



THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

নং 429 দিশপুৰ, বৃহস্পতিবাৰ, 16 জুন, 2022, 26 জেঠ 1944 (শক)

No. 429 Dispur, Thursday, 16th June, 2022, 26th Jaistha, 1944 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING & URBAN AFFAIRS

NOTIFICATION

The 10th May, 2022

No.UDD(T)199/2022/6.— In exercise of the powers conferred by the Section 9 (nine) of the Assam Town & Country Planning Act, 1959 (Assam Act II of 1960) read with Sub-section I of Section 10 (Ten) of Assam Town & Country Planning Act (as amended), the Governor of Assam is pleased to published the following notice regarding the publication of draft master plan for Mariani.

Notice for Publication of Draft Master Plan for Mariani

1. It is notified that the draft master plan for Mariani prepared by the Directorate of Town & Country Planning, Government of Assam, Town & Country Planning Act, 1959 read with Sub-section I of Section 10 (Ten) of Assam Town & Country Planning Act (as amended) for the area described in the schedule below is here by published.
2. Any person or persons affected by the draft master plan may submit their objection or opinion in writing to the Director, Town & Country Planning, Government of Assam, Dispur, Guwahati-6 within two months from the date of publication.
3. The draft master plan for Mariani with all relevant papers and maps may be inspected free of cost during Office hours at the Office of the Director, Town & Country Planning, Government of Assam, Dispur, Guwahati-6, the Deputy Director, Town & Country Planning, District Office, Jorhat, the Circle Office, Mariani Revenue Circle, Mariani, Office of the Chairman, Mariani Municipal Board, Mariani. Copies of the draft master plan for Mariani are available at the Office of the Deputy Director, Town & Country Planning Jorhat on payment.

SCHEDULE

A. SITUATION AND AREA :

DISTRICT	: Jorhat.
Sub-Division	: Titabar and Mariani.
Mariani Municipality Area	: 2.28 Sq. Km.
Mariani Master Plan area, 2041...			: 22.75 Sq. Km

B. DESCRIPTION OF BOUNDARY :

Parts of Revenue Circle and Villages included in the draft Master Plan Area for Mariani-

A. Mariani Revenue Circle.

BOUNDARIES :

NORTH	:	KALIAPANI GRANT AND GHARPHALIA GAON
EAST	:	HOLLONGPAR GIBBON SANCTUARY AND KATHALGURI TEA ESTATE
SOUTH	:	NAGAJANKA AND SONOWAL TEA ESTATE
WEST	:	NAHORBARI TEA ESTATE AND DEKA GAON

REVENUE CIRCLE AND MAUZA WISE VILLAGES INCLUDED UNDER PROPOSED MASTER PLAN AREA FOR MARIANI, 2041

Sl.No.	Village Name	Type of Settlement	Rural / Urban	Mouza	Revenue Circle
1	Dhekiajuli Grant (Dhekiajuli TE)	Rural	Rural	Mariani	Mariani
2	Deka Gaon	Rural	Rural		
3	Gharphalia Gaon	Rural	Rural		
4	Naharbari Chah Bagisa	Rural	Rural		
5	Naharbari Grant	Rural	Rural		
6	Kathalguri T.E.	Rural	Rural		
7	Mariani Grant	Rural	Rural		
8	Dewaguri Chapari	Rural	Rural		
9	Mariani (TC)	Urban	Urban		

KAVITHA PADMANABHAN,
Commissioner & Secretary to the Govt. of Assam,
Department of Housing & Urban Affairs.

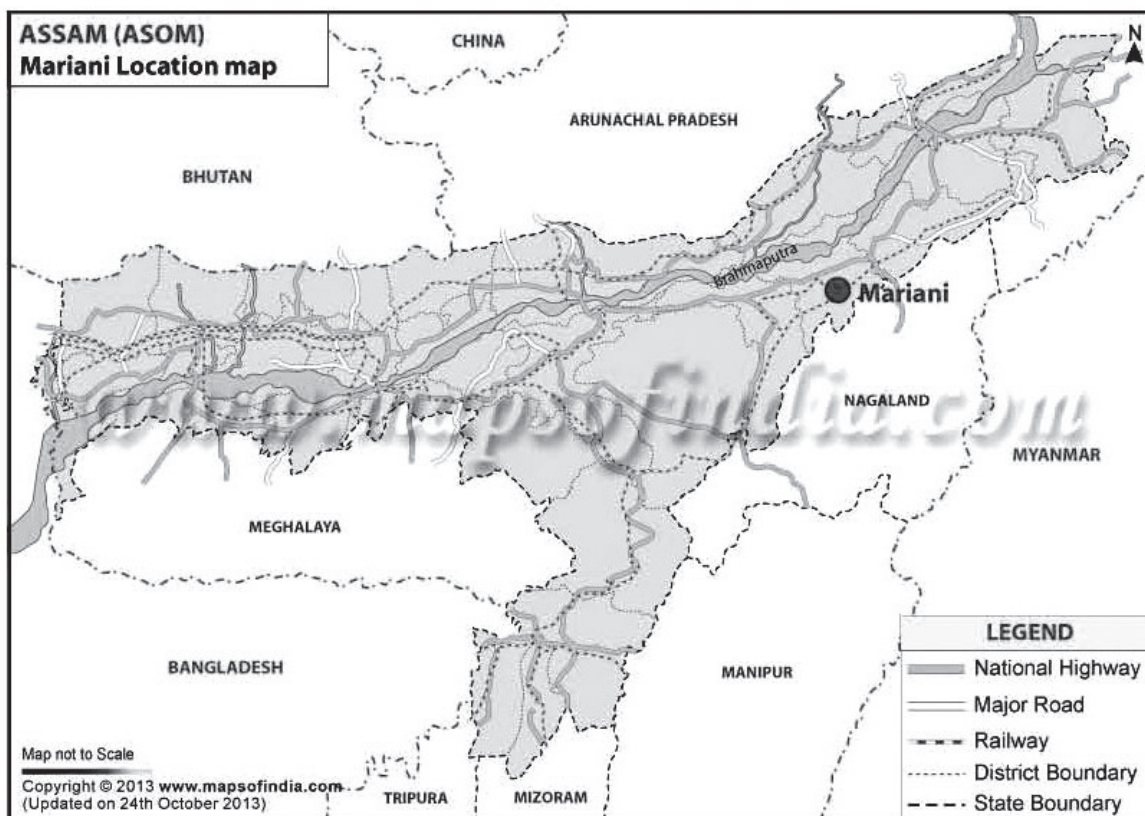
CHAPTER – 1

1.1. LOCATION:-

Mariani is a neighbourhood town of Jorhat. It is about 17.5 km from Jorhat Town railway station. Mariani is in the border of Nagaland. Mariani is famous for the Gibbon Wildlife Sanctuary which is located on the roadside on the way to Nakachari from Mariani at a distance of 5 km.

Mariani is located at 26.67°N 94.33°E. It has an average elevation of 155 metres (509 ft).

Figure 1.2 : Map of Assam showing location of Mariani Town.



1.2. REGIONAL SETTINGS :-

NORTH	KALIAPANI GRANT AND GHARPHALIA GAON
EAST	HOLLONGPAR GIBBON SANCTUARY AND KATHALGURI TEA ESTATE
SOUTH	NAGAJANKA AND SONOWAL TEA ESTATE
WEST	NAHORBARI TEA ESTATE AND DEKA GAON

The town has very good railway connectivity with rest of the country. It is served by Mariani junction, one of the major railhead of Tinsukia railway division. It falls in the Lumding–Dibrugarh section. Dhodar Ali connects Mariani by road. Mariani is well connected with Jorhat by road. Buses and mini vans (Tata Magic) are available frequently. The nearest airport of Mariani is Jorhat Airport.

1.3. BRIEF HISTORY OF THE TOWN AND SURROUNDINGS:-

Mariani town is surrounded by some of the largest tea gardens in India. Mariani has a cosmopolitan culture with many communities speaking different languages and living in harmony for decades. The town was once well known for having one of the largest plywood factories in India which was later closed down as felling trees was banned by law.

1.4. CLIMATE:-

Climatically Mariani experiences similar condition with rest of the State with hot humid summer and cool winter. The Monsoon rain start from the month of May continues up to September. The highest maximum temperature during summer is 32.2°C and minimum temperature is 9.4°C. The average annual rainfall is about 3600.3mm. The prevailing wind direction of the town is from northeast to southwest.

TABLE: TEMPERATURE, HUMADITY AND RAINFALL

Month	Temperature		Humidity (%)	Rainfall(mm)	Number of rainy day
	Min	Max			
Jan	9.4	22.3	74.5	32.9	3.16
Feb	11.9	24.0	68.5	46.7	4.16
March	15.6	27.5	67.5	146.4	10.33
April	19.1	28.6	77.0	376.3	14.16
May	21.9	29.9	74.5	407.0	15.88
June	24.2	31.6	80.5	525.1	17.00
July	24.7	32.2	81.5	809.7	21.66
August	24.7	32.1	81.5	494.6	16.33
September	24.0	31.7	83.5	535.9	17.83
October	21.1	29.4	83.5	149.2	9.16
November	15.3	26.4	80.0	58.0	2.20
December	10.7	23.4	77.5	18.5	2.25
				3600.30	134 days

Source : Soil and Water management, Toklai

1.5. TOPOGRAPHY:-

Mariani is located at 26.67°N 94.33°E.^[2] It has an average elevation of 155 metres (509 ft).

1.6. SOIL CONDITION:-

Surrounded by the tea gardens, forest and paddy fields Mariani is situated mostly on an alluvial flat land at a distance of 16 km from Jorhat town. The river Bhogdoi passes through the eastern part of the town separating the Gibbon Sanctuary and Mariani Town. Terraces of high-level alluvium of Pleistocene age occur along the southeastern boundary of the Master plan area along the foothills to south eastern boundary of the district.

The region bears texturally three types of soil - sandy loam, loam and clayey loam. These favour the cultivation of rice, mustard, pea, vegetables, etc. Thus, geographically the soil of Mariani Town is also considered as favourable for cultivation and plantation.

1.7. CITY INFLUENCE AND ITS CHARACTERISTICS INCLUDING SETTLEMENT PATTERN:-

The settlement pattern of Mariani is a mixed one. Due to the presence of tea gardens, workers from Bihar and Orissa migrated in to the region. Officials from Tea and Oil industry settled in Mariani. The indigenous people of the state live both in urban and rural areas. A good number of Marowari, Bengali, Bihari, Sikh and Muslim people reside in Mariani.

1.8. RURAL-URBAN SCENARIO:-

Both rural as well as urban characteristics can be seen in Mariani town and its surroundings. Though people use modern techniques to build their houses but there still exist houses which have been built with old methods. Many people of the town still use bamboo fence around their house. The Economically weaker section households are easily identified by their poor housing condition. Due to low incomes, their houses are mostly kutchra or semi pucca type and lack basic infrastructure.

1.9. HISTORY OF THE PHYSICAL GROWTH AND EXPANSION OF THE TOWN:-

With the up gradation and new setups in Jorhat town and with the requirement of new residential locations, Mariani has become one important town in the district. Govt. offices including Judiciary according to the norms have been established at Mariani resulting in to rapid physical growth of the town. The physical growth and expansion of the town has mainly taken place for the tea and oil industry which were developed by the British during British Era.

1.10. NEED FOR THE MASTER PLAN:-

A master plan or a development plan or a town plan may be defined as a general plan for the future layout of a city showing both the existing and proposed streets and roads, open spaces, public buildings etc. A master plan is a blueprint for the future development of the town.

A Master Plan, also called a comprehensive plan, provides a long-range vision for the built environment of a community. It guides the appropriate use of lands within a municipality in order to protect the public health and safety and to promote general welfare. Among other issues, the Master Plan can identify

- suitable locations for commercial, housing and mixed-use development;
- locations where the city should increase density, use redevelopment, or intervene in other ways;
- opportunities to extend and/or improve open space, recreational areas, and civic facilities;
- strategies from increasing economic development;
- environmental, historic and cultural resources that need conservation; and
- strategies for solving congestion and improving transit services.

As a result, the Master Plan has a direct relationship to its citizens, where we live, work, or own a business in that particular region.

Considering the present trend of growth of Mariani town, the future urban activities and needs, availability of urbanizable land and other environmental aspects.

The master plan area of Mariani covers an area of 25.05 sq.km. having population of 81052 as per 2011 census and field survey conducted by Town and Country Planning, Jorhat.

CHAPTER-2**DEMOGRAPHY****2.1. TOTAL POPULATION:-**

Mariani Master Plan Area (MMPA) is Located in Jorhat district. According to census of India 2011, the total population of Mariani Master Plan area is 71456 persons out of whom 36821 are male and 34635 are female.

Table 2.1 : Urban & Rural Area Population Figure

Name of Master Plan Area	Category of Area	Area in Sqkm	Population in 2011
Mariani Master Plan Area	Urban	8.00	10020
	Rural	17.03	8184
Total		25.03	18204

2.2. MALE/FEMALE POPULATION:-

The details of Male and female population for the Mariani Master Plan Area (MMPA) is shown in the following table.

MALE AND FEMALE POPULATION OF MMPA IN 2011**Table 2.1 : Mariani District Areas / Town and Villages**

SI No	Name	No_HH	TOTAL	MALE	FEMALE
1	Dhekiajuli Grant (Dhekiajuli TE)	592	2530	1284	1246
2	Deka Gaon	71	319	161	158
3	Gharphalia Gaon	66	331	154	177
4	Naharbari Chah Bagisa	416	1997	959	1038
5	Naharbari Grant	144	666	359	307
6	Kathalguri T.E.	658	3174	1630	1544
7	Mariani Grant	1389	6494	3271	3223
8	Dewaguri Chapari	233	984	493	491
9	Mariani (TC)	4684	20801	10781	10020
		8253	37296	19092	18204

WORKING AND NON WORKING POPULATION

The details of working and non working population under Mariani Master Plan Area for the year 2011 is presented in the table.....

Sl No	Name of Area	population	Total worker	Non-worker	% of working population	% of non-working population
1	Mariani Master Plan Area	18204	3983	14221	21.88	78.12

AREAS AND HOUSE HOLD OF MMPA IN 2011**Table 2.1 : Jorhat District Areas / Town and Villages**

Sl No	Name	No_HH	Area_Sqkm
1	Dhekiajuli Grant (Dhekiajuli TE)	592	4.000706
2	Deka Gaon	71	0.964877
3	Gharphalia Gaon	66	0.729164
4	Naharbari Chah Bagisa	416	2.120551
5	Naharbari Grant	144	2.523163
6	Kathalguri T.E.	658	2.026574
7	Mariani Grant	1389	8.999823
8	Dewaguri Chapari	233	1.360756
9	Mariani (TC)	4684	2.308468
		8253	25.034082

2.3. POPULATION GROWTH RATE:-

After 2011 census, 3 numbers of new wards are included in the Mariani Municipal Board. Hence, the total number of wards in Mariani Municipal Board is 16 and having population of 19810(approx.) as per ULB report.

