

DISTRICT INDUSTRIAL  
POTENTIAL SURVEY REPORT OF  
BHANDARA DISTRICT



An Activity under  
Action Plan Target Of SISI, Nagpur  
(2009-2010)

GOVERNMENT OF INDIA  
MINISTRY OF SMALL SCALE INDUSTRIES

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**FOREWORD**

*In pursuance of action plan target for the year 2009-10, it was decided to prepare the District Industrial Potential Survey Report in respect of Bhandara district with a view to reaching the goals and meeting aspirations envisaged in the plan. A detailed survey of the district was carried out and comprehensive data from various Government agencies like District industries Centre (DIC), Maharashtra State Small Industries development Corporation (MSSIDC), Maharashtra Industries Development Corporation (MIDC, District Statistical Office, District Supply Office, Employment Office, Agriculture Office, District Fishery office and Financial Institutions etc. were collected. The study has not only analyzed the existing industrial set up but also the prospects of future enterprises development in the district.*

*It is hoped that this report will come in handy not only to existing and prospective entrepreneurs but also to various institutions which are directly or indirectly connected with the enterprises development of the district. Preparation of this report has been possible only by obtaining valuable information from various Government departments during the course of the survey. To all these departments, MSME-DI,Nagpur expresses its grateful acknowledgement for information made available.*

*The methodology adopted for the survey report consisted of desk survey, documentation of information data from the reports/records of the Government departments. The Co-operation extended by various Government Organization like DIC, MSSIDC, District Statistical Office, Employment office, District Fishery office, District Supply office, MIDC and Financial Institutions etc. is thankfully acknowledged.*

*Last but not the least I venture to place on record the contribution of Sh. S.S.Bhowate, Asstt. Director (Stat.) and Sh. Manish V.K. Jha, Investigator(EI) for their devotion, dedication and determination in preparing this survey report and therefore they deserve appreciation for such work by one and all.*

**(S.M.JAMKHANDI)**  
**DIRECTOR**

# **DISTRICT INDUSTRIAL POTENTIAL SURVEY REPORT OF BHANDARA DISTRICT**

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# DISTRICT INDUSTRIAL POTENTIAL SURVEY REPORT OF BHANDARA

## District At A Glance

<b>1.Geographical Location</b> (Bhandara & Gondia)	:	North Latitude 20.39 to 21.38 Deg. East Longitude 79.27 to 80.42 Deg.
<b>2.Area</b>	:	3717 Sq. Kms.
<b>3.Total Population</b>	:	1136 Thousand (2001 Census)
<b>Rural Population</b>	:	961 Thousand (2001 Census)
<b>4.Male Population</b>	:	573 Thousand
<b>5.Female Population</b>	:	563 Thousand
<b>6.Literacy</b>	:	78.65%
<b>7.Talukas</b>	:	-Bhandara,Lakhandur,Mohadi,Pauni, Sakoli,Tumsar and Lakhani.(07)
<b>8.Towns</b>	:	07
<b>9.Villages</b>	:	870
<b>10.Panchayat Samities</b>	:	07
<b>11.Municipal Councils</b>	:	03
<b>12.Gram Panchayat</b>	:	541
<b>13.Occupational Distribution</b> <b>No. of workers (in thousands)</b> <b>(2001 Census)</b>		
(A) Cultivators	:	157

(B) Agricultural Laborers : 171

I Persons Employed : 26  
(In Small/Village industries/  
Service industries/  
Maintenance etc.)

(D) Other workers : 30

(E) Total workers : 384

(F) Marginally Employed  
Persons : 40

(G) Unemployed Persons : 51

**14. Resources :**

(A) Agriculture : 1) Paddy  
2) Tur  
3) Wheat  
4) Groundnut  
5) Soyabean  
6) Gram

(B) Horticulture : 1) Banana  
2) Mango  
3) Orange  
4) Lemon  
5) Sugarcane  
6) Custard Apple

I Spices : 1) Chilly  
2) Ginger  
3) Turmeric  
4) Coriander  
5) Garlic  
6) Methi

(D)Vegetable  
1) Potato  
2) Tomato

(E) Animals in thousands

1. Live Stock	:	614
2. Cows	:	318
3. Buffaloes (Both Sex)	:	92
4. Sheep	:	2
5. Goat	:	179
6. Poultry Birds	:	451

(F) Forest Produce  
Timber wood, Fuel wood, Bamboo, Gum,  
Tendu Leaves, Mohachi Phule, Hirada, Lac.

(G) Mineral Resources  
1) Manganese Ore  
2) Chromite  
3) Corundum  
4) Kyanite  
5) Sillimanite  
6) Phyrohillite

15.No. of Registered MSMEs

(February,2010)	:	Part-I	-	2951
		Part-II	-	1477

Employment	:	Part-I	-	17804
		Part-II	-	13648

No. of Large Scale Projects : 03

Industrial Area : Bhandara (Gadegaon)-Major Indl. Area.  
Tumsar-Mini Indl. Area  
Mahadi-Mini Indl. Area  
Lakhandur-Mini Indl. Area

# CHAPTER-I

## INTRODUCTION

### 1.0 INTRODUCTION

The Industrial Potential Survey in respect of Bhandara district of Maharashtra State was conducted with the following objectives in view:-

1. To assess and analyze the human & material resources available in Bhandara District.
2. To evaluate the available infrastructure facilities including credit for development of MSMEs.
3. To evaluate the existing Industrial status of the District.
4. To identify products / projects that has got potential in the District.

The task of preparation of the District Industrial Potential Survey Report has been undertaken by the MSME-Development Institute, Nagpur at the instance of the Development Commissioner (MSME), Ministry of MSME, Government of India. This study forms a part of the action plan targets of MSME-DI, Nagpur for the year 2009-2010.

The Industrial Potential Survey was conducted in two phases viz.1) Collection of data through the field visit 2) Compilation, Assessment, Analysis, and Evaluation of the Information.

Statistical data was collected from various Offices which are associated with the Promotion and Development of Industries such as District Industries Centre, Banks, MSSIDC, MIDC, Deptt. of Agriculture, Mining, Forest, Fisheries, Sericulture, Statistics KVIB, KVIC, and Employment Exchange.

A part from the above extensive data was also obtained from various documents compiled by the Offices such as:

1. District Socio-Economic Statistical Abstract compiled by District Statistical Office, Bhandara.
2. A profile of Industrial scenario of Bhandara district compiled by District Industries Centre, Bhandara
3. Annual Credit Plan compiled by Bank of India, Bhandara.

The data so collected have been compiled, assessed, analysed, and interpreted in the following order.

1. General Characteristics.
2. Resources analysis
3. Infrastructural facilities
4. Present Industrial Scenario
5. Prospects of Industrial Development
6. Potential for rapid Industrialization
7. List and detail of Candidate Industries.

## CHAPTER-II

# GENERAL CHARACTERISTICS OF BHANDARA DISTRICT

### 2.1 Location & Geography

Bhandara district lies between 20.39 to 21.38 degree North Latitude and 70.27 to 80.42 East longitudes. The Wainganga and Bawanthadi rivers bound the major part of the northern territory of the district. Bhandara district is situated in Wainganga basin. It has a common boarder on North with Seoni District of Madhya Pradesh & is surrounded by Chandrapur district on the south, Gondia district on the East and Nagpur district on the West. The total area of the district is 3717 Sq. Kms. which is about 1.21% of the total area of Maharashtra State.

### 2.2 Administrative Set Up

For the purpose of administrative conveyance, the district is divided into seven Tahsils and Panchayat Samities. According to the 2001 Census, there was 541 Gram Panchayat for the purpose of Rural Development. The Geographical area of Tahsils is given in the Table II-A.

Table II-A

Sl .No	Name of the Tahsil	Area in Sq. Km.
1	Bhandara	538.14
2	Mohadi	572.66
3	Tumsar	802.50
4	Sakoli	722.50
5	Lakhandur	459.60

06	Paoni	621.25
07	Lakhani	--
	Total	3716.65

### 2.3 Area & Population

Bhandara district stretches over an area of 3716.65 Sq. Km. Area under Urban sector is 49.34 Sq. Km. while the area under the rural sector is 3667.31 Sq. Km. In the terms of area, Bhandara district constitutes 1.21% of the total area of the Maharashtra State. Total population of the district according to 2001 census was 1135835 out of which 573184 were males and 562651 were females. Of the total population, 84.56% is residing in rural area i.e.9.60 lakhs and 15.44% is residing in semi-urban area i.e.1.75 lakhs. The density of the population according to the 2001 census was 306 persons/Sq. Km. which is much below the density of Maharashtra State. The Tahsil-wise population of the district as per 2001 census is given in Table II-B.

