of government's grant but it is constantly personally funded for three consecutive years by village's 'Sarpanch' Shri Bharatbhai Parmar.

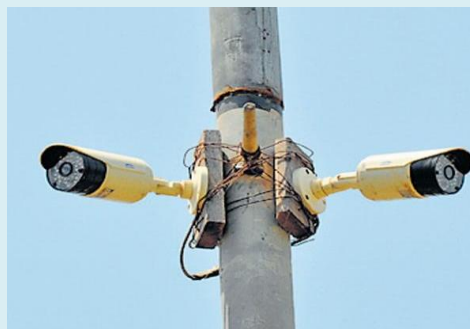
In 'Maiyarri' village the construction of roads takes place from government's grant. But, majority of the roads are developed by Bharatbhai at his own expense. Not only the roads but 600 to 700 water tap connections are also provided to the households of the village by 'Sarpanch' from his personal funding.

During the night time the village is illuminated because the 'Sarpanch' has funded the expense of installation of 200 street lights. Rs.15,000 is the bi-monthly electricity bill of streetlights of 'Maiyarri' village is not paid by 'Grampanchayat' but the 'Sarpanch' only pays it from his own pocket.



The self-funded development work does not come to an end at this point. To promote safety of the villagers and to avoid theft, dacoit, robbery or any other criminal acts in the village, around 60 CCTV Camera has been installed in the village. Every lane of the village is monitored through installed CCTV camera. In addition to this a

beautiful garden has been constructed for children, women and senior citizens. Rs.80,000 being the cost of garden preparation was borne by 'sarpanch'. Bharatbhai has used his personal funds in huge amount, compared to government's grant, for the development of village and has assured villagers with user-friendly basic facilities. He has set a true illustration of service to mankind and development of society.



Box 5.3 Activities done by Govindbhai for Mentally Challenged People

There are few unique people on the earth. Land of Saurashtra is known for its saints, soldiers and social workers. Right from 'Jalarambapa to Pragibapa' was the legendary examples of social workers. Pragjibapa was the pioneer of movement of helping insane (mad/mentally challenged) people. His illuminated lamp of social service is still burning in his absence. The ashram 'pagalashram' (place of dwelling of insane people) is run by his son. Before 30 years Pagabapa-Pragjibhai' requested a mediocre businessman Shri Govindbhai Patel to supply green vegetables for the dwellers of ashram. Govindbhai Patel's love for mentally challenged developed from his activity. Initially, everyday he used to go to the vegetable market and

buy fresh green vegetables, from his personal funds for ashram. When the green-grocer learnt about his deeds of social service, they supported Govindbhai by providing fresh green vegetables for ashram at free of cost.

Near Paradise Fountain there is a 'Swargiya Pragji Bhagat''s ashram, which is famous place for insane or mentally challenged dwellers. Pragji Bhagat used to move around in the city to collect funds, which were utilized to sustain the mentally challenged people. He used to depict great care and concern for mentally challenged people, which was even more than the care and concern exhibited by a father for his own son.

Presently, in this ashram under the leadership of Shri Munnabhai (son of demised Pragjibapa) the care of mentally challenged people is undertaken. The care of 90 mentally challenged people is carried out in the ashram. This activity is fully supported by various donors.

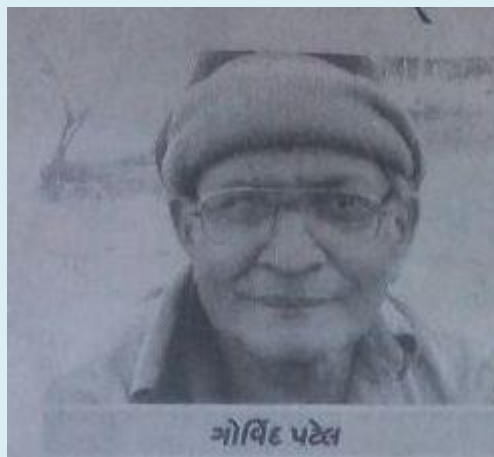
When Pragjibhagat was alive he used to visit Porbandar's Jivrajbhai Leuva Patel's place and requested boys to cheer up for noble cause and give anything or something for mentally challenged.

Govindbhai Patel was deeply touched at the begging style of Pragjibhagat and so he insisted him that he should daily come to his place as he always had things to offer for mentally challenged people. Govindbhai believed that service to mentally challenged people is service to God.