Table 2.3 : Population Growth Rate in Mariani Municipal Board

YEAR	POPULATION	(%) INCREASE
1961	1772	-
1971	2438	37.58
1991	12289	-
2001	16502	41.16
2011	18204	13.18

Source: Census of India

The decadal growth of population in the urban and rural areas of Mariani Master Plan area from 2001 to 2011 is shown in the following table:-

Table 2.4 : Population Growth of Mariani Master Plan Area

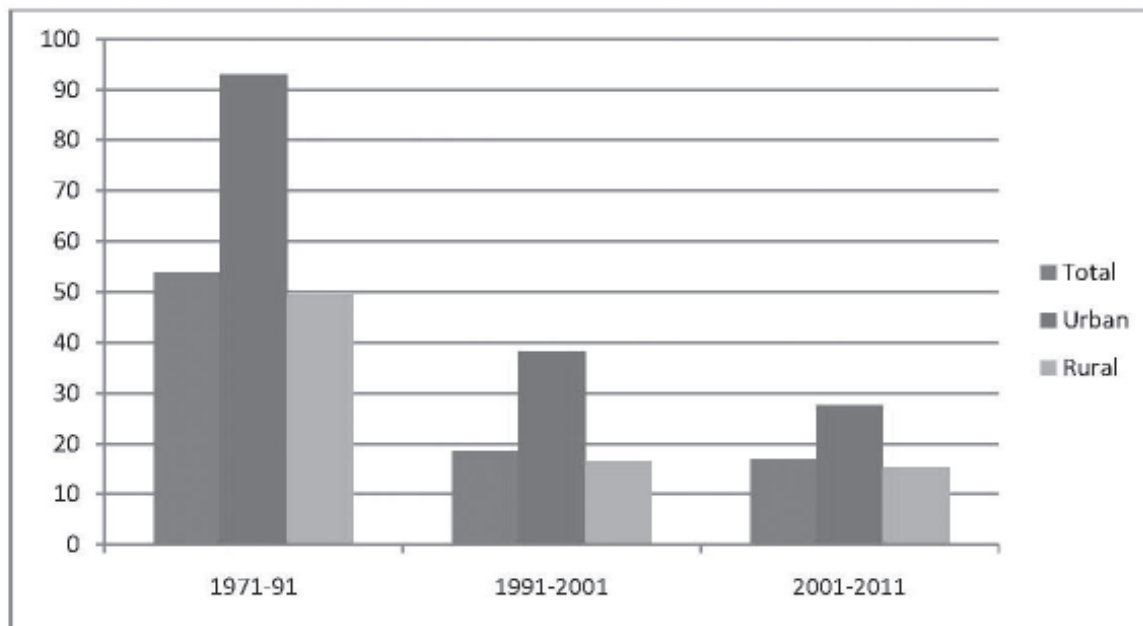
Zone	Year	Population	Increase in Population	% Increase
Total	2001	16502	-	-
	2011	18204	24079	25.42
Urban	2001	8901	-	-
	2011	10020	2308	13.19
Rural	2001	7601	-	-
	2011	8184	21771	55.16

Source: Census of India

Table 2.5 : Population Growth and Growth Rate of Assam

	POPULATION				GROWTH RATE (%)		
	1971	1991	2001	2011	1971-91	1991-2001	2001-11
Assam State*							
Total	14.62	22.49	26.66	31.17	53.83	18.54	16.93
Urban	1.29	2.49	3.44	4.39	92.97	38.24	27.61
Rural	13.33	19.93	23.22	26.78	49.42	16.51	15.35
*Population in thousand							

Figure 2.4 : Population Growth Rate of Assam : 1971-2011



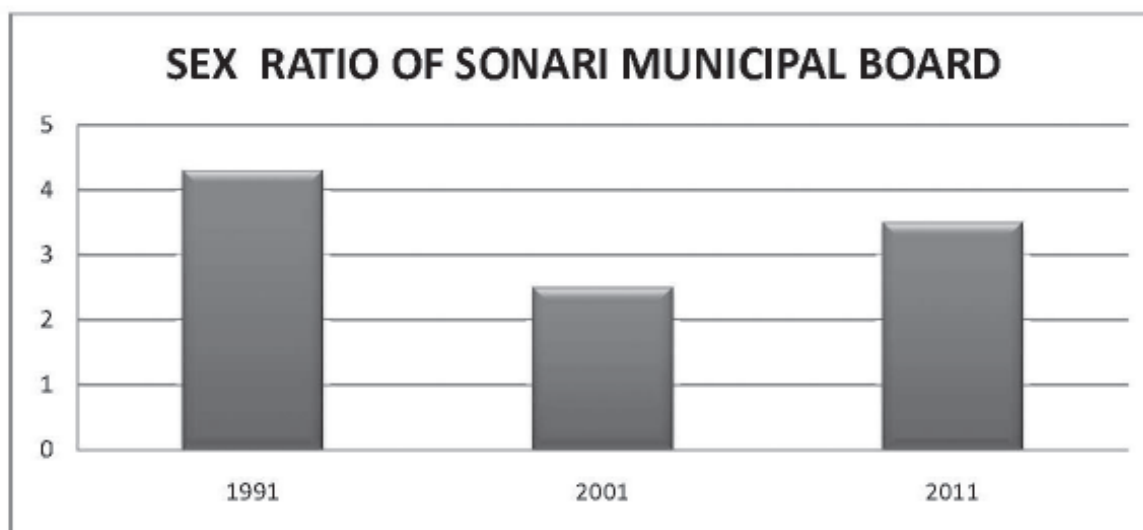
2.4. POPULATION DENSITY :-

The density of population of Mariani Municipal Board is 576 person per hectare.

2.5. SEX RATIO :-

In 1991 census, sex ratio in Mariani Municipal Board was 860. The value was 825 in 2001 and 908 in 2011.

Figure 2.5 : Sex Ratio of Mariani Municipal Board: 1991-2011



The sex ratio of Assam and MMPA for the last two decades as per census of India is given below:

Table 2.6 : Sex Ratio of Assam and MMPA

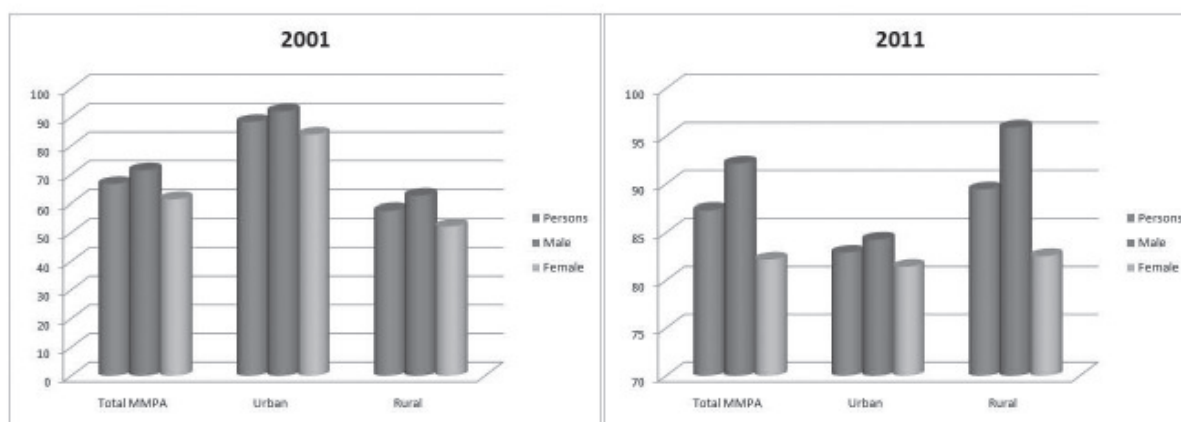
Year	Sex Ratio of Total Population		Sex Ratio of 0-6 Age Group	
	2001	2011	2001	2011
Assam State				
Total	935	947	965	957
Urban	872	939	943	955
Rural	944	950	967	957
Mariani Master Plan				
Total	869	940	974	932
Urban	825	908	975	911

2.5. LITERACY RATE :-

The literacy rate of Mariani Urban area as per census of India report, 2011 is 80.15% which is lower than state urban literacy rate of 88.47%. Male Literacy is around 82.4% while female literacy rate is 77.6%. The comparison of literacy rate in 2001 and 2011 for Mariani Master Plan area is given below:-

Table 2.7 : Literacy Rate of MMPA

	2001						2011					
	Absolute			Literacy Rate			Absolute			Literacy Rate		
	Urban	Rural	Total Master Plan Area	Urban	Rural	Total Master Plan Area	Urban	Rural	Total Master Plan Area	Urban	Rural	Total Master Plan Area
Total	13167	19712	32879	75.23	49.9	57.7	15877	28768	44645	80.15	55.7	62.4
Male	5604	13969	19573	78.9	57.5	64.2	8560	16474	25034	82.4	62.3	67.9
Female	4450	8856	13306	70.8	41.4	50.2	7317	12294	19611	77.6	48.7	56.6

Figure 2.7 : Literacy Rate of MMPA

2.6. WORKING AND NON-WORKING POPULATION:-

The total work force in Mariani master plan area in 2011 is 27693 persons. The work force is calculated considering the age group between 15 to 60 years. Out of this work force the working population is equivalent to 36.63% which is lower than the national average of 38%. The balance non working population (63.18%) mainly consists of women group and unemployed section of the population who are seeking employment in white-collar jobs as well as investment opportunities in business.

2.7. ST-SC POPULATION:-

As per census 2011, the details of SC and ST population for the Mariani Master Plan Area (MMPA) have been shown in the following table.

SC-ST POPULATION

Table 2.8 : SC and ST population of MMPA IN 2011

Sl No	Name	SC	ST
1	Dhekiajuli Grant (Dhekiajuli TE)	420	0
2	Deka Gaon	0	5
3	Gharphalia Gaon	0	0
4	Naharbari Chah Bagisa	27	0
5	Naharbari Grant	9	84
6	Kathalguri T.E.	0	1
7	Mariani Grant	3	0
8	Dewaguri Chapari	0	0
9	Mariani (TC)	66	142

2.8. MIGRATION OF POPULATION:-

The robust local economy once attracted scores of people from other parts of the country to settle here in search of jobs and business opportunities. In addition to Assamese and various indigenous ethnic groups, the town is home to hundreds of people who migrated from undivided Bengal, Bihar, Uttar-Pradesh, Rajasthan to change their fortunes.

2.9. HOUSEHOLD DENSITY AND SIZE:-

There are about 8253 residential houses in the year 2011 in Mariani Master Plan Area housing a total population of 81052 persons, as such, household size is 5.20 person's per house and the house hold density is 230 houses per sq.km.

2.10. POPULATION PROJECTION:-

In making the future population projection for Mariani Master Plan Area for the period 2001-2041, all the relevant factors such as changes in fertility and mortality rate, age sex composition of the population, existing land use pattern, socio-economic condition and expected emigrational flows have been considered.

For the projection, a general fertility rate of 0.19 for woman in a productive age group has been assumed. Mortality trends is based on recent experience of India and the trends on increase on life expectancy on the United Nations model life table for under developed countries.

The final population projections have thus been arrived at with the entire base population of 2011 accounted for as the natural population, by adding to the natural population, the increase due to the natural growth plus the increase due to emigrational flow of trade & commerce purpose including the natural increase of migrants. The following table shows the population projections up to 2041 for the urban and rural zones of Mariani Master Plan Area.

Table 2.10 : Population Projection of MMPA 2001-2041

Year	Urban Zone	% Increase	Rural Zone	% Increase	Total Population of Moran Master Plan Area	% Increase
2001	8901	-	7601	-	16502	-
2011	10020	13.2	8184	55.16	18204	9.35
2021	11323	13.2	12685	55.16	24008	12.05
2031	12795	13.2	19662	55.16	32457	12.05
2041	14458	13.2	30476	55.16	44934	12.05

Note : 2021, 2031 & 2041 population figures are estimated as per decade average growth rate of 2001 and 2011.

CHAPTER -3

ECONOMIC BASE AND EMPLOYMENT

3.1. FORMAL SECTOR:-

The Master Plan for Mariani stresses on the urgent need for creation of a conducive environment in which optimum use of natural, local and regional resources can be utilized to build up a sound economic base.

Mariani is a centre for tea gardens and oil fields. There are several Tea gardens and small industries around Mariani Town. Other important industries in Mariani are Timber, Rice, Floor, Cottage and light manufacturing units. In order to provide adequate employment opportunities in the future, the establishment of new industry should be encouraged and the rate of industrial growth needs to be stepped up considerably along with the expansion of service sector, so that it can keep pace with the population growth of this area. The future employment pattern of Mariani town will largely be associated with the growth of economic activities within the area. With the increase in administrative functions as the new District head quarter, Mariani is likely to have a considerable growth of activities in the service sector and trade and commerce as well. Mariani being the eastern most gateway for the state of Nagaland and as well as recent discovery of Oil and Natural gas in and around Mariani. This sector will experience a rapid development. There is a ample potentiality within the area for the growth of secondary sector too.

Assam is known as the place of one bud with two leaves. Assam's tea is not only famous within the country but it has also goodwill & demand in the international market. There are several tea gardens in Mariani and its suburb area. Moreover, a good number of small tea gardens were also established in the suburb area of Mariani boosting the socio-economic condition of the town.



Mariani region has a scope for establishing industry associated with tea garden implements, equipments of drilling, fabrication etc and other non-ferrous utensil units, casting and general engineering industries.

3.2. INFORMAL SECTOR:-

There is an English proverb that "Necessity is the mother of all inventions". With rapid growth of Mariani town, a number of Brick-kiln and Stone crusher industries have been setup in and around the planning area to construct house, road & bridges etc. The demand for bricks and stone is increasing day by day due to the establishment of new house, office building and institution etc.

The region is rich in forest resources which have not been exploited fully. But there is a good scope of various wood based industries, which can be taken up on a small and medium scale like safety matches, tea chests, furniture and pre-fabricated housing units etc.

The industrial development targets proposed above can be achieved through private sector & Governmental agencies by providing developed industrial land with necessary infrastructure like roads, power, water and drainage and incentive measures like rebate on power expenses, financial assistances in the form of loan at reasonable interest etc. The present concept of public – private partnership (PPP) can also be adapted for faster and smooth development of industries.

Mariani Town is the nerve centre of business & service of that area. Within the radius of 20 km distance, people use to come here to sell their produce and to buy necessary goods for their domestic consumption. There is a market in the middle of the town. Produces from nearby villages like Mahmora, Kakatibari are sold near this market. The area is not fully utilized and developed. There are about 856 nos of retail shops and 87 nos of commercial establishments within the Mariani Municipal area. In Mariani Town there are also some markets namely Mariani Daily market, Baruah market, Mini market, Super market, Mariani Sunday weekly market, Chaliha market etc. which fulfil the demand for Mariani & its suburbs. These markets have played an important role in the economic expansion of Mariani Town.