**Table II-B**

Sl. No.	Tahsil	Total Rural Urban	Persons	Male	Female
1.	Bhandara	Total	261193	132715	128478
		Rural	156201	78935	77266
		Urban	104992	53780	51212
2.	Mohadi	Total	144635	72773	71862
		Rural	144635	72773	71862
		Urban	--	--	--

3.	Tumsar	Total	213820	107302	106518
		Rural	166043	83181	82862
		Urban	47777	24121	23656
4.	Sakoli	Total	129462	65451	64011
		Rural	129462	65451	64011
		Urban	--	--	--
5.	Lakhandur	Total	113499	57027	56472
		Rural	113499	57027	56472
		Urban	--	--	--
6.	Pauni	Total	151477	76668	74809
		Rural	128894	65181	63713
		Urban	22583	11487	11096
7.	Lakhani	Total	121749	61248	60501
		Rural	121749	61248	60501
		Urban	--	--	--

## 2.4 Forest, Hills & Rivers

Bhandara district is well-known for the forest resources. Out of total geographical area of the district, 38 thousand hectares is under forest. The district possesses long stretches of hilly terrain. They are as under:

- a) Ambagad ranges which is an off – shoot of Satpura range is in the extreme North- West.
- b) Guihuri range stretches along the railway line from Bhandara town to Gondia.
- c) The Ballahari range is at the West of Bhandara.
- d) Pratapgarh hills lie in the south-west of the district.

The Wainganga river which is a tributary of the Godavari is the biggest river flowing in the district. The Bagh is another important river and is a tributary of the Wainganga. The Wainganga is the most important river of the district having its length in the district 200 kms . The District is also known as district of lakes / tanks.

## 2.5 Climate & Rainfall

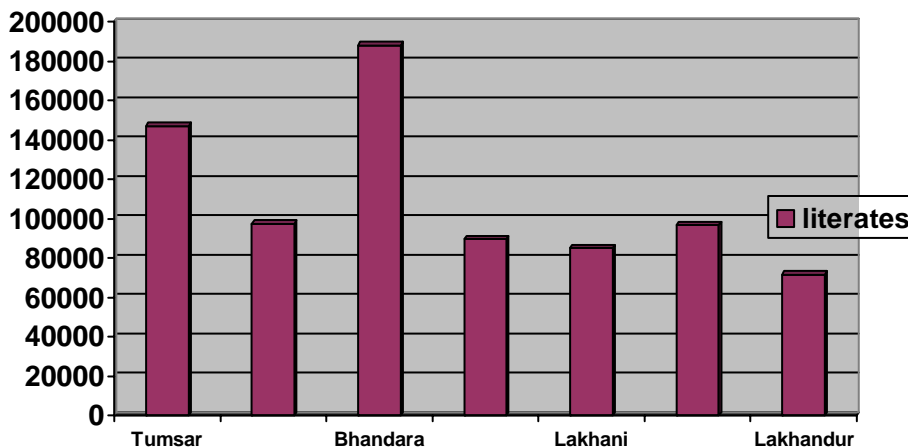
The climate of the Bhandara district is very extreme. The maximum and minimum temperature of the district is 47.5 deg. C and 7.4 deg. C respectively.

The average rainfall in the district is 1298 mm. The block wise deviation is also very wide. Normally rain commences in 2<sup>nd</sup> week of June and continues till 1<sup>st</sup> week of October.

## 2.6 Literacy

The literacy percentage of the Bhandara district is 78.65%.

Table showing literacy in the rural & urban area for Bhandara



Sl.No	Tahsil	No. of Persons	No. of Males	No. of Females
1.	Tumsar	147084 (79.18 %)	83716	63368
2.	Mohadi	97323 (78.42)	55437	41886
3.	Bhandara	188184 (82.68 %)	104822	83362
4.	Sakoli	89604 (78.93% )	51729	37875
5.	Lakhani	85044 (79.86 %)	48817	36227
6.	Pauni	96697 (74.20 %)	55941	40756
7.	Lakhandur	71558 (73.20 %)	41910	29648
	Total	775494 (78.68 %)	442372	333122

## 2.7 Soil Condition

The main types of soil found in Bhandara district are Kali-kankar, Sihar, Morand and Bhardi. The area under Kali-kankar i.e. under fertile land is very limited. In the valley of Wainganga, the soil consists of sandy loom. The soil in the Lakhandur tahsil is very heavy while clay loom reported to exist in Pauni Tahsil.

## 2.8 Dairy Activity

There is a good scope for expansion of dairy activity and Inland Fishery in the District. This activity can serve as major subsidiary activity for cultivators if proper tie-up arrangements through milk collection societies and marketing of fish/fish products are made available. There are total 297 registered co-operative milk collection societies in the District. Taking into consideration the number of milk collection societies and expected scope for this activity in the district, Government has already established 4 chilling centers with average milk capacity of 55000 liters per day as under:

S.No.	Name of Centre	Year when started	Present Handling Capacity Ltrs Milk/day
1.	Bhandara	1972	40000
2.	Bhandara	1997	40000
3.	Tumsar	1972	5000
4.	Sinpuri	1992	10000

## **CHAPTER-III**

### **RESOURCES AVAILABLE IN THE DISTRICT**

#### **RESOURCES AVAILABLE**

Rapid industrial development of any district heavily depends on the availability of various resources of which material as well as human resources plays a vital role in accelerating the process of industrial development. It is, therefore, necessary to make a realistic assessment of the availability of resources both in terms of quantity and quality. The material resources could be broadly classified into following groups.

- 1) Agricultural
- 2) Mineral
- 3) Forest
- 4) Animal Husbandry
- 5) Fisheries

#### **AGRICULTURE**

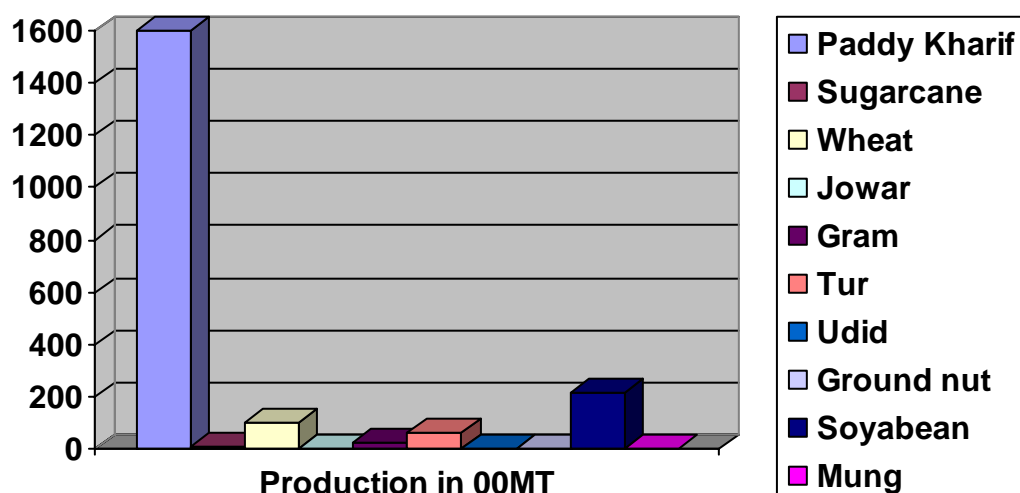
Bhandara district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The total geographical area of the district is 389Th. Hectares out of which cultivable area is 264 Th. Hectares of which 59 Th. Hectares is under Double/ Multiple crops.