Pragjibhagat once told Govindbhai Patel that he wanted green vegetables to feed the people of this ashram, so he requested him to help him in the endeavor. Govindbhai accepted his genuine request and since last 30 years he as pledged to supply fresh green vegetables to ashram. Daily he used to buy green vegetables from 'Vadi Plot's' vegetable market. Govindbhai was so inspired at the selfless service of Pragjibhai towards mentally challenged that he sold all the spare-parts of this small shop for Rs.50,000 only. He also sold his asset-his only house for Rs.60,000. All this was done to daily feed, the mentally challenged dwellers in the ashram with green vegetables. In this act of benevolence Govindbhai became hand to mouth, but still he did not lose hope and courage. He incurred a debt of Rs.30,000 and still continued to stick to his work. When this fact came to the notice of 'Vadi Plot's' green-grocers they decided not to collect a single penny for vegetables they gave to Govindbhai. Vegetable vendors started providing vegetables free of cost. Still today also, the vegetable vendors before selling the dearest vegetable to customers, they keep aside the vegetable for ashram, which is duly supplied to ashram by Govindbhai. The act of kindness expressed by small vegetable vendors is indeed commendable.

Govindbhai is not highly educated he has managed to clear old SSC. He hails from Vavdi village of Jetpur taluka. In 1971 he came to Porbandar with a meager amount of Rs.20 and since then he toiled hard in Porbandar for his livelihood. His beloved wife Champaben and obedient son Ghanshayambhai and Mayurbhai have immensely supported Govindbhai in the selfless act of helping mentally challenged people.

Chagghanbhai (entrepreneur of Fancy Store) was also motivated at the deeds of Shri Pragjibhai and he took up the initiative to build the ashram for mentally challenged, which was duly assisted by various kind-hearted donors. In this ashram there is a monthly check-up and treatment of mentally challenged people of ashram. This activity is carried out by doctors (Psychiatrist, Psychologist, Neurosurgeon etc) of who have specialized in treatment of mentally challenged patients. Under the guidance of Dr.Bharatbhai Gadhvi a separate file is maintained for every mentally challenged person, dwelling in the ashram. The expense of medicines and fees of doctors is borne by establisher of 'Sandipani Ashram- Shri



Rameshbhai Oza'. It is indeed an act of salute to the 60 years old man, who has devoted his complete life for the mentally challenged people.

Box 5.4 Library for Blind Men

This institution was formed to provide a variety of literature to the blind persons. Since making a Brail version of any book is very costly, it is not possible for all blind people to get that done individually. Further, it is also difficult to have supply of such books at all places. Brail version of books does help the blind persons substantially in increasing their knowledge base. The progress has been increasingly impressive after Shri Anil Kanjibhai Popat has taken charge of management of this organization which has noble intentions. Objective of this organization is to make books available in Brail script to the blind persons in India. No fee is collected from them for this purpose, so the blind persons can have access to the knowledge at their doorsteps – whether in villages or in cities. This organization has worked on these lines with a view to keeping their mind pleased and they are able to expand their mental horizon to quench their thirst of knowledge. In absence of such work, the blindness will make them inactive, gloomy and dry; and that will be more painful than the blindness itself. Reading of these books brings some special pleasure and interest in their lives. These books become their friends. In addition, the need for a Central Brail Library also stands fulfilled that was important from psychological angle.

The number of Brail books has kept on increasing at reasonable good rate due to the continued cooperation from the general people. Library has 10500 books that could be estimated at the cost of Rs.1000000, today which include Stories for children, Novels, Short Stories; and Books on Social Science, Religion, History, and Education; and also on Music. A person, on becoming members, gets the books at his doorstep without paying any deposit or fee. Only an application in the prescribed format is to be filled in to become a member. 1500 persons residing in different states of India are members of this Library till now. The books are sent by post to the places where the member resides. The books are specially packed while posting because the size of Brail books are bigger and the same need special care in transit. No postage is payable on the literature for blind people so these books are sent by Regd. A.D. post without cost to the library. Due to this concession, given by Indian Govt., the books can be easily made available to the blind persons. A member can retain the book for a maximum period of 15 days at a time; and has to strictly follow the instructions to take care of these books. Very few books are written into Brail at regional level press. As a result, while converting the books in to Brail, the translators have to undertake a test for this specialized work. The remuneration is paid to the blind men on this job at the prescribed rate. Thus, blind men get this financial benefit due to this library. This library is made of such handwritten books.

This Library has been recognized by the Office of the Director (Library), Education Department, Gujarat State Govt. at Gandhinagar. This Library gets grant assistance from the Office of the Director (Library), Education Department, Gujarat State Govt. at Gandhinagar. In addition, it also gets grant from Municipality of Porbandar city. This library is also dependent on the charity made by the social groups in addition to the various grants received for preparing more Brail versions for which management expenses are incurred.