Earlier the people of Mariani need to go to Dibrugarh & Jorhat for the banking transactions. But now, a number of nationalised banks such as State Bank of India, UCO Bank, United Bank of India, Canara Bank, Assam Gramin Vikash Bank, IDBI Bank, Axis Bank etc have established their branches at Mariani. Presently, the banking service at Mariani has improved because of these banks. The financial condition of the people has been improved along with strengthening of economic structure due to money mobilization by these banks. Moreover, insurance companies are also playing an important role for expansion of trade & commerce, social security and socio-economic development.

3.3. OCCUPATIONAL PATTERN:-

Occupational structure depicts the characteristics of employment for livelihood of the people living in a particular planning area. The engagement of people in industry, trade, commerce, white-collar jobs etc. is known as the occupation & employment character. In 2001, the total number of workers in Mariani Master Plan Area was about 21870, which constitute 38.39% of total population. In 2011, the total number of workers in Mariani Master Plan Area is about 29693 out of which urban worker constitutes 8400 and rural is 21293. The percentage of workers engaged in primary, secondary and tertiary sectors of occupations are 0.63%, 1.68% and 97.69% in the Urban Area and 16.64%, 2.69% and 80.67% in the Rural Area respectively. In the Planning area as a whole, the worker

engaged in primary, secondary and tertiary sectors of occupations are 10.22%, 2.20% and 87.50% respectively.

The occupational distribution of population in Mariani Master Plan Area of 2011 has been shown in the following table:-

Table 2.10: Occupational Distribution of Population in Mariani master Plan Area in 2011

Sl. No.	Category	Urban Area		Rural Area		Mariani Master Plan Area	
		No. of Workers	% of total workers	No. of Workers	% of total workers	No. of Workers	% of total workers
1	Primary Sector	62	0.63	2258	16.64	2320	10.22
2	Secondary Sector	332	1.68	502	2.69	694	2.28
3	Tertiary Sector	9542	97.69	12456	80.67	21998	87.50
	Total	8400	100.00	21293	100.00	29693	100.00

Source : Economics and Statistics Department and T & CP compilation.

The above table reveals that the number of people engaged in the secondary sector is higher in the Rural Area than in the Urban Area. This is due to the fact that in the suburbs of Mariani Town, there is the existence of tea gardens. The number of people engaged in primary sector in the planning area is low in comparison to the tertiary sector. The highest number of people is engaged in the tertiary sectors in the planning area.

The people of nearby villages have been blessed with the alluvium & fertile soil by the river Teok, which begets rich crops and this is the main source of livelihood for them. Secondly, due to expansion of micro, cottage & service industry, Mariani Town has been developing day by day providing source of living to many people. In view of the above, the question of livelihood can be discussed on the following heads mentioned below:-

- Engaged in industry like Tea, Rice, Floor and Cottage etc.
- Engaged in cultivation.
- Engaged in business.
- Serving as a Govt. employee & private employee.

CHAPTER-4

HOUSING AND SHELTER

4.1. HOUSING SCENARIO:-

Housing cover a large portion of an urban settlement at any point of time, It influences the quality of urban life, which in turn, affects the efficiency condition in Mariani Town is mainly characterized by inadequate amenities essential for standard living.

Though the houses in Mariani have been primarily designed for single family occupancy, the above figure supports the commonly observed situation of families doubling up in single-family dwelling units. According to 2011 census density of population in Mariani town is 3549 persons per sq.km. In the Master Plan Area as a whole the density of population is 1392 persons per sq.km, in 2011. The rate of construction of new houses has not kept pace with the rate of increase of population mainly in the urban area.

Residential buildings of Mariani are of mixed types. Generally in the old residential areas of urban zone Assam type houses and in the newly developed areas R.C.C. houses has been seen. In the rural areas more than 50% houses are Kutcha.

4.2. HOUSING SUPPLY MECHANISM:-

Housing supply is the main role of the state to improve living condition of the inhabitants either by direct provision or by enabling its provision. Different policies have been taken by the government to solve the housing problems especially for poor and low income group. Housing supply must address all social groups in the State including housing in urban areas, semi-urban areas and rural areas. In the recent years private builders and developers have come forward to solve the problems of housing in urban areas of the state by constructing flat. However at the present such practices have not been seen in Mariani Town. In the rural areas of Master plan area a few house has been constructed under centrally sponsored housing scheme. Recently housing in urban areas has been initiated by the central government through “Pradhan Mantri Awas Yojana – Housing for All (Urban)” scheme.

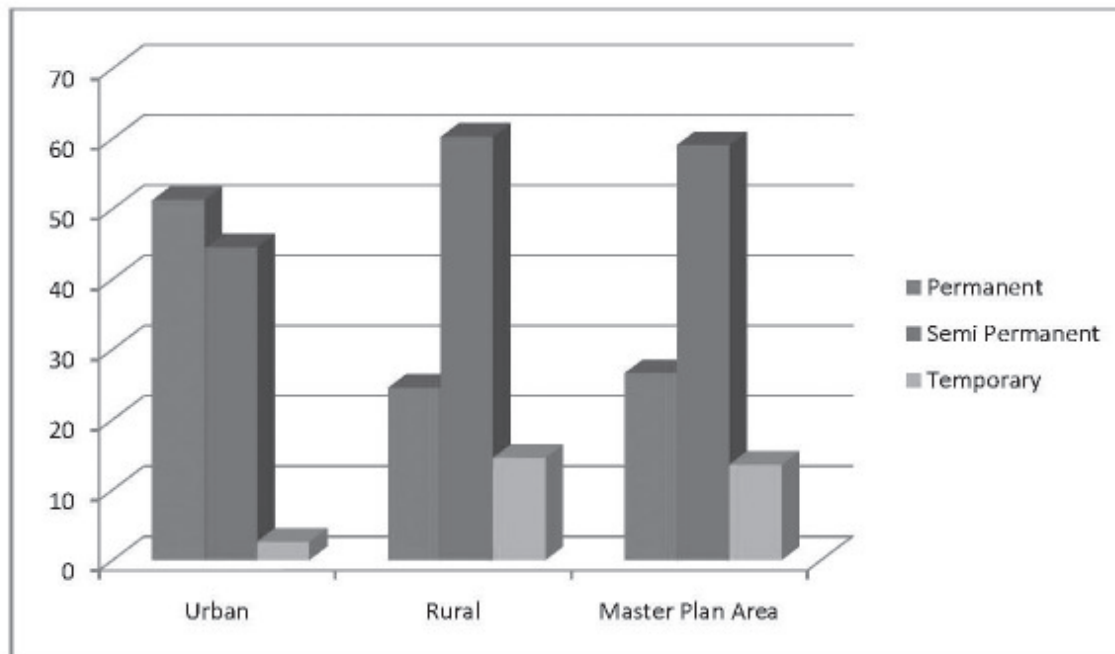
4.3. HOUSING CONDITION, TYPE OF STRUCTURE ETC.:-

Number and percentage distribution of persons living in permanent, Semi Permanent and Temporary house in 2011 are shown in the table below:

Table 4.1 : Housing Condition, Type of Structure

Housing Condition	Urban Area		Rural Area		Master Plan Area	
	No. of Households	Percentage %	No. of Households	Percentage %	No. of Households	Percentage %
Permanent	1759	38.15	14646	22.85	16405	23.88
Semi Permanent	2637	57.19	28223	44.04	30860	44.92
Temporary	192	4.16	20339	31.74	20531	29.89

Source : Census of India.

Figure 4.1 : Housing Condition**Table 4.2 : Number and Percentage of Households by Source of Lighting**

Particulars	Urban		Rural		Master Plan Area	
	No. of Households	Percentage %	No. of Households	Percentage %	No. of Households	Percentage %
Electricity	3997	86.68	25052	39.09	29049	42.29
Kerosene	553	11.99	38453	60.00	39006	56.78

Solar	15	0.33	337	0.53	352	0.51
Other Oil	13	0.28	38	0.06	51	0.07
Any Other	5	0.11	34	0.05	39	0.06
No Lighting	28	0.61	172	0.27	200	0.29
Total	4611	100	64086	100	68697	100

Source : Census of India.

Figure 4.2 : Number of Household by Source of Lighting (%)

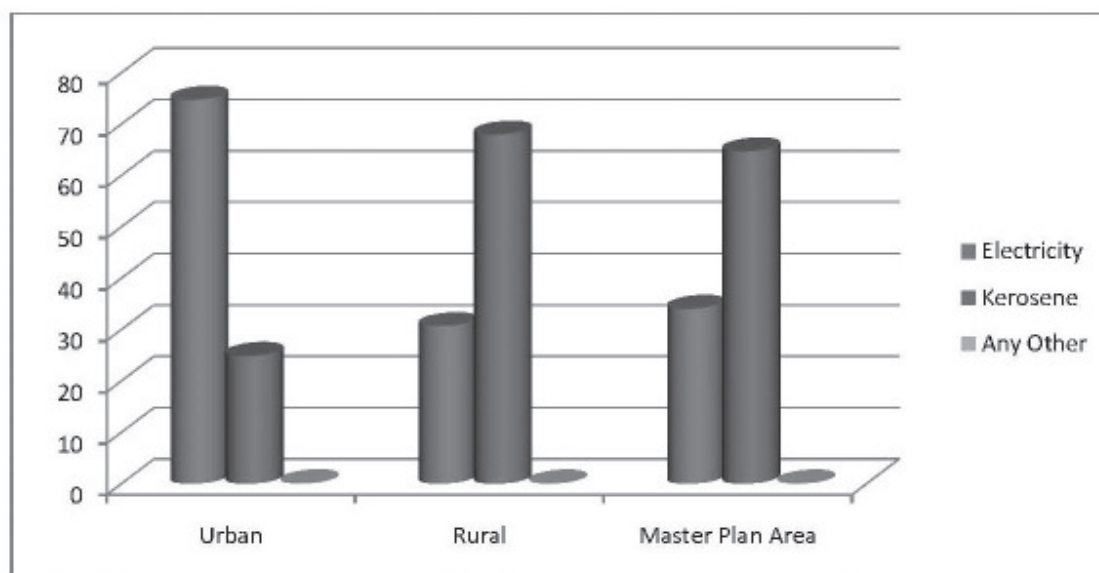


Table 4.3 : Number and Percentage of Households by Main Source of Drinking Water

Particulars	Urban Area		Rural Area		Mariani Master Plan Area	
	No of Households	Percentage %	No of Households	Percentage %	No of Households	Percentage %
Tap water from treated source	656	14.23	8199	12.79	8855	12.89
Tap water from untreated source	160	3.47	2135	3.33	2295	3.34
Covered well	16	0.35	396	0.62	412	0.60
Un-covered well	13	0.28	8186	12.77	8199	1.03
Hand pump	2841	61.61	27469	42.86	30310	44.12

Tube well	861	18.67	10954	17.09	11815	17.20
Spring	1	0.02	217	0.34	218	0.32
River/Canal	26	0.56	1197	1.87	1223	1.78
Tank/Pond	11	0.24	5044	7.87	5055	7.36
Other source	26	0.56	289	0.45	315	0.46
Total	4611	100	64086	100	68697	100

Source : Census of India.

Figure 4.3 : Source of Drinking Water (%)

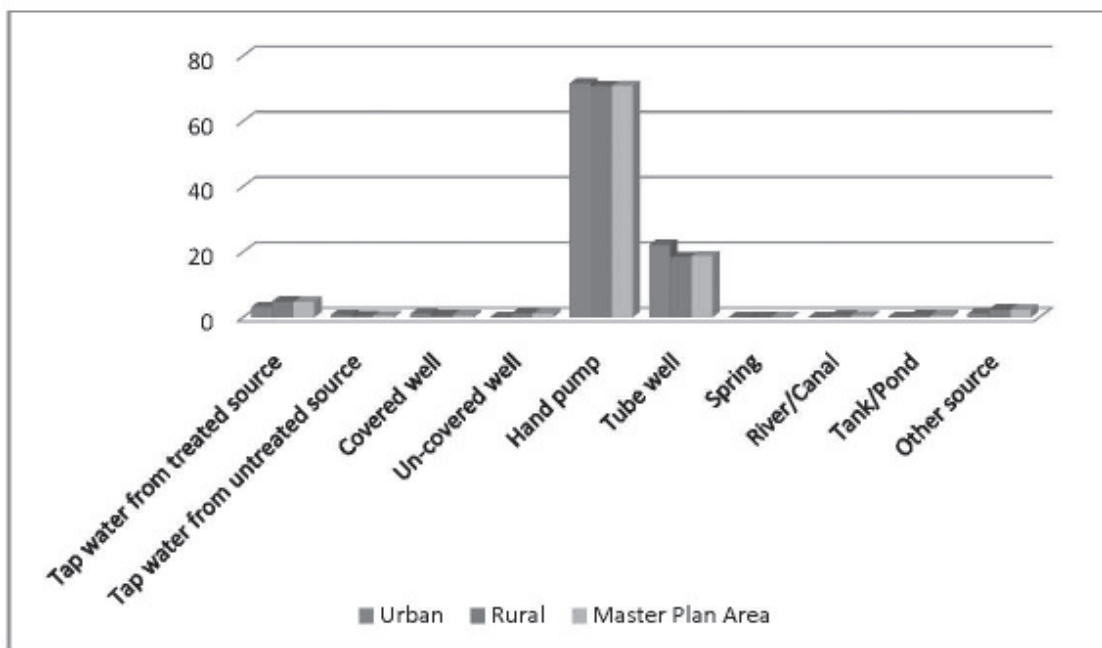


Table 4.4 : Number and Percentage of Households by Type of Fuel Used for Cooking

Particulars	Urban Area		Rural Area		Mariani Master Plan Area	
	No of Households	Percentage %	No of Households	Percentage %	No of Households	Percentage %
Firewood	1376	29.84	55863	87.17	57239	83.32
Crop residue	37	0.80	628	0.98	665	0.97

Cow dung cake	3	0.07	69	0.11	72	0.10
Coal etc.	3	0.07	19	0.03	22	0.03
Kerosene	214	4.64	110	0.17	324	0.47
LPG/PNG	2927	63.48	7082	11.05	10009	14.57
Electricity	1	0.02	23	0.04	24	0.03
Bio-gas	9	0.20	39	0.06	48	0.07
Any other	1	0.02	89	0.14	90	0.13
No cooking	40	0.87	164	0.26	204	0.30
Total	4611	100	64086	100	68697	100

Source : Census of India.