The main crop grown in the district is Paddy. On this account, the district was selected as one of the Districts in the country for giving special assistance under “Special Food Production Programme” for the last twelve years. Other important food crops are Wheat, Gram, Tur and Til. The area

under Macca, Tur, Sugarcane, Turmeric, Mango, and Til is also increased. The total area under food crops area under paddy is about 74%. The District is having only one sugar factory viz. Vainganga Sahakari Sakhar Karkhana at Devhada (Tumsar) under co-operative sector, which has restarted crushing since 1999-2000. Another sugar factory under public sector named as Chaitanyeshwar Sakhar Karkhana Ltd., is under establishment at Masal, Tah. Lakhandur in the District The Area and Production figures of Principal crop for the year 2005-2006 are given in Table III-A and III-B

**Table III-A**  
**Area and Production of Agricultural Crop**

Sl.No.	Crop	Area 00'hect.	Production 00'tones	Productivity Kg/hect.
1.	Paddy Kharif	1724	2972	1724
2.	Sugarcane	12	840 (MT)	70
3.	Wheat		96	960
4.	Jowar		02	397
5.	Gram		22	560
6.	Tur	65	62	954
7.	Udid	05	03	600
8.	Ground nut	02	02	1000
9.	Soyabean	125	212	1696
10	Mung	05	03	600



### Production of Agriculture for the year 2003-2004

Sl.No.	Crop	Production per hectare (Kg)	Production (00'MT)
1.	Ginger	1001	104
2.	Chilly	399	09
3.	Turmeric	1054	--
4.	Potato	7101	825

### Area of Agriculture Crop for the year 2005-2006

S.No	Crop	Area (Hectare)
1.	Sugarcane	22
2.	Chiku	136.14
3.	Orange	554.75
4.	Lemon	19.45

<b>5.</b>	<b>Guava</b>	<b>169.10</b>
<b>6.</b>	<b>Custard Apple</b>	<b>394.84</b>
<b>7.</b>	<b>Mango</b>	<b>7904.43</b>
<b>8.</b>	<b>Aaola</b>	<b>29.60</b>
<b>9.</b>	<b>Jackfruit</b>	<b>145.97</b>
<b>10.</b>	<b>Cashew Nut</b>	<b>18.75</b>

### **Irrigation**

The irrigation resources of the district consist three major Indira Sagar Dam, Gose-Khurd, Itiadh and Bawanthadi project, 3 medium & 50 minor projects, 1670 Zilla Parishad tanks, 486 lift irrigation schemes & about 13028 wells. The total area under irrigation from all sources is around 1.18 lakhs hectares of which the net area under irrigation from all sources was 85 thousand hectares.

### **Mineral Resources**

Bhandara District has been endowed with various valuable mineral resources. Manganese Ore is found in large quantity in the district. The other important minerals found in the district are Iron ore, Chromite, Silliminite, Corundum, Phyrophyllite, Kaynite and Quartz. Besides these, the other minor minerals are also found in the District. During the year last year 192841 MT of Manganese Ore was produced, 169 MT. of Chromite was produced, 1478 MT of Kaynite/ Silliminite was produced, 1868 MT. of Phyrophyllite was produced and 7647 MT. of Iron Ore/Quartz was produced. Details of Production and No. of Mines of such Minerals are given below.

### **1) Manganese Ore:**

Manganese Ore plays a vital role in alloy steel formation and in the manufacture of dry batteries and paints. It is estimated that about 20 million tones of Manganese Ore reported to be available in the district. Important mining centres are Chikhala, Dongri (Bujurz), Balapur (Hamesha), Sitaswangi and Indrabuchi in Tumsar Tahsil where high grade of Manganese Ore is found. Low grade Manganese Ore occurrence is located at Mangrali, Mandekar, Lendezari, Alesur, Asolpani and Korli.

### **2) Chromite:**

Chromite deposits are located at Pauni Tahsil. Chromite has important use in refractory, metallurgical and chemical industries. Geological data indicated that there is 0.48 million tones of Chromite available in the District.

### **3) Corundum:**

Corundum is mainly used for manufacturing of various types of abrasives such as grinding wheels and coated abrasive (Emerge Paper & Cloth ). It also finds their use for the manufacture of high temperature refractory materials wiredrawing dies, thread guides and gauge blocks. Corundum is the second hardest material next only to diamond. It also possesses high melting point (1950 deg. C). The deposits of corundum are located in Pohara and Dahegaon in Sakoli Tahsil.

#### 4) Kyanite & Silliminite:

These alumina silicate materials are found in more than 20 localities in the district. Out of known deposits, the workable mines exist in Pohara, Dahegaon, Paradi and Nawargaon. The important mines at Dahegaon and Pohara run by M/s. Maharashtra State Mining Corporation.

Kyanite and Silliminite are useful for the manufacturing of super duty alumina silicate refractory bricks and block, which find their uses in various Industrial furnaces as lining materials.

#### 5) Phyrophyllite:

Geological data indicate that there is 0.28 million tones of Phyrophyllite available in the District. Phyrophyllite is a hydrous aluminum silicate, which finds its use in the manufacture of paper, ceramics, refractories and insecticide formulations primarily as fillers. In Bhandara District, Phyrophyllite mines are located at Pohara and Kanheri in Sakoli Tahsil. Deposits of other Mineral like Copper Ore, Tungsten, and Vanadium are also available in the Bhandara district. The Production figures of minerals are given in the following table.

**Table III B**

Sl.No	Name of the Mineral	Production in Metric Tonnes	No. of Mines
		2005-06	
1.	Manganese Ore	192841	2
2.	Chromite	169	1
3.	Kyanite/Silliminite	1478	5

4.	Phyrophyllite	1868	3
5.	Iron Ore & Quartz	7647	---

### 3. Forest:

During the year 2000-2001, an estimated 41 thousand hectares of area was under forest which constituted 12.85% of the total area. Forest resources contribute significantly to the economy of the district. Most of forest area is located in the Bhandara, Tumsar, Tiroda and Sakoli Tahsils. Teakwood is available from these forests in sizeable quantity. The other timber wood is sal, bija, tinsa, shisam, haldi, mohawa, rohan, khair yen and behada.

The area under the forest is given in the following table.

**Table III-C**

Sl.No	Category	Area in Sq. Kms.
1.	Reserved Forest	582
2.	Protected Forest	316
3.	Unclassified Forest	319
	Total	1217

The Major and Minor forest produce of Bhandara District including Gondia District for the year 2003-2004 are given in table III-D

**Table III-D**

Sl.No	Forest Produce	Production	Sale	Value for Sale in thousands
1.	Timber wood (m3)	2.742	1.46	2748
2.	Fuel wood (m3)	19.42	0.46	226
<b>Minor Forest Produce</b>				
3.	Bamboo (Nos.)	577900	859755	3160
4.	Grass (Quintal)	300	300	06

5.	Tendu Leave (S.B.)	44118	44118	27500
6.	Gum (Quintal)	55	55	40
	<b>Others</b>			
7.	Khirmi Fruit(Quintal)	10	10	07
8.	Lac (Quintal)	50	50	14
9.	Custard Apple (Quintal)	10	10	05

Total Income from the Forest produce is approximate 3.37 crores. In addition to the above, forest produce like Lac, Khirmi and Sitafal are also available in minor quantities. Bhandara district forest is also endowed with forestry having a number of Herbs and Plants which are used in the manufacture of Ayurvedic Medicine.

#### **4. Live stock resources:**

In a predominantly agriculture district, livestock plays a significant role. According to the 1997 census, the livestock population of the district was 1783 thousands, out of the total livestock population, 37.96% were estimated to be LiveStock, 17.89% Cow & Buffaloes, 5.15% Buffaloes (Both Sex), 13.68% Sheeps & Goats and 25.29% Poultry Birds.

The live stock population of the district and its break up under different groups as per 1997 census are given in Table III-E

**Table-III-E**

<b>Sl.No</b>	<b>Category</b>	<b>Population 1997 census (In Thousands)</b>
1.	Livestock	677
2.	Cows & Buffaloes	319

3.	Buffaloes (Both Sex)	92
4.	Sheep & Goat	244
5.	Poultry Birds	451

### 5. Fisheries:

Bhandara district is known as the district of lakes & tanks. Bhandara district has rich potential for the development of inland fisheries due to good network of water source spread throughout the district.

The total area covered by rivers is 200 Kms. At the end of March 2004, 11,765 hectares are used for the inland fisheries. The total production during the year 2003-2004 was 15,950 M.T. and a revenue of Rs.3184 lakhs was realized. The Fish Centre are located at Nagthana of Mohadi Taluka and Shivnibandh of Sakoli Taluka. Tahsilewise Fish Production are given in the Table III-F.