The Library has now its own building. Its administrative expenditure is about Rs.250000 per year which includes salary, postage, telephones, electricity bill, repairs, vehicles, printing and stationery and the other miscellaneous expenses. Rs.100000 is received from the Office of the Director (Library), Education Department, Gujarat State Govt. at Gandhinagar, and Rs.5000 from the Municipality of Porbandar as grant to meet the administrative expenditure per year; and donations are collected from field for the balance amount of Rs.145000 per

year. There is a need for creating a permanent Maintenance Fund so that from its interest, these expenses could be met.

Box 5.5 Activities done by Kanjibhai for Old People

Late Shri Kanjibhai Jamanadas Popat (blind himself) is considered the Godfather (Bheeshmapitamah) of the blind fraternity. He instituted and developed various organizations for blind men like Andh Sarvoday Mandal in the year 1951; and Shri Andh Mahila Vikas Gruh, Rajkot; Shri M.T.Doshi Andh Vidyalay at Surendranagar, Shri Andhajan Vividhlakshi (multipurpose) Talim (training) Kendra at Jamnagar, Shri La.Va.Lodhiya Andhajan Pustakalay at Porbandar. In Gujarat, the first school for blind was opened in Bhavnagar, the name was Krushnakumarsinh Ji Andh Udyog Shala. The founder and manager of this school was Shri Netarwala, who was a blind Parsi gentleman. Shri Kanjibhai studied in this school, and hence in permanent memory of Shri Netarwala, he created a trust by the name of Shri Drushtiheen (blind) Oza Natawarlal Dolatram Netarwala Charitable Trust, Bhavnagar. Under the aegis of this Trust, various activities are undertaken for the development of blind persons. Similarly, the first Vrudhhashram for blind was also opened in Bhavnagar but for some circumstances, it could not be made functional, hence it was shifted in the building of the Blind men's Library at Porbandar. But before this library could make any progress, Kanjibhai died on 16th December 1999. His dream remained incomplete. The trust is trying to push his movement and to accomplish his dream. At present, there are ten such old persons who are blind, their lodging, boarding, clothing and medicines are made available free of cost. The capacity of this organization is eleven.

5.10 SWOC Analysis

Strength

- Very poor families are very less in Kutiyana and Ranavav talukas of the district. Only six% and eight% respectively.
- Due to sea vulnerability INS Sardar Patel has been commissioned in Porbandar on May 9th, 2015.
- Porbandar district administration continuously is organizing training and awareness generation activity for various communities for Disaster Management.
- Total number of crimes has reduced from 973 in the year 2009 to 838 in the year 2013.
- The three major dams of the district are able to fulfill the demand of the water supply.
- Credit by the commercial banks in the semiurban (28.22% CAGR) area has seen a drastic change over the last four years.

Weakness

- Rainfall in the district has drastic fluctuations in the last four years.
- Kutiyana district is not connected with the railway line.

Opportunities

- The number of population under the fair price shops has reduced in the year from 2010-2011 to 2013-2014.
- Average daily service in kilometers has increased at 4% CAGR.
- Crime against women in Porbandar district has increased at 6% CAGR when compared to Gujarat State of 8% CAGR in the last 5 years. Thus to stop the crime against women various schemes has been started like 181 Abhayam, Police Station based Support centers for Women has been started.
- The percentage of households with water connections in Porbandar taluka is just 51% which is less when compared to Ranavav (70%) and Kutiyana (66%). There is an opportunity to increase the same.

Threats

- In the year 2014-2015 very poor families in Porbandar taluka was highest when compared to the district and with other two talukas
- In the BPL families majority of the families are landless in all the three talukas
- It's a challenge to reduce the crime rate in Porbandar district especially for theft.

5.11 Way Ahead

In Porbandar district 25% of the families are living Below Poverty Line (BPL) and of which 11% of the families are in the category of very poor. In Porbandar taluka 14% of the families are in the category of very poor. This is high when compared to district. There are 22% of the BPL families in Porbandar taluka which has the monthly income less than Rs.500. There is more number of OBC who are socially and financially backward. The funds for the betterment of OBC have not been at par with the ST, SC funds allotment. Thus seeing to more number of people under OBC there has to be increase in the fund allocation for OBC category.

24% of the BPL families do not have sanitation facilities. There are 3% of the BPL children who are not going to school and working in the district. To further reduce this some strict action can be taken on the parents who are sending their child for working and not to school. This can be done through police help. There are only 7% of the BPL families who are able to get enough food for the year. Rest are not in a position to have their meal on the regular basis. Thus some steps and schemes has to be framed and executed to increase the living standard of the BPL families specific to their monthly income, sanitation, food security and upliftment of children.

The crimes which are reported against women in Porbandar district has increased over the last 5 years. Majority of the cases against women are because of domestic violence. Thus some steps have to be taken by the police department to reduce women harassment. A woman has to be given information through various media and proper knowledge towards protecting oneself against the harassment of domestic violence.

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