Figure 4.4 : Type of Fuel Used for Cooking (%)

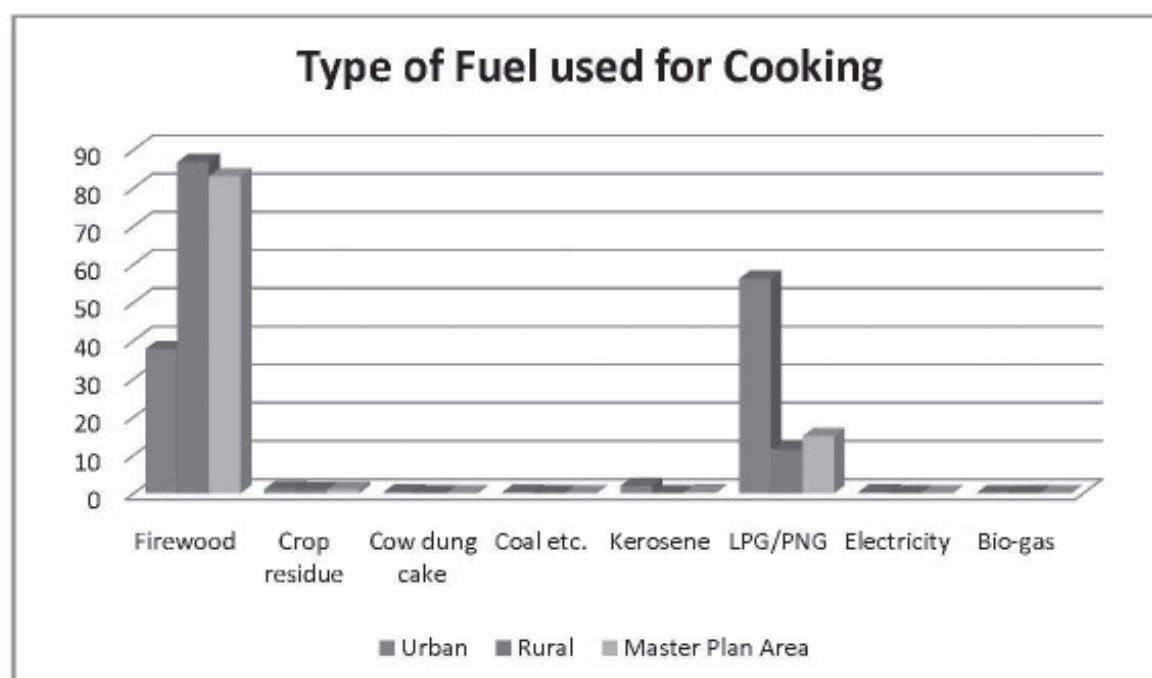


Table 4.5 : Number and Percentage of Households Availing Banking Services and Number of Households Having Each of the Specified Assets

Particulars	Urban Area		Rural Area		Mariani Master Plan Area	
	No of Households	Percentage %	No of Households	Percentage %	No of Households	Percentage %
Banking Services	3317	71.94	25396	39.63	28713	41.80
Radio	800	17.35	13953	21.77	14753	21.48
Television	3195	69.29	20252	31.60	23447	34.13
Computer/Laptop with Internet	238	5.16	777	1.21	1015	1.48
Computer/Laptop without Internet	466	10.11	2663	4.16	3129	4.55
Landline Telephone	106	2.30	838	1.31	944	1.37
Mobile Telephone	3430	74.39	23090	36.03	26520	38.60
Both Land line and Mobile Telephone	287	6.22	1737	2.71	2024	2.95
Bicycle	2753	59.71	38710	60.40	41463	60.36
Scooter/ Motor Cycle/ Moped	1231	26.70	7272	11.35	8503	12.38
Car/ Jeep/ Van	514	11.15	2251	3.51	2765	4.02
None of the specified asset	341	7.40	16249	25.35	16590	24.15

Source : Census of India.**Table 4.6: Number and Percentage of Households by Type of Drainage Connectivity for Waste Water Outlet**

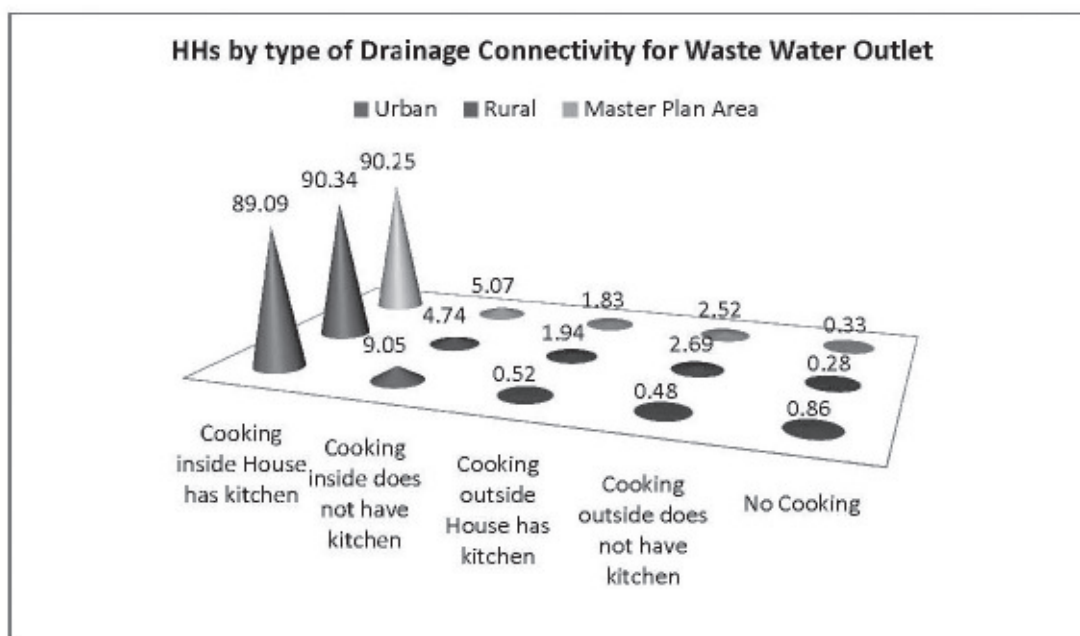
Type of Drainage	Urban Area		Rural Area		Mariani Master Plan Area	
	No of Households	Percentage %	No of Households	Percentage %	No of Households	Percentage %
Closed Drainage	117	2.54	805	1.26	922	1.34
Open Drainage	1289	27.95	13196	20.59	14485	21.09
No Drainage	3205	69.51	50085	78.15	53290	77.57
Total	4611	100	64086	100	68697	100

Source : Census of India.

Table 4.7 : Number and Percentage of Households by Availability of Kitchen Facility

Availability of Kitchen		Urban Area		Rural Area		Mariani Master Plan Area	
		No of Households	Percentage %	No of Households	Percentage %	No of Households	Percentage %
Cooking inside House	Has kitchen	4337	94.06	55796	87.06	60133	87.53
	Does not have kitchen	185	4.01	4423	6.90	4608	6.71
Cooking outside House	Has kitchen	42	0.91	1708	2.67	1750	2.55
	Does not have kitchen	7	0.15	1995	3.11	2002	2.91
No Cooking		40	0.87	164	0.26	204	0.30
Total		4611	100	64086	100	68697	100

Source : Census of India.

Figure 4.7 : Number and Percentage of Households by Availability of Kitchen Facility

4.4. SLUMS – SQUATTERS AND INFORMAL SECTOR :-

The Slum in urban area is a common phenomenon in India. Every city has varied set of slums defined by location, community, income group and housing typologies. Generally Slums can be identified by their informal settlement patterns. Slums are characterized by irregular clustering of small buildings, a lack of formal road networks, a high ratio of roof coverage to area, an absence of vegetation, and proximity to railways, highways, and other hazards such as steep slopes or low-lying areas which experience flooding.

Slum has not been identified till now in Mariani Master Plan Area.

4.5. HOUSING STOCK, SHORTAGE AND NEED ASSESMENT: -

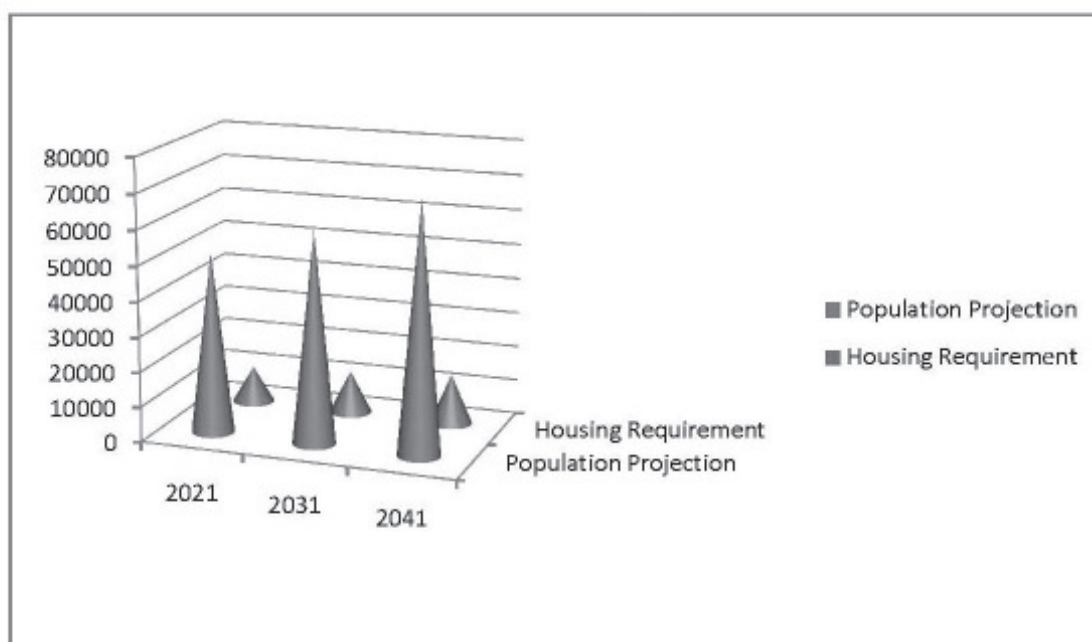
There are 1970 census houses within the Mariani Municipal Board area and 1192 houses within the Mariani town (MB) area, used as residence and residence cum other use i.e. a total of 3162 census houses in urban area of Mariani Master Plan. This shows that an average of 4.5 persons occupy per house in urban area of Mariani master plan.

To find out the housing need for future a detailed study of family size, level of obsolesce, existing shortage etc. are necessary. However, on the basis of projected population and household size of 5 persons, the gross housing needs are depicted below:

Table 4.8 : Housing Requirement in Mariani Master Plan Area upto 2041

Year	Projected Population	Gross Housing Requirement
2021	115304	10349
2031	164031	12099
2041	233350	14212

Table 4.8 : Population Projection and Housing Requirement in MMPA upto 2041



CHAPTER - 5

TRANSPORTATION

5.1. NETWORK OF ROADS:-

Urban road network is considered as engines of economic growth. However, the roads of Mariani urban area are very narrow and shoulder width is insufficient to accommodate the present traffic volume for easy movement and there is also little scope for the widening. Mariani is well connected with Jorhat, Namrup, Dibrugarh, Mon district of Nagaland by road. The historic Dhodar Ali passes through the town connecting Namrup towards east, Simaluguri, Nazira, Joysagar towards west. Mariani town is located 45 km away from the historic town of Jorhat and roughly located between Jorhat and Namrup town. Bhoju, the nearest railway station is well connected by major passenger trains like intercity which is 3 km away from the town and easily approachable. Nearest junction is Simaluguri. Distance from Dibrugarh Mohanbari airport to Mariani is about 77 km and Jorhat airport is about 80 km serves the town. Indigo, Air India regularly flies to both the airports. Most of the places of the town are easily communicable by walk and bicycle. Rickshaw and Electronic Rickshaw facilities are available within the town.

Mariani being the third gateway for the state of Nagaland. Considerable amount of goods and passenger traffic by road passes through the town destined to various places of the region. There is an existing road network in Mariani but it lacks in form and pattern. The Mon High-way, Bhojo Mariani road and the Dhodor ali are the main transportation corridors and form an integral part of the existing circulation pattern of Mariani town. Other local roads are narrow and possess very little scope for future expansion.

The railway station remains always busy and requires immediate improvement. Moreover, road junctions in the town are not technically developed and it requires immediate technical intervention.

In this plan, emphasis has been given on the following aspects for effective transportation system in Mariani Master Plan Area.

- Optimum use of the existing transportation system through improved traffic operation and controls.
- Improvement of the existing road network through strengthening and widening.
- Provision for adequate parking facilities.
- Development of new roads and other transport facilities.

The plan recommends development of road infrastructure as per table given below:

Table 2.11 : Category of Roads

Category of Roads	Name	Existing Width (m)	Recommended Width (m)
Principal Main Roads	Dhudor Ali	25	21 to 25
	Namtola Road	25	21 to 25
Main Roads	Nahor Ali	3.66	9 to 12

	Parbotipur Road	3.66	9 to 12
	Bank Road	3.05	9 to 12
	Baruah ali Road	6.4	9 to 12
	Court Road	6.1	9 to 12
	College Road No. 1	6.1	9 to 12
	P.C. Gogoi Path	3.66	9 to 12
	Mariani – Amguri Road	4.57	9 to 12
Others Road	-		Minimum 6 and 3.65 for single plot

5.2. OVERVIEW OF CRITICAL ROADS AND IMPROVEMENT:-

Mariani is well connected with the rest of the country by roads and railways. The Dhudor ali have connected Mariani with other places as shown below:

- Mariani to Namrup
- Mariani to Jorhat
- Mariani to Nazira
- Mariani to Dibrugarh .
- Mariani to Mon District of Nagaland via Tizit.
- Mariani to Arunachal Pradesh.

Mariani is also connected with railway network from Bhojo to Guwahati. The railway station of Bhojo facilitates the passengers to travel to Guwahati and also outside Assam. Beside train plying of taxis, buses, winger and trucks are playing a major role in transporting passengers and goods to and from Mariani.

Mariani town has gained importance in the field of tea industry and business owing to its industrial base and existence of nearby industrial and business towns like Jorhat.

Demow, Namrup, Nahorkotia and Dibrugarh. This has resulted in increase of vehicles on the roads of Mariani town. On the other hand, a good number of ASTC buses, private buses and winger play through the town.

5.3. BUS TRANSPORT TERMINALS:-

At present both ASTC and private bus stations are located along the road side of Dhudor Ali within the main town. These stations serve intra - urban traffic, i.e. regional traffic but create lots of traffic congestion in the area. Taxi and Auto stands are also located by the side of the roads. This stands are also creating congestion and obstruction to the smooth flow of traffic.

5.4. FREIGHT ZONES LOGISTICS:-

Presently, there is no truck terminus at Mariani. The loading and unloading from trucks are carried out by the side of road.