**Table III-F**

S.No	Tahsil	Total Area Suitable for Fish Culture. (Hectare)	Actual Area brought under Fish Culture (Hectare)	Fish Production (M.T.)	Value (In Lakhs)
1.	Tumsar	2242	2200	2690	538
2.	Mohadi	1800	1600	835	167
3.	Bhandara	1568	1078	2587	517
4.	Sakoli	1988	1930	3134	627
5.	Lakhani	936	670	1022	210
6.	Pauni	2048	1458	3388	667

7.	Lakhandur	1183	1000	2294	458
	Total	11765	9936	15950	3184

**6. Sericulture:** Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world.

India has also the distribution of producing all the three commercially known varieties of silk viz. Mulberry, Tassar, Iri and Murga.

Maharashtra state stands third in the country in Mulberry & Tassar cultivation according to latest estimates. The present area under Sericulture in Bhandara district is about 119 acres which is mostly concentrated in Talukas of Bhandara district. There are five grades and its value depends upon its quality viz.

A. Grade-Rs. 137/- Per Kg.

B. Grade-Rs. 110/- Per Kg.

C. Grade-Rs. 80/- Per Kg.

D. Grade-Rs. 40/- Per Kg.

E. Grade-Rs. 20/- Per Kg.

**Progress in Sericulture Industry in Bhandara District is given in the Table III-G**

Sl.No	Details	2002-2003	
		Tussar	Mulberry
1.	Mulberry Plantation (acres)	50	39
2.	DFLs supply (Nos.)	94292	3238
3.	Cocoon Production	2328292(Nos)	664.600kgs
4.	Govt. Cocoon Purchase	1194510(Nos)	344.600kgs
5.	Employment to the Farmers	176	48

The Sericulture Department is providing facilities for making Sericulture Industry more popular in the district.

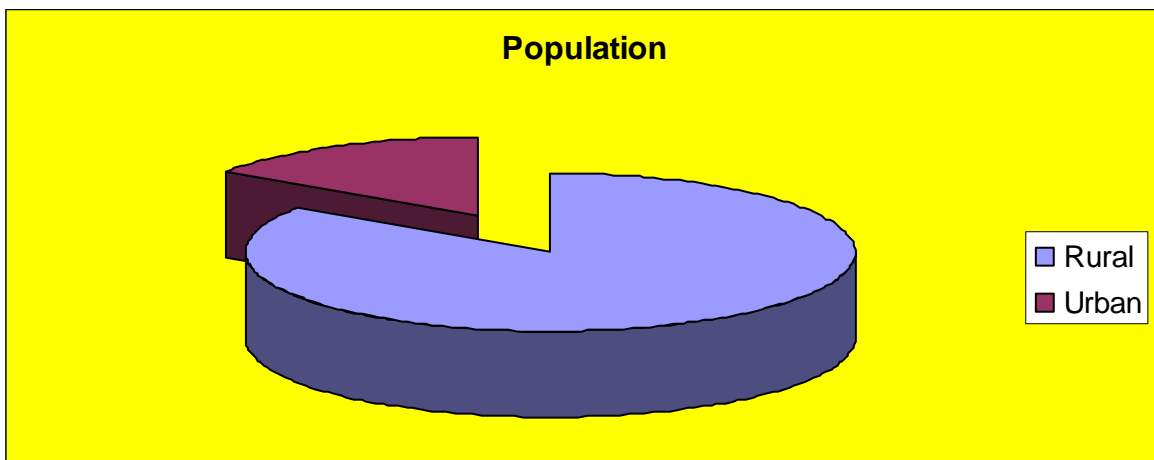
- 1) Provides Tuti seeds at subsidized rates.
- 2) Eggs. Laying 300 Per 100 DFLs and Rs. 150/- as subsidy.
- 3) Subsidy for Drip Irrigation.
- 4) Survey and Project assistance scheme.
- 5) Conducts training programme for farmers.
- 6) Purchases products of Rashim of fair price

### **Human Resources:**

The availability of materials resources only indicates the potential for development of a region but it depends upon the quality of human resources to exploit the same to the optimum advantage. The assessment and analysis of the existing material resources was made in the early part of this chapter. It is now necessary to focus the attention on the quality of human resources and assess its ability to exploit the material resources.

As it has already been seen according to the 2001 census that the total population of the district was 1136 thousands out of which 573 thousands are male and 563 thousands are females.

The details regarding population are given in Table-III-H



**Table III-H**

Sl.No	Sector	Area in Sq. Kms.	Population	Male Population	Female Population
1.	Total	3716.65	1135835	573184	562651
2.	Rural	3667.31	960483	483796	476687
3.	Urban	49.34	175352	89388	85964

**Literacy:**

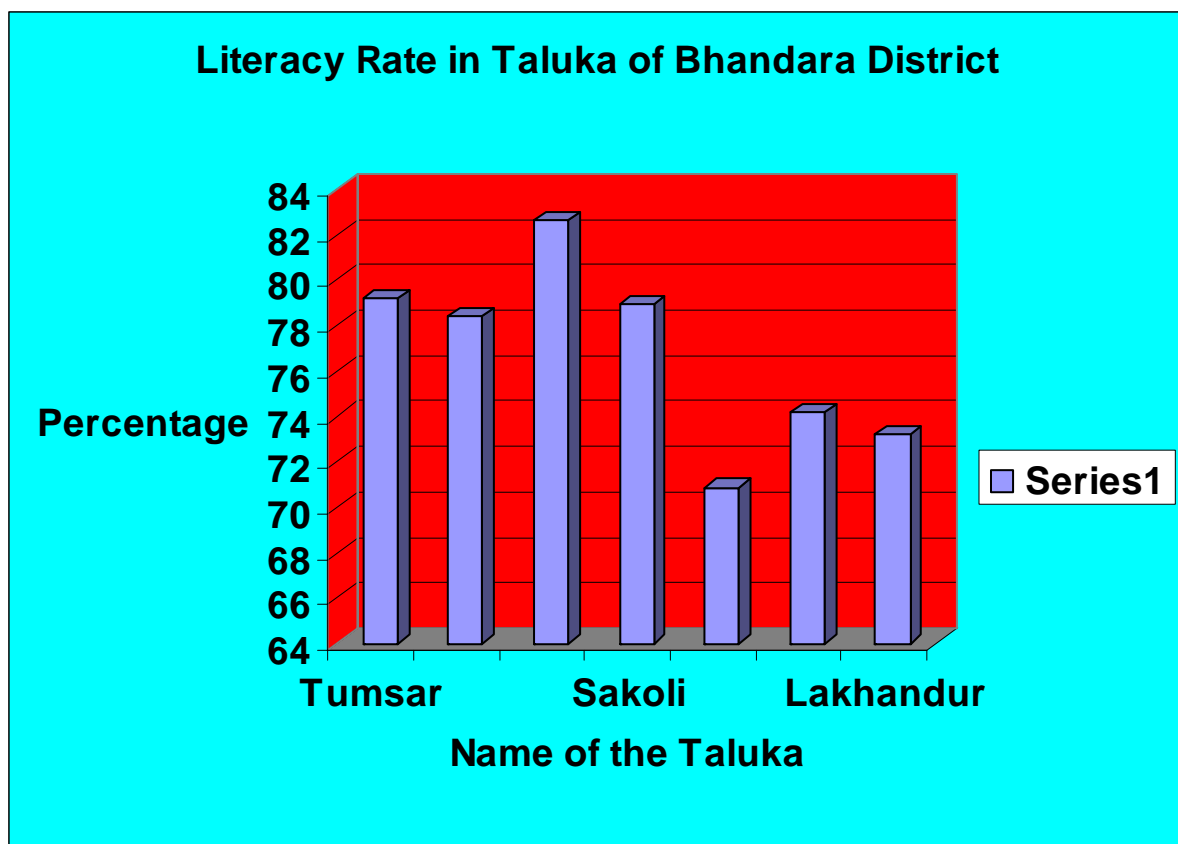
According to the 2001 census, 78.65 % of the total population of the district was literate. Details regarding block-wise literacy rate in Bhandara district is given in Table III-I

**Table III-I**

S.No	Name of the Tahsil	Literacy rate	Male	Female
1.	Tumsar	79.18% ( 147084)	90.08% (83716)	68.26% (63368)
2.	Mohadi	78.42% (97323)	88.95% (55437)	67.79% (41886)
3.	Bhandara	82.68% (188184)	90.70% (104822)	74.40% (83362)
4.	Sakoli	78.93% (89604)	90.41% (51729)	67.26% (37875)
5.	Lakhni	79.86% (85044)	91.25% (48817)	68.36% (36227)
6.	Pauni	74.20% (96697)	84.80% (55941)	63.34% (40756)