5.5. FOOTPATHS AND BICYCLE TRACKS:-

Footpaths are normally designed for pedestrian for pleasant and comfortable walking. In Mariani, there is no any footpath in other roads of the town. There is no cycle track in the town. Exclusive lane for slow moving vehicles, pedestrians along with spaces for street vendors are also essential for overall development of a town. The hawkers and street vendors also play an important role in urban economy. The notification of vending and no vending zone by the authority is mandatory as per the provisions of the Street Vendors Act, 2014. This improves the capacity of the lanes designed for motorized vehicles and increases the safety of slow moving vehicles and pedestrians.

The plan suggests construction of footpath in both sides of all the roads in the town by the concerned authority .The plan also earmarks cycle tracks in the town.

The width of footpath as per URDPFI guidelines is as follows:

Table 5.2 : Width of Footpath

Sl. No.	Description	Width (Mtr)
1	Minimum free walkway width in residential/mixed use areas	1.8
2	Commercial/Mixed Use Areas	2.5

The URDPFI Guidelines for cycle /NMT track is given in the following table:

Table 5.3 : Cycle Track

Description	Arterial Road	Sub-arterial Road	Distributary Road	Access Road
Non Motorized Vehicle	Segregated cycle track	Segregated cycle track	Cycle lane	Mixed/traffic
location	Between carriageway or street parking and footpath on either edge of the carriageway	Between carriageway or street parking and footpath on either edge of the carriageway	On the edge of the carriage adjacent to the footpath or parking	Not applicable
Gradient	1:12-1:20	1:12-1:20	1:12-1:20	1:12-1:20
Lane width	2.2 to 5.0m	2.2 to 5.0m	2.2 to 5.0m	Mixed with motorized vehicular traffic
Minimum width	2.5m for a two lane cycle track and 1.9m for a common cycle track and footpath	2.0m for a two lane cycle track and 1.7m for a common cycle track and footpath	1.5m	1m(painted)

5.6. PARKING:-

At present, there is no organized parking space for the cars, two wheelers in the market area. The cars are generally parked on the main road of the town. The roads are already overcrowded with traffic and further encroachment on road surface by cars and two wheelers has resulted obstructed traffic flow.

The plan proposes one parking area for two wheelers and four wheelers at junction point of and Bhoju Charali and in front of Mariani College Stadium.

The recommended equivalent car space (ECS) required for different type of vehicles as per URDPFI guidelines are given in the following table for design of parking areas:

Table 5.4 : Parking Space

Sl. No.	Vehicle Type	ECS
1	Car/Taxi	1.00
2	Two Wheeler	0.25
3	Auto Rickshaw	0.50
4	Bicycle	0.10
5	Trucks/Buses	2.50
6	Emergency Vehicle	2.50
7	Rickshaw	0.80

5.7. AREAS WITH MAJOR TRAFFIC CONGESTION AND PARKING ISSUE, ACCIDENT PRONE AREA:-

The maximum inter - town traffic volume is generated on the road starting from Mariani Daily Bazaar area and moving towards Jorhat in Gar Ali. This is the most vital link for both to the town and the rest of the district. The second inter town traffic generating road is Mariani-Titabar Road.

The present mixed traffic on narrow roads has accelerated traffic congestion in Mariani. The town has mainly two accident prone areas, the area adjacent to the traffic police point near Mariani daily bazaar.

The heavy vehicles belonging to tea industry ply daily through the town is also a cause of concern for public safety.

5.8. IMPROVEMENT OF ROTARY AND JUNCTIONS:-

The town does not have a road rotary and plan does not foresee its requirement. However, improvement of all road junctions as per IRC guidelines is urgent and important for improving the traffic scenario.

5.9. STREET LIGHTING AND PROPOSED IMPROVEMENT PLANT:-

The town is illuminated by Mariani Municipal Board with around 200 numbers of street lights of 40 watts for the convenience of the people. The Municipal Board is planning a project for solar light installation in the streets covering the 16 (sixteen) wards.

5.10. SIGNAGE – AVAILABILITY AND REQUIREMENT:-

The ULB, traffic & other concerned departments will assess the requirement of Signage and accordingly install the signage as per the rules and regulations for the beautification of the town as well as smooth flow of traffic and public convenience.

5.11. MAJOR PROPOSALS:-

- One Railway Overbridge is proposed from near Hengul Theatre to Mariani Town after crossing two Railway Level Crossing.

CHAPTER – 6

INFRASTRUCTURE, PUBLIC UTILITIES & SERVICES

6.1. PHYSICAL INFRASTRUCTURE:-

6.1.1. WATER SUPPLY:-

The source of water in Mariani is mainly Tube Well, shallow tube, Ponds and Supply Water through Public Health Engineering Department. Most of the household use tube well as source of water where the supply water is not available. The only source of water is tube well and the ring well as ground water and surface water is readily available at Mariani town and its adjoining areas. Though the tube well and ring well are efficiently functioning, it will no longer be considered as free from contamination due to presence of a number of pit latrines. A comprehensive water supply scheme with treatment plant covering the population up to 2041 is the need of the hour.

The objective of a public protected water supply system is to supply safe and clean water in adequate quantity, conveniently and as economically as possible. Rising demand of water due to rapid urbanization is putting enormous stress while planning the water supply system for an area; it is evident to consider water conservation aspects, which may be possible through optimal use of available water resources, prevention and control of water and effective demand management.

As per URDPFI guidelines the norms for water requirement for institutional buildings are given below:-

Table 2.15 : Requirement for Institutional Buildings

Sl. No.	Institutions	Litres per head per day
1	Hospitals (including Laundry)	-
	a) No. of beds exceeding 100	450 (per bed)
	b) No. of beds not exceeding 100	350 (per bed)
2	Hotels	180 (per bed)
3	Hostels	135
4	Boarding Schools	135
5	Restaurants	70 (per seat)
6	Day School/Colleges	45
7	Offices	45
8	Cinema, Concert Halls and Theatre	45

In addition to the above the fire- fighting water demand is also as a function of population. It is desirable that one- third of fire fighting requirements from part of the service storage. The balance requirement may be distributed to several state tanks of strategic points. These strategic points may be filled from nearby pond streams or cannels by water tanker's wherever feasible.

6.1.2. DRAINAGE SYSTEM :

The drainage system at Mariani town is not so good compared to nearby towns. There are natural channels in the both sides of town connecting the Teok River. But due to the poor drainage and sewerage system in Mariani, creates the problem of flood in low lying area during rainy season also low-lying of Dhudor ali, which passes through the middle of the town, the existing drains are not capable of draining the surface run off out completely and as a result water logging has become a regular feature during the rainy season. The beds of the drains have become shallow resulting in the crippling of their capacity to discharge drain waters effectively. Even in the winter too, this disability causes water logging on the drains thereby giving chances for rise of mosquitoes and flies. A contour survey can be carried out to study the existing drainage condition of the town.

6.1.3. SANITATION:

In Mariani Master Plan area more than 50% household used septic tank. The percentage of household who used septic tank is almost double in urban area then in rural area. In the Master plan area still people use open pit or other means which are not conducive for health and environment atmosphere. So, this plan suggests authority concern to take step for such type of practices and also take measures under some scheme or providing financial assistance to construct septic tank in their household or authority concern to take steps for the construction of public toilet/sewerage system. These measures will help to reduce the hazardous atmosphere in urban areas as well as in rural areas. The number and percentage of households by type of latrine facility in MMPA are shown below:

Table 2.16 : Number and Percentage of Household by Type of Latrine Facility

Type of Latrine Facility	Urban Area		Rural Area		Master Plan Area	
	No. of Households	Percentage (%)	No. of Households	Percentage (%)	No. of Households	Percentage (%)
Pipe Sewer System	497	10.78	2042	3.19	2539	3.70
Septic Tank	2411	52.29	7124	11.12	9535	13.88
Other System	585	12.69	5568	8.69	6153	8.96
Ventilated pit	359	7.79	6413	10.01	6772	9.86
Open pit	466	10.11	21382	33.36	21848	31.80
Night Soil Disposed into open Drain	1	0.02	522	0.81	523	0.76
Night Soil removed by human	0	0.00	191	0.30	191	0.28
Night Soil removed by animal	2	0.04	288	0.45	290	0.42
Public Latrine	33	0.72	1070	1.67	1103	1.61
Open	257	5.57	19486	30.41	19743	28.74
Total	4611	100.00	64086	100.00	68697	100.00

Source : Census of India.

Figure 2.13 : Households by Type of Latrine Facility (%)

The general standard for public toilets in public area and modified norms for public toilets in public places and roads recommended in URDPFI guideline are given below:-

6.1.4. SEWORAGE NETWORK:-

Like the rest of the towns of the state, Mariani also does not have sewerage network and treatment plant. Human night soil is generally disposed at conventional septic tanks or low cost sanitary pits. Till the execution of the sewerage scheme, it is recommended to encourage the people to construct sanitary latrines of their own and to cover poor families under Swaachh Bharat Mission. The use of service latrine should be banned as per law for the health and hygiene of the community. It is also suggested that, concern development should initiate action to implement sewerage system for Mariani town.

6.1.5. SOLID WASTE MANAGEMENT – CURRENT SITE ASSESSMENT, LAND OWNERSHIP, PROPOSED SITE:-

The collection and disposal of solid waste in Mariani is done by Mariani Municipal Board. Mariani Municipal Board has provided dustbins in some specified locations for collection of solid waste from the households. With the help of garbage van the collected waste is dumped in the specified open dumping ground in every morning. A garbage disposal site and solid waste management site has been proposed at Rajabari Grant.

6.1.5. ELECTRIC SUB-STATION AND MAJOR TRANSFORMERS:-

Power requirement of Mariani Master Plan Area is met by the ASEB grid. Around 75% of the total population in the Town have electric connection. Mariani is also facing the problem of acute scarcity of electric power like the other towns of the state. In peak hours load shedding for one or two hours is a way of life for its residents. Since the consumption is increasing at a fast rate, the department concerned fails to cater to the needs of the people causing load shedding a bitter experience. The authority concern provides around 200 numbers Tube lights/CFLs of 40 Watts in the street of Mariani town for the benefit of the people. There is one electric sub-station at Mariani Town.

6.2. SOCIAL INFRASTRUCTURE:-

6.2.1. SCHOOLS, COLLEGES AND UNIVERSITIES:-

The progress and development of a place is closely related to expansion and development of education. There are many good educational institutions in the town, catering the needs of many nearby villages and tea-gardens. Mariani is known for its eminent scholars. Schools provides education both Assamese and English Medium. Most of the schools follow syllabus of Secondary Education Board of Assam, others follows Central Board of Secondary Education (CBSE). For higher secondary (10+2) both schools follow syllabus of Assam Higher Secondary Education Council (AHSEC). Some of them are: The Rajadhap LP School, The Rajadhap ME School, BPBM Higher

Secondary School, PKB Girls HS School, Chah Mazdoor Vidya Niketon, Polestar Academy, Mariani Junior College, Polestar Academy, Shankaedev Sishu Vidyab Niketon, Mariani Town High School, Shankardev Shishu Vidya Niketon, Mariani Jatiya Bidya laya, Shantipur LP School, Polestar Academy, Mariani Jatiya Bidyalaya etc, which are a host of brilliant students who are now placed across various reputed organisations/companies in India and abroad. The St Joseph's Higher Secondary School is one of the major institutes in Mariani boosting education in this locality. The Mariani College, The Mariani Junior College, The Mariani Commerce College, Junior College are some of the other major institutes of Higher Education of the locality. The Mariani Hindi High School is a Hindi-medium school. The nearest University is the Dibrugarh University.



6.2.2. HIERARCHY OF HOSPITALS AND HEALTH CENTRES:-

Mariani is little underdeveloped regarding health services. In Spite of patient flow from nearby state Nagaland, only a handful doctors are available for the service. Any serious cases the patients are referred to Assam Medical College, Dibrugarh or Jorhat Medical College, Jorhat. In Mariani town, there are Mariani Town Hospital, Mariani Civil Hospital, Chanakya Medical, Mariani State Vety. Hospital, Rajaphukhuri Hospital, Teok Garden etc are located in Mariani. Besides, there are Primary Health Centres, Secondary Health Centres and Sub Centres in specified places of Mariani Master Plan Area. In spite of that, considering the population growth in greater Mariani area, medical facilities at present are not adequate, as a result large no. of patients rush to Dibrugarh and Jorhat for better treatment. But at present, there is a construction of one Medical College in Jorhat Distric is under progress which will be solve the problems of serious health issues nearby towns of Jorhat district.

6.2.3. PARKS AND RECREATION SPACES:-

Mariani Master Plan Area has only 0.714 sqkm of land for recreational facilities. There is also a library near Mariani College as well as in the middle of the town. There is also a park around a historic Ahom Kingdom's tank called Borpukhuri .There is also an DC Court at Rajadhap. Religious places of worship like Sarbojanin Namghar, Gurudwara Sahib, Hari Mandir, Kali Mandir Shiv Mandir, Shanti Mandir, Mosque, Buddha Mandir etc giving a truly secular ans cosmopolitan feeling. In addition to this, numerous vacant plots of land serve as play grounds. But now these are occupied by newly constructed badges leading to shortage of open spaces in the planned area.

CHAPTER – 7

ENVIRONMENT AND CITY BEAUTIFICATION PLAN

7.1. DESCRIPTION OF ECO-FRIENDLY AREAS:-

The Historic Dhudor Ali is passing through the Mariani town. There are several tea gardens in and around the Mariani Master Plan Area. There is a Gymkhana club golf course built sometime around 1945. This golf course was created by the tea planters. This golf course is 1.5 km away from the Mariani gymkhana and as a whole about 5 km away from the centre of the Mariani town. There are dramatic changes in elevation on this course which make it more interesting. The course is a part of the Naphuk Tea Estate. Besides, there are parks and playgrounds in the Master Plan Area.

7.2. PLAN/MEASURES FOR PROTECTION AND CONSERVATION OF ENVIRONMENTALLY – FRIENDLY ZONES:-

Being environmental friendly simply means having a lifestyle that is better for the environment. It's all about taking small steps towards mother earth so as to make this planet a better place for our communities and generations to come. A good way would be to start with conserving water, driving less, walking more, consuming less energy, buying recycled products, eating locally grown vegetables, joining environmental groups to combat air pollution, producing less waste, planting more trees and many more. The more that we do on our part the faster we will create an environment of living that promotes sustainability.

In the environmentally friendly zone, there is more than just a good recycling programmed in place. People of the town who are committed to conservation and preservation of resources should encourage options like community play grounds, public transportation, green construction and work to change the way that fossil fuels and other resources are used to support community services.

This plan suggest following proposals for protection and conservation of environmental friendly zones:-

- People of Mariani Town should join hand with environmental groups to protect the town and make the environment clean and green.
- Reduce, reuse, recycle waste hierarchy is the order of priority of actions to be taken to reduce the amount of waste generated and to improve overall waste management processes and programs.
- Plantation habit should be grown up among the people. For this necessary awareness camp should be organized by competent authority for conservation of natural resources and composting system.
- Steps should be taken by the authority to stop people from littering on roads. Instead, educate them to put trash and garbage in dustbins. The pile of garbage on road hampers the beauty of the city and also pollutes the air

7.3. CITY BEAUTIFICATION PLAN/ PROPOSALS:-

To improve town's appearance and aesthetic view, neighbourhoods often try to update what is known as streetscape, which pertains to the area between the driving lanes and the edge of the private property. Partly this is a popular strategy because it is public space and it's easy for the government to dictate what will happen there. In truth, streetscape can be quite effective in uniting block faces or a series of blocks that are discordant in some way, because streetscape often includes plantings, the effect is to soften the view created by streets and hopefully sidewalks. Care in the choice of materials and in the quality of the installation makes all the difference in this form of beautification.

In addition to streetscape, sometimes we need a focal point. This might be public art and open air theatre, fountains, a clock tower or grouping of tall grasses. If we already have a lonely statue or old historical building with nothing around it, maybe we should add planting beds of considerable size, an inviting bench or two, and maybe an interpretive sign explaining the rest of the store". A tree planting project, either on a vacant plot, in a park, or in the parkway between the side walk and the street is great for improving Town's appearance over the course of a few years at a relatively low cost. Voluntary schemes should be taken up by neighbourhood basis for cleaning up the park of the Town. Project should also be taken up for cleaning the river or stream. Litter collects on the banks and then ultimately in the water, especially when no trash cans are provided.

7.4. ROADSIDE PLANTATION:-

The main object of road side plantation is to provide protection to road, traffic, check soil erosion, food, fuel, fodder and timber to the society and mitigate climate change issues. Plantation is durable assets that produce fruits and raw-materials for agro based industry, and also generate livelihood after 7 to 10 years.

This plan suggests the social forestry department to prepare project on road side plantation with details of road to be covered, length of road and species of plants to be planned with numbers of plants for entire Mariani Master Plan area.

Plantation of fruit bearing plants, suitable to local agro-climatic condition should be done in every area of the Master plan. The authority concerned should take steps for organizing camp and awareness program for road side plantation and educate the people about the benefits of road side plantation including its impact on city's landscape.

7.5. URBAN AGRICULTURE AND URBAN FORESTRY:-

Urban Agriculture is the new culture that is catching up in emerging cities. Since the population growth rate is very high, natural resource to feed the increasing population in coming days is going to be a difficult task. So, urban agriculture is seen as a big solution to the problem.

Urban forestry is the careful care and management of tree in urban settings for the purpose of improving the urban environment. Urban forestry advocates the role of trees as a critical part of the urban infrastructure. Urban forest functions are thus often oriented toward human outcomes, Such as shade, beauty and privacy. Urban forests bring many environmental and economic benefits to town.

Among these are energy benefits in the form of reduced air conditioning, reduced heating by shading buildings, homes and roads, absorbing sunlight, reducing ultraviolet light, cooling the air and reducing wind speed.

So, urban forestry scheme should be taken by competent authority for afforesting degraded forest land in the Mariani Master plan Area. This type of scheme will act against climate change by creating a carbon sink and against air pollution in the town. This plan also suggests for starting tree surveys in the town which can be conducted by NGO and college or school students. A plan should be framed to create small nurseries in Govt. school as well as in private institution where there is extra space.

7.6. PUBLIC RAIN WATER HARVESTING SCHEME:-

Rainwater harvesting is a process involving collection and storage of rain water that runs off natural or man – made catchment areas, e.g. roof top, Compounds, rock surface or hill slopes or artificial repaired impervious/semi-pervious land surface.

Due to deforestation and the consequent ecological imbalance, the ground water level is going down day by day. The constant rising demand of water supply especially from the urban areas does not match with the surface water sources, as a result of which the water reserves beneath the ground level are over exploited. This consequently results in the water level depletion.

Water harvesting apart from recharging the ground water level, increases the availability of water at a given place at a given point of time. It also reduces the power consumption. It further reduces the run off which chokes the storm water drains artificial flooding, chances of soil erosion and improves the quality of water. The plan suggest rain water harvesting scheme to be implement by a competent authority. Moreover, the urbanization trend reduces the infiltration rate of rain water into the sub-soil thereby reduces ground water recharging.

7.7. DEVELOPMENT OF PARKS AND RECREATION SPACES:-

The Plan recommends 3.47 hectare of land for recreational purposes. The land earmarked for parks and recreation is not sufficient for the increasing population. This plan is not in a position to increase the land for parks and recreation as required for the proposed population due to non availability of Government land in the plan area. The plan envisages a Town hall to meet the social and cultural needs of the town and also recommends modernizing the existing play ground with adequate infrastructure.

7.7.1. URDPFI GUIDELINE FOR PARKS AND RECREATION SPACES:-

The provision of socio- cultural facilities shall correspond to the changing urban demography and work life style.

Table 7.1 : Norms for Socio-Cultural Facilities

Sl. No.	Category	Population Served Per Unit	Land Area Requirement
1	Anganwadi – Housing Area/Cluster	5000	200-300 Sqm
2	Community Room	5000	750 Sqm (NBC)
3	Community Hall/Marriage Hall/Library	15000	2000 Sqm
4	Music, Dance and Drama Centre	100000	1000 Sqm

Table 7.2 : Norms for Recreational Facilities

Sl. No.	Category	Population Served Per Unit	Land Area Requirement
1	Housing Area Park	5000	0.50 Ha
2	Neighbourhood Park	15000	1.00 Ha
3	Community Park	100000	5.00 Ha

Table 7.3 : Norms for Sports Facilities

Sl. No.	Category	Population Served Per Unit	Land Area Requirement
1	Residential Unit Play Area	5000	5000 Sqm
2	Neighbourhood Play Area	15000	1.50 Ha
3	District Sports Centre	100000	8.00 Ha

7.8. BEAUTIFICATION OF MAZOR TRANSIT ZONE :-

Mariani has emerged as a major transit zone for Tea. The Tea of Mariani region transit to all over India. So, it is very much essential to beautify and upgrade the major traffic points like bus stand, Railway station and market area of this emerging transit zone of upper Assam.

7.9. ROAD SIGNAGE AND STREET FURNITURE :-

Road signs are signs erected at the side of or above roads to give instruction or provide information to road users. The earliest signs were simple wooden or some milestones. But in course of time, many states of India have been adopting pictorial signs or otherwise simplified and standardized

their signs to overcome language barriers and enhance traffic safety, such pictorial signs use symbols in place of words.

Street furniture is a collective term for objects and pieces of equipment installed on streets and roads for various purposes. It included Benches ,traffic barriers ,bollards post boxes phone boxes, street lamps, traffic lights, traffic signs ,bus stops, taxi stand, public lavatories fountains, public sculptures and waste receptacles an important consideration in the design of street furniture is how it affects road safety.

In Mariani Master Plan Area existing road signs and furniture are inadequate for increasing traffic and those are not also scientifically designed. So, the plan suggests to authority concern to take steps for the installation of warning, priority, prohibitory, mandatory, information, facilities, service, direction, position and indication signs in the roads of Mariani town, so that local people as well as outsiders can be benefitted and road safety can be maintained.

In Mariani Master Plan area presently there is no street furniture necessary for the public. The concern authority should take steps for the construction of public lavatories at important public places and installation of benches in the park and public places, post boxes, bus stop, taxi stand, waste collectors etc.

This plan recommends for preparation and execution of a city beautification plan covering street light, traffic signal etc. that will enhance the beauty of this resourceful town.

CHAPTER – 8**LAND USE PLAN****8.1. DEVELOPABLE AND NON – DEVELOPABLE AREA OF THE MASTER PLAN:-**

Urban growth and development is often conditioned by the natural landscape like hills, water bodies, forests and manmade impediments like railway line, major roads, river, canals etc. It is also conditioned by the resources and technology employed in overcoming the growth impediments and constraints.

Existing Mariani Master Plan covers an area of 25.03 sqkm. Except the Dhudhor Ali, passing through the middle of the Town, no other physical features are constrains for development. The soil is very fertile and good vegetation is observed in the region.

The quality of urban life and its functional efficiencies are governed by its land-use pattern. In order to understand and analyze systematically the functional relationship between various uses particularly the place of working, living and recreation, a detailed land use survey was conducted during 2010 and was analyzed up to 2041 to estimate the present and future need of the Town. The present Mariani Town committee covers an area of 8.00 sqkm (800 hectare), while the existing Master Plan covers an area of 25.03 sqkm, out of which total developed area is 5.68 sq.km. of the total plan area, i.e. 31.70% of the total plan area.

8.2. EXISTING AND PROPOSED LAND-USE :-

The existing various uses of land and the areas occupied by each use in Mariani Master Plan Area has been shown in the following table:

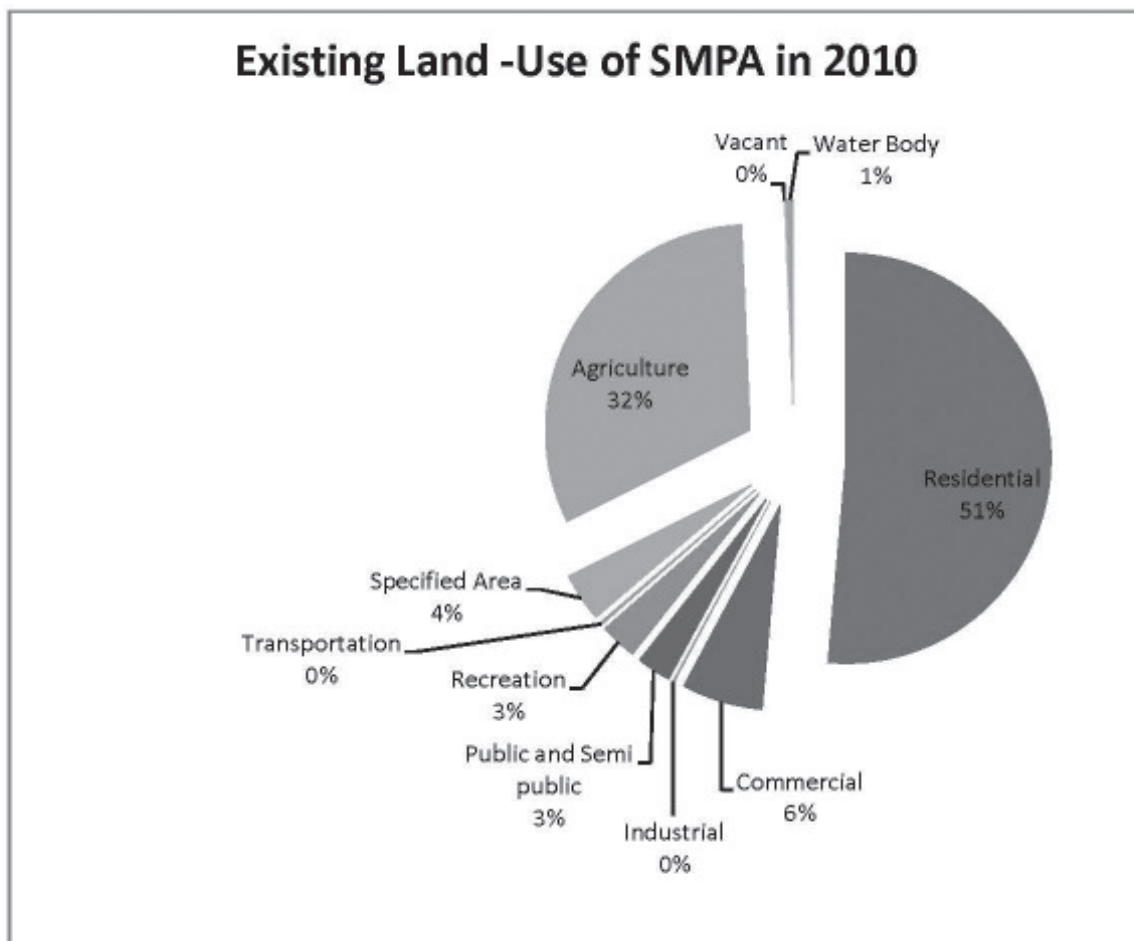
Table 8.1 : Existing Land-Use of MMPA in 2010

Sl. No.	Categories	MARIANI Master Plan Area in Hectare	Percentage of Mariani Master Plan Area (%)	Percentage of Developed Area (%)
A.	DEVELOPED AREA			
1	Residential	1346.90	42.14	57.38
2	Commercial	166.80	5.22	7.11
3	Industrial	3.60	0.11	0.15
4	Public and Semi public	71.00	2.22	3.03
5	Recreation	76.30	2.39	3.25
6	Transportation	581.80	0.18	24.78
7	Specified Area	101.00	3.16	4.30
	Total	2347.40	73.45	100.00

B.	UNDEVELOPED AREA			
8	Agriculture	830.80	25.99	
9	Vacant Land	2.30	0.07	
10	Water Body	15.50	0.49	
	Total	848.60	26.56	
	TOTAL MASTER PLAN AREA	3196.00	100.00	

Source: Town & Country Planning, Jorhat Land Use Survey 2010

Figure 8.1: Existing Land-Use of MMPA in 2010



Land use planning has a bearing on the expansion of the Town and put pressure on rural areas. A change in urban economic function causes changes in population. The decision to locate administrative block, commercial activities and industrial estates in urban areas stimulates general economic development and accounts for population growth resulting in opportunities for employment, increased income and business opportunities.