7.	Lakhandur	73.20% (71558)	85.64% (41910)	60.73% (29648)
	<b>District</b>	<b>78.68%</b> <b>(775494)</b>	<b>89.11%</b> <b>(442372)</b>	<b>68.11%</b> <b>(333122)</b>

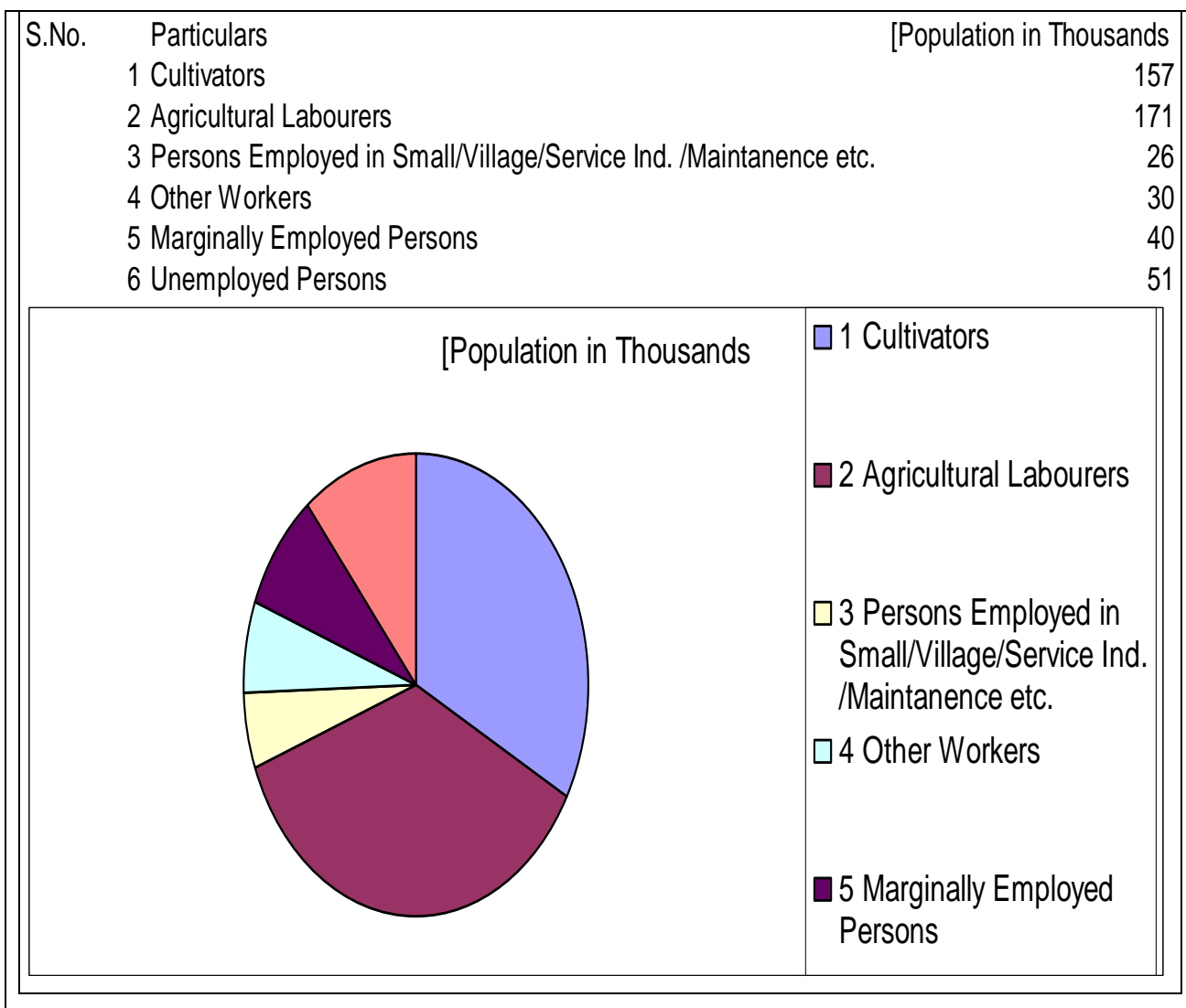
Bhandara Tahsil having the highest Literacy rate which is 82.68% followed by Tumsar, Sakoli Mohadi and other Tahsils.



### **Occupational Pattern of Population:**

As per the 2001 Population census, 384 thousands are the total workers belonging to categories of Cultivators, Agricultural Labourers, persons employed in Small/Village Industries/Services Industries/Maintenance etc., and other workers. Occupational Pattern of population is given in Table III-J

**Table III-J**



As already mentioned, the services of technically qualified and skilled persons are required to exploit the available resources for Industrial development purpose.

The Live register of Employment Exchange, Bhandara throws some light on the qualified persons who are unemployed. The number of educated unemployed persons registered with Employment Exchange, Bhandara is given in Table III-K.

**Table III-K**

Sl.No.	Category	No. of Unemployed Persons as on 30.06.06	
		Male	Female
1.	Matriculates	31850	11469
2.	Higher Metric/ Intermediate	11844	3542
3.	Engineering/ Diploma Holder	497	26
4.	Graduates:		
	a) Arts	1384	692
	b) Science	1069	134
	c)Commerce	513	183
5.	I.T.I.	1284	85
6.	B.Ed. & B.P.Ed.	177	76
7.	Apprenticeship	43	--
	Total	48661	16207

The Live register of Information & Guidance Bureau of Nagpur gives a picture of the qualified and technically skilled unemployed persons. The number of technically qualified persons registered with the Information & Guidance Bureau of Vidarbha region is given in Table –III-L ( Covering six districts) i.e. Nagpur, Bhandara, Chandrapur, Gadchiroli, Wardha & Gondia.

**Table-III- L**

Sr.No.	Category	No. of unemployed persons as on 31.12.2007		
		Male	Female	Total
1.	Civil engineering	721	83	804

2.	Mechanical engineering	876	06	882
3.	Electrical engineering	342	72	414
4.	Architecture	19	16	35
5.	Metallurgy	08	02	10
6.	Mining	63	--	63
7.	Instrumentation	13	03	16
8.	Agriculture	27	07	34
9.	Telecommunication	90	41	131
10.	Automobile	09	01	10
11.	Production	84	06	90
12.	Industries	50	08	58
13.	Computer	210	179	389
14.	Chemical	84	07	91
15.	Food technology	05	02	07
16.	Oil Technology	02	01	03
17.	Paper Technology	03	--	03
18.	Textile technology	08	--	08
19.	Sugar technology	--	--	--
20.	Paint Technology	--	--	--
21.	Electronics	194	106	300
22.	Petro-Chemical	--	--	--
23.	Plastic technology	03	--	03
24.	Cellulose technology	05	--	05
25.	Fire engineering	03	--	03
26.	B,E. Electrical generation & supply	--	--	--

27.	Printing Tech.	01	--	01
28.	Aeronautical Engg.	01	--	01
29.	Agriculture			
	B.Sc.	348	231	579
	M.Sc.	72	09	81
30.	M.A.	1102	1002	2104
31.	M.Sc.	378	364	742
32.	M.Com.	507	343	950
35.	Law	56	35	91
36.	Veterinary	05	42	47
37.	Others (M.B.A., P.G. Dip., M.S.W., etc.)	799	1324	2123

It may be inferred from the above table that the quality and number of educated persons available in the Vidarbha region are quite large the resources which can be tapped suitably for development of the region.

## **CHAPTER-IV**

### **INFRASTRUCTURE FOR INDUSTRIAL DEVELOPMENT**

Availability of infrastructure facilities like Power, Bank, Industrial accommodation in the form of plots & Sheds, Transport, Communication and Training Institutions are important for the eventual development of Industries. Infrastructure determines the pace of economic development of a region. Besides Material and Manpower Resources, Industrial Development of any region depends heavily on the available Infrastructural Facilities.

#### **Banking:**

The Lead Bank responsibility is with Bank of India having 13 Branches in the District . There are 09 Commercial Banks, 1 Gramin Bank & 1 Co- operative Bank operating in the District with Branch network of 98 branches, 93 of which are participating in the implementation of Service Area Approach. Besides, there are 2 Urban Co-operative Banks, viz Janata & Urban Co-operative Banks having 16 branches in the district.

Commercial Banks mostly provide short-term and in some cases Medium term Financial assistance to Small Scale Industry. Short-term Credit facilities are granted for working capital requirements like those for raw material, Goods in process, Bills Receivable and Book Debts. Medium term loans are granted for the acquisition of land, construction of factory premises, purchase of machinery and equipment and operative expenses.

The Bankwise branch network is as under:

Sl.No.	Name of the Banks	No. of Branches
1.	Commercial Banks (9)	44
2.	Bhandara Gramin Bank	21
3.	The B.D.C.C. Bank Ltd.	33
	<b>Total</b>	<b>98</b>

The Comparative sectorwise achievement is given in the following table

**IV-A**  
**Table IV-A**

(Rs. In Crores)

Sector	AAP 2003-04			AAP 2004-05			AAP 2005-06 (upto 31.3.06)		
	Target	Achi.	%	Target	Achi.	%	Target	Achi.	%
Agriculture	52.24	39.38	75	67.13	58.32	87	87.28	76.87	88
SSI	4.34	3.38	78	5.37	3.59	67	6.52	7.47	114
OPS	24.19	24.08	100	29.79	24.56.82	82	36.87	32..38	88
Total	80.77	66.84	83	102.29	86.47	85	130.67	116.74	89

**SMALL INDUSTRIAL DEVELOPMENT BANK OF INDIA:**

Small Industries Development Bank of India-the apex bank of small scale industries extends assistance to SSI units through various schemes.

The activities of S.I.D.B.I. are as under:-

- a) Re-financing of loan and advances extended by the primary lending intuitions to industrial concerns in the small scale sector and providing resources support to them.

- b) Discounting and rediscounting of bills arising from sale of machinery, to or manufactured by industrial concerns in the small scale sector.
- c) Extension of seed capital/soft loan assistance and National Equity Fund, Mahila Udyog Nidhi and seed capital schemes through specified lending agencies.
- d) Granting direct assistance as well as refinancing of loan extended by primary lending institutions for financing export of products manufactured by industrial concerns in the small sector.
- e) Providing services like factories leasing etc. to industrial concerns in the small scale sectors.
- f) Extending financial support to National Small Industries Corporation for providing leasing hire-purchase and marketing support to SSI units.
- i) Initiating steps for technological up gradation and modernization of existing units.
- ii) Expanding the channels for marketing the products of SSI sector in domestic and overseas markets and
- iii) Promotion of employment oriented industries especially in semi-urban areas to create more employment opportunities and thereby checking migration of population to urban and cosmopolitan area.

**Surface :**

**Roads :**

Growth industry heavily depends on availability of adequate transport and communication facilities. As far as Bhandara is concerned, it is well placed in the road map of Maharashtra State. It has a common border on North with Seoni district of Madhya Pradesh and is surrounded by

Chandrapur district on the South, Gondia district on the East and Nagpur district on the West.

**National Highway :**

National highway No. 6 which connects Mumbai and Calcutta cuts through the district which provides bank with commercial and industrial centers of the Western and Eastern regions of the country.

**State Highway:**

A good network of 430 kms. of State highway connects the interior parts of the district with the major marketing centers and district headquarters. Besides the above, a network of major district roads, village roads, and other roads facilitates smooth transportation.

The following table indicates the present position of roads of various categories for Bhandara.

<b>Sl.No.</b>	<b>Category</b>	<b>Distance in Kms.</b>
1.	National Highway	76
2.	State Highway	430
3.	District Road (Major)	609
4.	Other District road	900
5.	Village road	1856

## **Railway :**

Similar to roadways the district is also well connected with almost all the commercial and industrial centres located in all the two corners of country by railway also.

The details of the rail routes and length of railway are given in following table.

<b>Sl.No</b>	<b>Railway Track</b>	<b>Length in Kms.</b>
1.	Broad gauge	32
2.	Double Line	98
3.	Narrow gauge	10
	<b>Total</b>	<b>140</b>

## **Talukawise Railway Station :**

<b>Sl.No.</b>	<b>Taluka</b>	<b>Railway Station</b>	<b>Railway Area</b>	<b>Railway Track</b>
1.	Bhandara	Bhandara Road	Broad gauge	S.E. Railway
2.	Mohadi	Koka	-do-	-do-
3.	Tumsar	Tumsar Road	-do-	-do-
		Tumsar		
		Gobarwahi		
		Dongri Buzruk		
		Mitewahi		
		Chicholi		
4.	Sakoli	Shodand	-do-	-do-
5.	Paoni	Paoni road	--	--
		Bhoyar Road		

## **Post and Telegraphs :**

At the end of March, 2002 there were 136 & 32 hundred Post offices and two Telegraph offices respectively and 131 villages having the facilities of Post Offices.

## **Power Supply :**

Electricity is the basic infrastructure needed for the industrial development in the district. Total 778 Villages & Towns are electrified and 772 Inhabited Villages are electrified. At the end of the year 31 March 2004, 730800 Th.K.W. electricity has been consumed in the district as indicated in the following table.

**In Thousands K.W.**

<b>Sl.No.</b>	<b>Category of Electricity Consumption</b>	<b>Total Consumption (%)</b>	<b>Type of Electricity</b>
<b>1.</b>	<b>Domestic</b>	<b>93795 (48.71)</b>	<b>Thermal</b>
<b>2.</b>	<b>Commercial</b>	<b>14696 (7.63)</b>	<b>Thermal</b>
<b>3.</b>	<b>Industrial Activities</b>	<b>52296 (27.15)</b>	<b>Thermal</b>
<b>4.</b>	<b>Agriculture</b>	<b>12302 (6.38)</b>	<b>Thermal</b>
<b>5.</b>	<b>General</b>	<b>13154 (6.83)</b>	<b>Thermal</b>
<b>6.</b>	<b>Other</b>	<b>6313 (3.27)</b>	<b>Thermal</b>
	<b>Total</b>	<b>192556</b>	

### **Industrial Land:**

An appraisal of availability of infrastructure facilities for industrial growth has to take due note of the importance of land. This vital factor holds strategy in any scheme for industrial development of a region. The developed plots are under available to entrepreneurs by Maharashtra Industrial Development Corporation (MIDC).

### **MIDC Plots:**

As is widely known, MIDC acquires and develop industrial plots with all the basic amenities and take them available to needy entrepreneurs. There are one major and three mini industrial areas which are as under:

### **Bhandara (Gadegaon) Industrial Area :**

This industrial area is 80 kms away from Nagpur city & 13 Kms. From Bhandara city on Nagpur to Raipur N.H.No. 6 MIDC has acquired 142.71 hecets. of land in which 62 no. of plots have been carved out 62 nos. of plots have been allotted out of which, one plot has been allotted to M/s. Ashok Leyland Ltd. And total 20 Units are working and the rate of the plot is Rs.30/- per Sq. Mt.

### **Tumsar Mini Industrial Area :**

This Industrial area is 95 Kms. away from Nagpur city & 30 Kms. From Bhandara town on Nagpur-Gondia state highway. For this Industrial area, MIDC has acquired 10.31 hecets. of Land in which 24 plots have been carved out and 24 nos. of plots have been allotted and 08 units are working & the rate of the plot is Rs30/- per Sq. Meter.

### **Mohadi Mini Industrial Area :**

For this Industrial Area 10.71 hecets land has been acquired 42 Nos of plots have been carved out and 25 are allotted. Development work is on progress. 02 units are working & the rate of the plot is Rs30/- per Sq. Meter.

### **Lakhandur Mini Industrial Area :**

For this Industrial Area 11.90 hecets of land has been acquired by the MIDC, Bhandara & the rate of the plot is Rs30/- per Sq. Meter.

The details are given in the Table:

**Bhandara (Gadegaon) Major Industrial Area :**

1)	Total Area	-	142.71 hecets.
2)	Allotted but no progress	-	22
3)	Available for allotment	-	--
4)	No. of plots Vacant	-	--
5)	No. of Units in Production	-	20
6)	Rate Rs. 30/- Per Sq.Mt. –		

**Tumsar Mini Industrial Area:**

1)	Total Area	-	10.31 Hecets.
2)	Allotted but no progress	-	13
3)	Available for allotment	-	01
4)	No. of Plots Vacant	-	--
5)	No. of Units in Production	-	08
6)	Rate of Rs. 30/- Per Sq. Mt.		