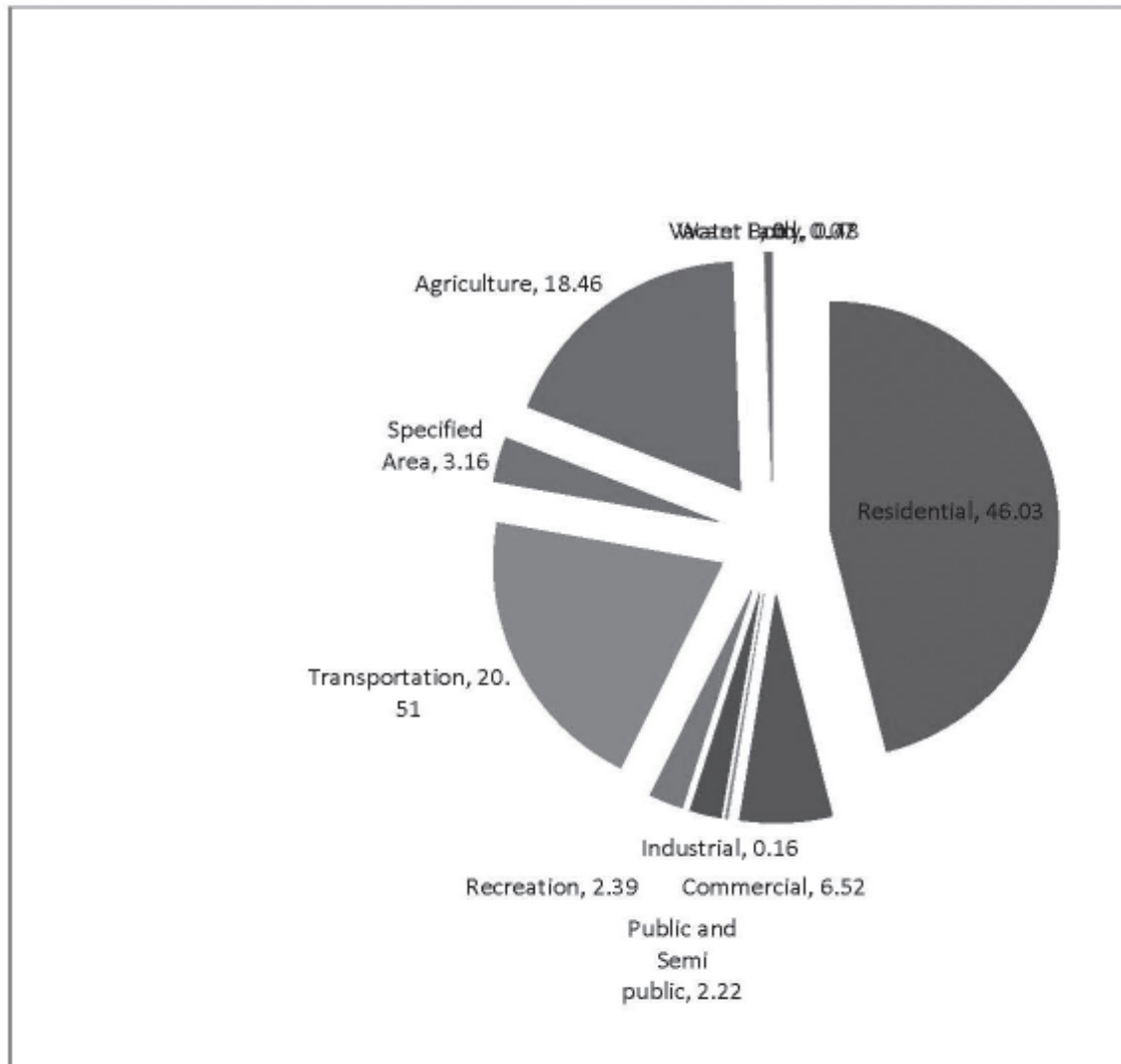
The proposed Mariani Master Plan covers an area of 126.4715 hectare or 1.264715 Sq km, out of which about 438.00 hectare or 13.71% of the total plan area is proposed to be developed for urban use by 2041 for a projected population of 71061 persons.

The following table shows the proposed distribution of land uses in Mariani Master Plan Area up to 2041.

Table 8.2 : Proposed Land-Use of Mariani Master Plan Area upto 2041

Sl. No.	Categories	Mariani Master Plan Area in Hectare	Percentage of Mariani Master Plan Area (%)	Percentage of Developed Area (%)
A.	DEVELOPED AREA			
1	Residential	1471.00	46.03	56.83
2	Commercial	208.50	6.52	8.06
3	Industrial	5.00	0.16	0.19
4	Public and Semi public	71.00	2.22	2.74
5	Recreation	76.30	2.39	2.95
6	Transportation	655.48	20.51	25.33
7	Specified Area	101.00	3.16	3.90
	Total	2588.28	80.99	100.00
B.	UNDEVELOPED AREA			
8	Agriculture	589.92	18.46	
9	Vacant Land	2.30	0.07	
10	Water Body	15.50	0.48	
	Total	607.72	19.01	
	TOTAL MASTER PLAN AREA	3196.00	100.00	

Figure 8.2 : Proposed Land-Use in MMPA upto 2041



The existing various uses of land and the areas occupied by each use in Mariani Master Plan Area has been shown in the following table:

Categories	Mariani Master Plan Area in Hectare	Percentage of Mariani Master Plan Area (%)	Percentage of the total Developed Area
DEVELOPED AREA			
Residential	1337.30		
Commercial	166.80		
Industrial	3.60		

Public and Semi public	50.30		
Recreation	71.40		
Transportation	5.60		
Specified Area	246.80		
Total	584.00		
UNDEVELOPED AREA	14.80		
Vacant Land	2.30		
Agriculture	0.70		
Water Body	2.60		
Total	2.30		
TOTAL MASTER PLAN AREA	101.00		
Beautification and Landscape	4.90		
Garbage Disposal Site	1.50		
Water Supply	0.40		
Night Shelter	0.50		
Affordable Housing	9.10		
Administrative Area	13.20		
Roads	364.90		
Total	3196.00		
Total Developed Area	212.00		

8.3. COMPOSITE ZONES OR MIXED ZONES:-

With rapid urbanization and growth of urban population the demand for housing and market complex has increased manifold. The main item of development in the area will be development of well planned roads, drains, provision of external electrification, water supply and a site for community centre with a parks and a neighbourhood shopping centre. The project is proposed to be implemented in area of 4776.9sqm at ward no12.

It is proposed to develop 234.22sqm. of land for local shopping centre, 61804.68sqm for development of a park and for neighborhood community centre and 203419.88sqm. of land for road network and roadside drain.

CHAPTER – 9

PROPOSED PROJECT, BRIEF AND TENTATIVE FUNDING SOURCE

9.1. IDENTIFY PRIORITY SECTORS AND PROJECTS:-

The plan proposals for Mariani Master Plan Area spread up to 2041. It is quite obvious that the natural development will continue and the private developers will play an important role in this respect. As such, the private development is encouraged in conformity with the Master Plan. It is strongly recommended to stop unplanned and sporadic developments but to encourage balance planned and sustainable development where the provision for necessary physical infrastructure and socio-economic amenities are economically made possible. There are some immediate necessities as pointed out by the various stake holders, which are to be taken up as priority schemes for the Master Plan Area which is listed below:

- Widening and improvement of roads, with street lights and demarcation of notified parking area.
- Improvement of existing Mariani Daily market others near Mariani Municipal Board office and near Mariani tank in Mariani town into a well planned, people friendly business hub.
- Construction of a Tourist lodge and a Marriage hall.
- Construction of a Town Hall & old age home.
- Construction of Slaughter house.
- Improvement of existing traffic signal points and setting up new ones.
- Setting up of Organic farming industry.
- Setting up of Micro Small and Medium Enterprises.(MSME)
- Improvement of existing A.S.T.C. Bus station.
- Construction of Vendor and Hawker market.
- Construction of public bus stand and truck stand.
- Construction of Auditorium.
- Improvement of existing hospital and dispensaries.
- Construction of cold storage, ware house etc.
- Development and Construction of playground and Indoor stadium.
- System of regular collection and disposal of garbage in the master plan area by the concerned authority.
- Scheme for Solid waste Management system as per waste management Rule, 2016.
- Preparation and execution of a comprehensive drainage scheme.
- Execution of independent Residential Land Development.
- Water supply scheme
- Proposal for fuel filling station and LPG go down.

Necessary schemes for development of land and to provide necessary incentive to attract industrial enterprises in the areas earmarked for industries Abhaypuria Phatikachuwa gaon.

In the first phase, the schemes like widening and improvement of roads, construction of new roads, provision for required spaces for parks, playgrounds and parking places and improvement of

commercial and market areas including existing market, daily bazaar etc. can be taken up. The Town Committee has to play an important role in liaison with other Govt. agencies in formulation and execution of such schemes in the Master Plan Area. All the above schemes need to be carried out to make the plan area in to healthy place of living.

In addition to the above, the plan also recommends for the establishment of Health centre, construction of fly-over, construction of Administrative block housing and Govt. offices under one roof.

9.2. FUND REQUIREMENT FOR EACH SECTOR/ PROJECT:-

Fund requirement for each sector project will be finalized by the ULB & concerned line department after preparation of detailed project report as per Govt. instruction.

9.3. IDENTIFY LAND SITE FOR PROPOSAL:-

The plan finds the following sites are suitable for taking up the proposals in accordance with the existing trends of growth as well as for balanced development:

- One Bus Stop near College Stadium..
- One Truck Terminus at Naphuk Grant besides Dhudor Ali.
- One parking area for two wheelers and four wheelers at Bhoju Charali and at Nahor Ali.
- Water Supply Scheme :-At ward no 14
- Solid Waste Management System :- At Rajabari Grant.
- Residential Land Development Scheme :- At ward no. 16.
- Light and Medium industrial unit :- At Teak Gaon besides Nahor Ali.
- Oil filling station at Dhudor Ali.
- Cycle track : One is from Bhoju Charali to Nahor Ali and the other one is from Public Ground to Disang River Bridge on Dhudor Ali.
- Vending Zone : Near Public Ground and at Mariani College Stadium.
- Junction point:- a. Bhoju Charali b. Nahor Ali Tinali and c. Rajapukhuri Tinali.
- One Bypass is being proposed from Lachit Park via Mariani Grant Tea Garden to Dhodor Ali at ward no. 7.
- One wholesale and Retail market is being proposed near the truck terminus at Naphuk Grant.

9.4. INDICATIVE SOURCES OF FUND:-

The ULB & concerned line departments will submit the DPR's to their respective departments for sanctioning fund from State & Central Government under various schemes like NLCPR, NEC, 10% pool fund etc. The ULB's can also adopt the policy of Private Public Partnership (PPP) mode for raising the fund for a few remunerative projects.

CHAPTER – 10

DISASTER PLAN

10.1. HAZARDS SPECIFIC PRONENESS IN MARGHERITA:-

➤ **Earthquake :-**

As per the latest seismic zoning map of India, the Jorhat district falls under High Risk Zone-V, where a maximum intensity of IX can be expected.

➤ **Flood :-**

Even Mariani Town is also facing urban flooding in many localities due to low laying of NH-37 and lack of proper drainage system.

➤ **Soil Erosion :-**

The soil erosion is major threat to many areas due to the high undercurrent of river Budhi Dihing.

➤ **Fires :-**

The fire takes places in Mariani due to short circuit in commercial areas, thatched house. Mainly fire takes place from March to April when the climate remains very dry.

➤ **Cyclone:-**

In Mariani cases related to low density cyclone occurred in some places.

10.2. NEED FOR DISASTER MANAGEMENT:-

Data on disaster occurrence, its effect upon people and its cost to countries, are primary inputs to analyze the temporal and geographical trends in disaster impact. Disaster losses, provide the basis for identifying where, and to what extent, the potentially negative outcomes embedded in the concept of risk is realized. They help to understand where, and to whom, disaster risk becomes impact. They also provide the basis for risk assessment processes, a departing point for the application of disaster reduction measures.

Development cannot be sustainable unless disaster mitigation is built into development process. Investments in mitigation are more cost effective than expenditure on relief and rehabilitation. Prevention and mitigation contribute to lasting improvement in safety and are essential to the integrated disaster management system. Disaster response alone is not sufficient as it yields only temporary results at a very high cost. So, emphasis must be on Disaster prevention, mitigation and preparedness, which help in achieving objectivity of vulnerability reduction.

As per Section 40 of Disaster Management Act, 2005 that every department of the State Government shall prepare a Disaster Management Plan.

10.3. IMPORTANCE OF PUTTING DISASTER MANAGEMENT PLANS IN PLACE:

Disasters are events that have a huge impact on humans and/or the environment. Disasters require Government intervention. They are not always unpredictable. Floods take place in valleys and flood plains, droughts in areas with unstable and low rainfall, and oil spills happen in shipping lanes. This predictability provides opportunities to plan for, prevent and to lessen the impact of disasters.

Disasters arise from both natural and human causes, and the responses needed could stretch community and government capacity to the limit. Disasters are inevitable although we do not always know when and where they will happen. But their worst effects can be partially or completely prevented by preparation, early warning, and swift, decisive responses.

Disaster management aims to reduce the occurrence of disasters and to reduce the impact of those that cannot be prevented. The Government White paper and Act on Disaster Management define the roles of Local Authorities as well as Provincial and National government in disaster management.

North East Region has been vulnerable to many natural and manmade disasters in the past. We can notice that most of the disasters have occurred within the last two decades, and the frequency, intensity and magnitude of the disasters are ever increasing.

10.4. PLAN OBJECTIVES:-

The objectives of the Disaster Management Plan are:

- ❖ Disaster management in the routine affairs of the office
- ❖ To provide technical and humanitarian assistance during disaster
- ❖ Prompt and effective discharge of office responsibilities during disaster situations
- ❖ Ensuring safety of office infrastructure, human resource and other assets
- ❖ Ensuring safety of the beneficiaries and others
- ❖ Speedy restoration after disaster impact
- ❖ To conduct trainings and capacity building for effective prevention, mitigation and response for disasters.
- ❖ To undertake information, education and communication activities to create awareness among the communities and the general public.

10.5. LIKELY GEOGRAPHICAL EXTENT AND MAGNITUDE / SEVERITY:-

- 1) The Master Plan area is situated on a flat land with slight slopes towards North-West up to the river Budhi Dihing which flows in to mighty Brahmaputra towards North. During Monsoon, river Budhi Dihing as well as mighty Brahmaputra overflows and excess water enters in to the Master Plan Area and causes flood. Moreover, low lying of National Highway-37 passing through the town and poor drainage system for unplanned development; enhance every chances of flash flood due to heavy rainfall. Such flash floods have been experienced during last five years.

- 2) Assam as a whole is within the Zone V of earthquake zone. Especially in 1950 Earthquake, Mariani has witnessed a large devastation. So, it can be said that geographically and geologically Mariani is situated in a very hazards prone zone.
- 3) Chances of Landslide are comparatively less in this district but might happen in the bank of Budhi Dihing river. But fire can broke out in the congested residential and commercial areas, bazaars of the town anytime during lean season. So is the risk of epidemic in the slum/basti areas. The district has faced cyclones several times in the past. Road accident, rail accident, collapse of multi-storeyed buildings etc. can occur at any time. Of course riot is not so common in this district.

10.6. DISASTER MANAGEMENT CYCLE:-

In multi-hazard response plan, the disaster management cycle has a significant role to play. The four stages of disaster cycle have their own importance in terms of their implementation during, after and before the occurrence of any disaster.

Pre Disaster Activities

1. Policy development and National, State, district, local level disaster organization formation
2. Vulnerability and capacity assessment
3. Prevention and mitigation
4. Preparedness, planning and training

During Emergency Activities

1. Warning (beginning before the actual event)
2. Evacuation, search and rescue
3. Emergency assistance (relief) – food, water, shelter, medical aid

Post Disaster Activities

1. Repair and restoration of life lines (power, telecommunications, water transportation)
2. Reconstruction and rehabilitation.



10.7. FORMATION OF MARIANI DISASTER MANAGEMENT CELL (MDMC):-

The Master Plan recommends for formation of a Mariani Disaster Management Cell (MDMC) in the office of the Chairman, Mariani hat Town Committee, as per Section 40 of Disaster Management Act, 2005.