**Mohadi Mini Industrial Area :**

1)	Total Area	-	10.71 Hecets.
2)	Allotted but no progress	-	25
3)	Available for allotment	-	13
4)	No. of plots Vacant	-	--
5)	No. of Units in Production	-	02
6)	Rate of Rs.30/- Per Sq. Mt.		

**Lakhandur Mini Industrial Area :**

1)	Total Area	-	11.90 Hecets.
2)	Allotted but no progress	-	--
3)	Available for allotment	-	--
4)	No. of plots Vacant	-	--
5)	No. of Units in Production	-	--
6)	Rate of Rs.30/- Per Sq. Mt.		

24 NAGPUR REGION = STATUS POSITION OF MIDC INDUSTRIAL AREAS										
Sr.No	District	Name Of Midc Area	Area Developed (Hect)	Area Allotted hectares	Area Available For Allotment	No Of Working Units	No Of Closed Units	Allotted But No Progress	Available For Allotment	Rate Rs.Per Sq.Mtr.
1	2	3	4	5	6	7	8	9	10	11
1	Bhandara	Bhandara	142.71	134.97	---	20	10	22	--	30
2	Bhandara	Mohadi	10.71	5.43	0.57	2	--	25	13	30
3	Bhandara	Tumsar	10.31	6.57	--	8	--	13	1	30
4	Bhandara	Lakhandur	11.9	1.2	10.7	--	--	---	--	30

### **Other Industrial Assistance :**

It seen from the above data that facility like credit, transport and communication and constancy for development of industry etc. are available in the Bhandara district. Some of the other vital inputs needed for accelerating the growth of industrial development are

- i) Consultancy and training services
- ii) Availability of raw material
- iii) Marketing assistance.

The agencies which are looking after the above mentioned infests are:

### **Micro, Small & Medium Enterprises- Development Institute, Nagpur:**

MSME-DI engaged in assistance/consultancy to prospective entrepreneurs and existing unit, preparation of District Industrial Potential Survey Report, Project profiles, conducting Entrepreneurship Development Programme, Entrepreneurship Skill Development Programme, Motivational Campaigns and Management Development Programmes and Skill Development Programmes, provide guidance for Export Promotion and Ancillary development. Organized programmes on Energy conservation, Pollution control, Quality Control & Up gradation, ISO-9000/TQM & ISO-14001 & EMS. Engaged in intensive technical assistance to the unit and marketing for SSI through Sub-contract exchange, Vendor Development Programme and International Trade Fair and above all MSME-DI work for the promotion & development of MSMEs

### **Marketing Assistance/Supply of Raw Material :**

The Maharashtra Small Scale Industrial Development Corporation (MSSIDC) is a premier agency to extend marketing assistance to SSI units

so as to enable the latter to effectively participate in Govt. Stores Purchase Programme. MSSIDC also provides scarce raw materials. The details of the Marketing assistance by the office of MSSIDC, Bhandara to MSMEs are given in the following table for the year 2008-2009:

**Table IV-C ITEMWISE MARKETING PERFORMANCE REPORT  
FOR THE YEAR 2008-09**

<b>Sr.No.</b>	<b>Name of Item</b>	<b>Value (in lakhs Rs.)</b>
1.	RCC pipes	1.76
2.	PVC pipes	0.46
3.	Polythene Bags	4.49
4.	Water Storage Tank	--
5.	Steel Furniture	117.29
6.	Air Cooler	5.76
7.	Tarpaoline	--
8.	Computer Furniture	6.47
9.	Diesel Engine Oil/ Elect. Motor	56.29
10.	Agriculture Implements	--
11.	Fire Extinguisher	--
12.	Educational Material	--
13.	Water Purifier	0.17
14.	Paint and Chemical	2.00
15.	HDPE Pipes	70.58
16.	Other Cement Products	--
17.	Ptg. & Stn.	9.76
18.	Metal Fab.	0.67
19.	Misc. Items	41.84
20.	Spl. Item	132.46
	<b>Total</b>	<b>450.00</b>

**Bifurcation of Special Items Table IV-D**

<b>Sr.No.</b>	<b>Name of Item</b>	<b>Value (in lakhs Rs.)</b>
1.	Mining Timber	--
2.	Poly. Product	3.00
3.	Playing Eq.	--
4.	Dressing Kit	--
5.	Works Contract	21.47
6.	Chain Link Fencg.	--
7.	Garment	--
8.	Agro Shed Net	11.95
9.	Sign/ Tin Board	--
10.	Bamboo Fur.	--
11.	Bio-Fert.	94.67
12.	Solar Light	--
13.	Interior Work	--
14.	Satranji	0.47
15.	Roof Bolt Mchines	--
	<b>Total</b>	<b>132.46</b>
<b>Bifurcation of Misc.Items</b>		
1.	Electric Balance	0.12
2.	Bucket	0.49
3.	Sound Service	11.14
4.	Utencils	11.19
5.	Pendal Material	18.9
	<b>Total</b>	<b>41.84</b>

## **CHAPTER - V.**

### **Review of Existing Industrial Status**

Most of the enterprises that are existing in the district of Bhandara predominantly Agricultural and Engineering based. The main enterprises in the district are Rice mills, Brass utensils, Poha mills, Bide manufacturing units, Sawmills, Bricks unit, Ceramic item . The numbers of MSMEs which are Registered with DIC, Bhandara as on Feb.,2010, were 2951 Part-I & 1477 Part-II. There are 03 large scale enterprises in the district. There is an adequate scope for the promotion of ancillary enterprises based on the existing & prospective large scale enterprises discussion is tended to review the present status of the enterprises

#### **Large and Medium Scale Industries:**

At present there are about 03 large scale enterprises existing in Bhandara district. The present status of Large Enterprises are given in the following table:

S.No	Name of L&M Scale Inds.	Products	Investments (in crores)	Employment
1.	M/s Ashok Leyland Ltd. MIDC, Gadegaon, Tah. Lakhani	Truck chassis,Axle Comp., Gear Box, Crown wheel.	86.00	442

2.	M/s Maharashtra Metal Powder Pvt. Ltd. Maregaon, Bhandara	Aluminium Powder & Paste	10.50	190
3.	M/s Sunflag Iron & Steel Ind. Ltd. Warthi	Various Types of Steel	280	456

With the existing large scale enterprises and few more coming up in the district, MSMEs located in the district have scope in providing their services to these enterprises. Based on the requirements of these large scale enterprises, a few more MSMEs can also come up and become ancillary units to these large scale enterprises.

### **MSMEs :**

Bhandara district is moderately developing as far as industrial activities are concerned. There are 960 SSI, MSI & SSSBE are permanently registered with the DIC, Bhandara and 1650 SSI are Provisional Registered with DIC, Bhandara with an investment of Rs. 4271.65lakhs would provide employment to 9704 persons.

The list of permanently & provisionally registered SSI units in Bhandara district is given in the following tables:-

**INDUSTRY GROUPWISE TOTAL NO. OF CUMMULATIVE SINCE INCEPTIN MICRO, SMALL & MEDIUM ENTERPRISES  
EMPLOYMENT, INVESTMENT & PRODUCTION CAPACITY**