The MDMC has to be constituted with the functionaries like Chairperson (Chairman), Vice Chairman (Co-Chairperson), Chief Executive officer (Executive Officer), Members (SDO-Civil, Health, Roads, Building, Tea & Oil industries and other relevant department), and Nodal Officer (Jr. Engineer).

The MDMC will give emphasis towards the preparation of Mariani Disaster Management Plan. The plan also recommends that the MDMC cell to co-ordinate during emergency with the District Disaster Management Authority (DDMA) located at the Head-Quarter of the District. The MDMC Cell will provide all the available resources and manpower for Disaster Management. This Cell will mobilize the service of technical personnel for the damage survey work to help the District Administration.

The MDMC must meet at least once in six months i.e. in the month of March and September before the Disaster Season (Flood & Cyclone) of Mariani town under the chairmanship of the Chairman/Chairperson, Mariani Town Committee & to update the plan. For this, one month's prior notice should be given to all concerned departments before convening the meeting. Chairman/Chairperson should review the work of MDMC. An emergency meeting will hold whenever information is received regarding calamity.

10.8. STANDARD OPERATION PROCEDURE (SOP):-

The Master Plan recommends the MDMC for formulation of Standard Operation Procedure (SOP) for automatic response of the members during disaster as follows:

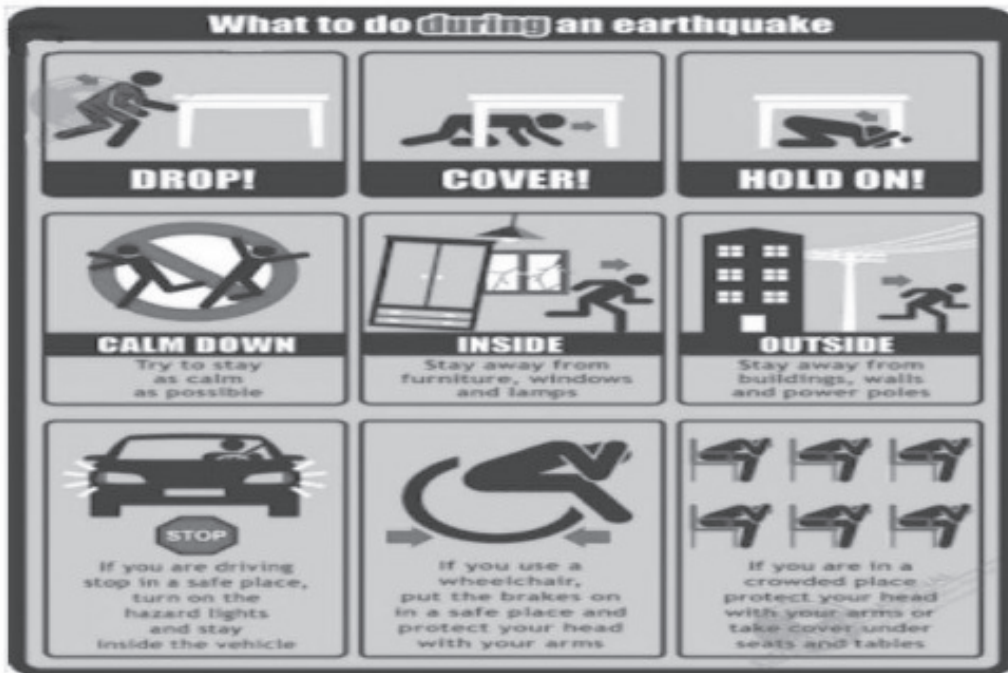
- ❖ Written guideline that precisely defines how operations are to be carried out.
- ❖ An organizational directive that establishes a standard course of action.
- ❖ Written guidelines that explain what is expected and required of the personnel.
- ❖ Standardization of activities :-
 - Identify planned and agreed upon roles & actions.
 - Promote coordination and communication amongst personnel.
 - Simplify decision making during potentially stressful conditions.
- ❖ Proper implementation of Assam Notified Urban Area Building Rules – 2014 (ANUABR) & Sensitization among stakeholders engaged for construction work/owners to use disaster resistant technologies.

10.9. RAINWATER HARVESTING:-

Mariani Zone has experienced heavy rainfall during summer season due to the south-western monsoon that leads to artificial floods not only in the plan area. So, the plan recommends adoption of rainwater harvesting system in construction activities that will reduce the volume of artificial floods in the Master Plan Area and also help to maintain the ground water level.

10.10. DOs & DON'Ts DURING

a) EARTHQUAKE:-



b) FIRE:-



LAND USE PERMISSIBILITY**Land Use Permissibility**

Index of Use Zones :

- R – Residential
 C – Commercial
 I – Industrial
 P – Public & Semi Public
 T – Transportation
 G – Green Belt (Recreational and Open Space)
 E – Eco-sensitive / Eco Friendly
 C I – Composite Use I
 C II – Composite Use II

S. N.	Land Uses	Use Zones in Which Permitted								
		R	C	I	P	T	G	E	CI	CII
1	Airport, Helipad, Flying Club					●				
2	Art gallery, museum, exhibition centre	●	●		●				●	●
3	Auto Supply store and Show room for motor vehicle and machinery		●	●					●	●
4	Automobile service and repairing station			●						●
5	Bank and Safe deposit vault	●	●	●	●	●			●	●
6	Bird Sanctuary						●	●		

7	Boarding or lodging house	●	●		●				●	●
8	Botanical garden						●			
9	Bus Depot		●	●		●				●
10	Bus Terminal	●				●				
11	Canteen and eating house serving the industries			●						●
12	Cemetery, crematorium, burial ground, electric crematorium				●					
13	Children Traffic Park				●		●			
14	Cinema	●	●						●	●
15	Clinic for pets	●	●		●				●	●
16	Clinical Laboratory		●		●				●	●
17	Club house not conducted primarily as business	●	●		●		●		●	●
18	Club house or other recreational activities conducted as business		●						●	●

		R	C	I	P	T	G	E	CI	CII
19	Cold storage and ice factory			●						●
20	College				●				●	●
21	Commercial/ business Offices ²		●	●					●	●
22	Community hall & welfare centre	●	●	●	●				●	●
23	Contractor plant and storage for building material			●						●
24	Convenience Shopping Centre	●	●	●	●	●			●	●
25	Convention Centre				●				●	●
26	Cottage, Handloom and Household Industries ³	●	●	●					●	●
27	Court				●				●	●
28	Crèche & Day Care Centre	●	●	●	●				●	●
29	Cultural and Information Centre		●		●				●	●
30	Customary home occupation	●	●						●	●

31	Defence	●	●	●	●	●			●	●
32	Diary and poultry industry			●						
33	Dispensary	●	●	●	●				●	●
34	Dry Cleaners-cleaning and dyeing		●	●					●	●
35	Educational and research institution	●	●		●				●	●
36	Electric Sub-station	●	●	●	●	●	●		●	●
37	Existing Village ⁴	●	●	●	●	●	●	●	●	●
38	Fair Ground				●				●	●
		R	C	I	P	T	G	E	CI	CII
38A	Farm House ^m	●					●			
39	Film studio ^s						●			
40	Fish curing ⁶						●	●		
41	Flatted Group Industry		●	●					●	●
42	Flood control work	●	●	●	●	●	●	●	●	●
43	Forensic Science		●		●				●	●

	Laboratory								
44	Forest						●	●	
45	Gas Godown	●	●		●			●	●
46	General Industries ⁷			●					●
47	Golf course						●	●	
48	Green house	●	●		●		●	●	●
49	Gymnasium	●	●		●		●	●	●
50	Health Centre	●	●	●	●			●	●
51	Hospital	●	●	●	●			●	●
52	Hostels for educational institution	●	●		●			●	●
53	Hotel		●		●			●	●
54	Indoor Games Hall	●	●	●	●		●	●	●
54A	Integrated Township ¹⁴	●		●	●		●	●	●
55	Jail				●				
56	Junk yard ⁸			●					
57	Local,		●	●	●			●	●

	Municipal, State or Central Government office	●				●				
58	Mechanical workshop with lathes, drills, grinders, spot welding set			●						●
59	Medical, eye and dental practitioners' clinic	●	●	●	●				●	●
60	Monument ⁹	●	●	●	●	●	●	●	●	●
61	Motor Driving Training Centre	●	●		●				●	●
61A	Motel ¹⁰	●	●		●		●		●	●
		R	C	I	P	T	G	E	CI	CII
62	Municipal facility (as listed in Annex VII)	●	●	●	●	●	●	●	●	●
63	Music, dance, drama training centre	●	●		●				●	●
64	Neighbourhood Shopping Centre- convenience & local shopping with	●	●						●	●

	vegetables, fruits, flowers, fish and meat.									
65	Night Shelter	●	●	●	●	●			●	●
66	Nursery, Horticulture and Orchards	●	●	●	●	●		●	●	●
67	Nursing Home	●	●	●	●				●	●
68	Oil Depot ¹⁰			●						
69	Open Air Theatre	●	●	●	●		●		●	●
70	Orphanage	●	●		●				●	●
71	Park, play ground, playfield and recreational area	●	●	●	●		●		●	●
72	Personal Service Shop	●	●	●	●	●			●	●
73	Petrol filling station	●	●	●	●	●	● <small>n3</small>		●	●
74	Photograph studio and laboratory	●	●	●	●				●	●
75	Piggery			●						
76	Planetarium		●		●		●		●	●

77	Police Headquarter and Police Lines				●					
78	Police Station, Out Post and Fire Station	●	●	●	●	●			●	●
79	Post office, Telephone Exchange, Telegraph Offices	●	●	●	●	●			●	●
80	Professional office of a resident of the premise	● 15	●						●	●
81	Public library	●	●		●	●			●	●
82	Radio broadcasting studio				●				●	●
83	Railway Station					●				
		R	C	I	P	T	G	E	CI	CII
84	Reformatory (Juvenile Home)				●				●	●
85	Refinery ¹¹			●						
86	Religious Place like temple, namghar, mosque, church etc	●	●		●				●	●

87	Research and Development Centre		●	●	●					
88	Residence cum Work Plot	●	●						●	●
89	Residential Dwelling	●	●		●				●	●
89A	Residential Dwelling Low Income Group ^{14, 14}	●	●	●	●			●	●	●
90	Residential Plot- Plotted Housing	●			●				●	●
91	Restaurant, cafeteria, milk bar	●	●	●	●	●	●		●	●
92	Retail Shop ¹²	●	●	●	●	●			●	●
93	Satellite and Telecommunication Center				●				●	●
94	Schools	●	●		●				●	●
95	Service Centre	●	●	●		●			●	●
96	Sewerage treatment plant			●	●					
97	Social, cultural and religious institution	●	●		●				●	●

98	Specialised Park/Ground		●		●		●		●	●
99	Sports Training Center				●		●		●	●
100	Stadium						●			
101	Storage of petroleum and other inflammable materials			●						●
		R	C	I	P	T	G	E	CI	CII
102	Storage, Warehouses and Godown		●	●					●	●
102 A	Storage of Processed Food & Diary Product Consumer and stationery article		●	●	● ^{nc}				●	●
103	Swimming Pool	●	●		●		●		●	●
104	Taxi stand and bus stand, cycle and rickshaw stand	●	●	●	●	●	●		●	●
105	Theatre, assembly or concert hall, dance and music hall and such other	●	●		●				●	●

	place of entertainment									
106	Truck terminal		●			●				
107	Vending Booth	●	●	●	●	●	●		●	●
108	Vocational Training/ Technical Training Institute	●	●	●	●				●	●
109	Watchman or Caretakers' Lodges	●	●	●	●	●	●		●	●
110	Water Treatment Plant	●	●	●	●	●	●	●	●	●
111	Weekly Market/ Informal Sector Unit	●	●		●			●	●	●
112	Wholesale Trade		●							
113	Wireless transmitting and weather station, Transmission Tower				●				●	●
114	Zoological park						●			

Note:

1. All Existing non nuisance, non-polluting uses to continue in the following use zones:

- Residential
- Commercial
- Industrial
- Public/Semi-public
- Transportation and Communication
- Composite Use I
- Composite Use II

All existing non nuisance, non-polluting uses may be allowed to continue /discontinue after an application for special permission to the Authority in the following use zones:

- Recreational, Commercial, Public/ Semi Public & Green Belt
 - Eco-sensitive/ Eco-Friendly.
 - All notified forest, water bodies, rivers etc. are classified as Eco-Sensitive Zone. Also the entire other areas west of Gorchuk-Pamohi Road, South of National Highway bye-pass upto Deepar Beel shown in land use zoning plan are classified as Eco-Sensitive Zone where existing Govt. institutions will not be affected.
2. To be permitted in commercial areas to be indicated in Industrial Use Zones in Local Area Plans/ Layout Plans
 3. In Residential use zone, existing uses to continue and new ones to come on special permission from the authority Also refer Annex I
 4. No further expansion of residential area
 5. In the New Town proposed Recreational Area
 6. Only Existing uses to continue
 7. Only those industries as listed in Annex I
 8. Permitted only in Heavy Industrial Zone
 9. Existing locations to continue

10. Permitted only in Heavy Industrial Zone
11. Permitted only in Heavy Industrial Zone
12. *In commercial centers in industrial areas
13. Parks, parking, circulation and utilities can be located in any of the use zones. In recreation and eco-sensitive zone, these would be permissible with special permission from the Authority.
14. The following activities shall be permitted only in Eco-Friendly Zone and not in Eco-Sensitive Zone
 - Tourism
 - Socio-cultural activities
 - Bungalow type construction
 - Integrated Township
 - Residential Dwelling Low Income GroupDevelopment of land would be permitted in Eco-Friendly Zone, if an integrated land development proposal is submitted. Such proposal should cover an area of more than 20 ha and should have obtained prior Environmental Impact Assessment (EIA) clearance from competent authority with maximum coverage of 33% and maximum FAR of 150.
15. To the maximum of 30 percent of the FAR is allowed
 - n1. Maximum coverage of 25% and maximum FAR of 50 provided the area is not notified as water bodies forest etc
 - n2. A roadside hotel designed primarily for motorists, typically having the rooms arranged in low blocks with parking directly outside with 25% coverage & 50 FAR. Provided area is not notified as water bodies, forest etc. & only on plots along NH & peripheral ring roads
 - n3. In Green Belt it is allowed on N.H by pass and peripheral ring road as a high way amenity.

- n4. Maximum coverage of 25% and maximum FAR of 50 with Assam Type structure in areas not notified water bodied forest etc.
- n5. Maximum coverage of 40% and maximum FAR of 100 on the plot along National Highway and peripheral ring roads.

Note: For interpretation of land use zoning and development control regulation Authority may constitute a committee of experts if such situation arises. The committee may also be given the task of elaborate and add on the above land use permissibility considering the circumstances that may come from time to time in the process of implementation of the plan for subsequent approval of Government.

END