Name of the District : Bhandara

Month :- Feb.-2010

PART- I

Division as per NIC 1998	Industry Group Discription ( As per NIC 1998 )	No .of Enter Prises	Employ ment	Investment P & M ( Rs.in lakh)	Installed Capacity ( Rs.in lakh)
15	Manufacturer of Food products and Beverages	931	6241	7959	
16	Manufacturer of Tobacco products	4	933	15	
17	Manufacturer of Textile	33	346	213	
18	Manufacturer of Wearing Apparel, Dressing and Dyeing of Fur	264	809	686	
19	Training & Dressing of Leather, Manufacturing of Luggage Handbags, Saddloers, Hamess	96	272	83	
20	Manufacturing Wood products of wood, cdrok, Articles of straw & Platting Materials Except	41	382	200	
21	Manufacturing of Paper & Paper Products	14	90	63	
22	Publishing of Printing & Reprorfuction of Recorded Media	30	149	233	
23	Manufacturing of Coke, Refind Petroleum Products & Nuclear Fuel	14	71	21	
24	Manufacturing of chemicals & Chemicale Products	283	1827	387	
25	Manufacturing of Rubber & Plastic Products	74	541	335	
26	Manufacturing of other Non-Metalic Mineral Products	193	2573	996	
27	Manufacturing of Basik Metals.	22	184	117	
28	Manufacturing of Fabricated Metal Products, Except Machinery & Equipment	156	941	1111	
29	Manufacturing of Machinery & Equipment N.E.C.	6	63	67	
30	Manufacturing of Office, Accounting and Computing machinery	2	5	2	
31	Manufacturing of Electrical Machinery & Apparatus N.E.C..	75	359	161	
32	Manufacturing of Radio, Television Communication Equipments and Apparatus	2	104	51	
33	Manufacturing of Medical, Precision Optical Instruments, Watches and clocks	0	0	0	
34	Manufacturing of Motor Vehicles, Trallers & Semi- Trallers	1	8	1	
35	Manufacturing of other Transport Equipment	0	0	0	
36	Manufacturing of Furniture, Manufacuring N.E.C.	26	280	38	
37	Recyeling	0	0	0	
40	Elecricity, Gas, Steam & Hot Water Supply	0	0	0	
41	Collection, Purification & Distribution of Water	7	137	194	
50	Maintenance & Repair Of Motor Vehicles & Motor cycle ( NIC 1998 CODES 50200 & 50404	55	102	33	
52	Maintenance & Repair Of Personal Household goods ( NIC 1998 code 52601 & 52609)	127	203	78	
60	Land Transport ( NIC 1998 codes 60211 )	0	0	0	
63	Supporting & Auxillary Activities (NIC 1998 Codes 63022 & 63091 )	1	5	10	
64	Post & Telecommunication ( NIC 1998 CODES 64205, 64206, 64207)	22	56	29	

71	Renting of Transport Equipment & other Machinery & Equip N.E.S.(NOC Codes 71110 to 71290)	0	0	0	
72	Computer & related Activities (NIC 1998 code 72201 to 72203,72300,72400,72501 & 72502)	110	75	143	
74	Other Business Activities (NIC 1998 74131 to 74133,74221,74300,74941,74942,74993)	108	371	134	
85	Health & Social Work (NIC 1998 code 85197 & 85321 )	6	17	7	
92	Recreational, cultural & Sporting Activities (NIC 1998 code 92111,92113,to 92115)	0	0	0	
93	Other Service Activities (NIC 1998 code 93010 & 93011)	248	676	467	
	Not Recorded				
	<b>TOTAL</b>	<b>2951</b>	<b>17804</b>	<b>13834</b>	

**INDUSTRY GROUPWISE TOTAL NO. OF CUMMULATIVE SINCE INCEPTIN MICRO, SMALL & MEDIUM ENTERPRISES  
EMPLOYMENT, INVESTMENT & PRODUCTION CAPACITY**

Name of the District : Bhandara

Month :- Feb.-2010

PART- II

Division as per NIC 1998	Industry Group Discription ( As per NIC 1998 )	No .of Enter Prises	Employ ment	Investment P & M ( Rs.in lakh)	Installed Capacity ( Rs.in lakh)
15	Manufacturer of Food products and Beverages	346	3944	4389	15688
16	Manufacturer of Tobacco products	4	650	19	199
17	Manufacturer of Textile	28	407	138	243
18	Manufacturer of Wearing Apparel, Dressing and Dyeing of Fur	65	194	18	40
19	Training & Dressing of Leather, Manufacturing of Luggage Handbags, Saddloers, Harness	19	61	11	17
20	Manufacturing Wood products of wood, cdrok, Articles of straw & Platting Materials Except	11	134	92	83
21	Manufacturing of Paper & Paper Products	10	54	103	29
22	Publishing of Printing & Reprorfuction of Recorded Media	52	123	83	127
23	Manufacturing of Coke, Refind Petroleum Products & Nuclear Fuel	1	1	1	1
24	Manufacturing of chemicals & Chemical Products	51	449	469	543
25	Manufacturing of Rubber & Plastic Products	15	87	47	112
26	Manufacturing of other Non-Metalic Mineral Products	322	4623	2670	1367
27	Manufacturing of Basic Metals.	18	196	140	506
28	Manufacturing of Fabricated Metal Products, Except Machinery & Equipment	161	1363	1471	2645
29	Manufacturing of Machinery & Equipment N.E.C.	1	122	7	0
30	Manufacturing of Office, Accounting and Computing machinery	0	0	0	0
31	Manufacturing of Electrical Machinery & Apparatus N.E.C..	19	144	58	101
32	Manufacturing of Radio, Television Communication Equipments and Apparatus	0	0	0	0
33	Manufacturing of Medical, Precision Optical Instruments, Watches and clocks	1	2	1	1

34	Manufacturing of Motor Vehicles, Trallers& Semi- Trallers	4	31	50	115
35	Manufacturing of other Transport Equipment	0	0	0	0
36	Manufacturing of Furniture, Manufacturing N.E.C.	71	396	61	351
37	Recyeling	0	0	0	0
40	Elecricity,Gas,Steam & Hot Water Supply	0	0	0	0
41	Collection, Purification & Distribution of Water	0	0	0	0
50	Maintenance & Repair Of Motor Vehicles &Motor cycle ( NIC 1998 CODES50200& 50404	28	70	11	29
52	Maintenance & Repair Of Personal Household goods ( NIC 1998 code 52601 & 52609)	41	79	12	26
60	Land Transport ( NIC 1998 codes 60211 )	0	0	0	0
63	Supporting & Auxillary Activities (NIC 1998 Codes 63022 & 63091 )	2	10	11	16
64	Post & Telecummunication ( NIC 1998 CODES 64205,64206,64207)	1	2	1	1
71	Renting of Transport Equipment & other Machinary& Equip N.E.S.(NOC Coads 71110 to 71290)	0	0	0	0
72	Computer & releted Activities (NIC 1998 code 72201 to 72203,72300,72400,72501 & 72502)	24	129	44	70
74	Other Business Activities (NIC 1998 74131 to 74133,74221,74300,74941,74942,74993)	96	148	74	92
85	Health & Social Work (NIC 1998 code 85197 & 85321 )	2	6	1	4
92	Recreational, cultural & Sporting Activities (NIC 1998 code 92111,92113,to 92115)	0	0	0	0
93	Other Service Activities (NIC 1998 code 93010 & 93011	84	223	285	473
	Not Recorded				
	<b>TOTAL</b>	<b>1477</b>	<b>13648</b>	<b>10267</b>	<b>22879</b>

## Format-I

### Fourth Census of MSMEs and First Census of Pharmaceutical Units Bhandara District

<b>1.</b>	<b>Total No of Units in all Frame list</b>	<b>:</b>	<b>1194</b>
<b>2.</b>	<b>No of Units Alloted for</b>	<b>:</b>	<b>1194</b>
<b>3.</b>	<b>Status of Visited Units</b>		
	<b>(a) Working</b>	<b>:</b>	<b>862</b>
	<b>(b) Closed</b>	<b>:</b>	<b>289</b>
	<b>(c) Non Traceable</b>	<b>:</b>	<b>43</b>
	<b>(d) Total</b>	<b>:</b>	<b>1194</b>
<b>4.</b>	<b>Census Format Received</b>		
	<b>(a) Working</b>	<b>:</b>	<b>862</b>
	<b>(b) Closed</b>	<b>:</b>	<b>332</b>
	<b>(c) Total</b>	<b>:</b>	<b>1194</b>
	<b>(d) Percentage</b>	<b>:</b>	<b>100</b>
<b>5.</b>	<b>No. of Formats Sent to New Delhi</b>		
	<b>(a) Working</b>	<b>:</b>	<b>862</b>
	<b>(b) Closed</b>	<b>:</b>	<b>332</b>
	<b>(c) Total</b>	<b>:</b>	<b>1194</b>

## Format-II

### Frame list- wise Weekly Progress Report at the week ending on 25/7/2008

**1. Frame lists (After deleting common name) to be surveyed:**

(a)	DIC	:	1038
(b)	ASI	:	30
(c)	KVIC/KVIB	:	123
(d)	Total	:	1191
(e)	Pharma	:	03
(f)	Total	:	1194

**2. No. of units for which data collection work completed:**

(a)	DIC	:	1038
(b)	ASI	:	30
(c)	KVIC/KVIB	:	123
(d)	Total	:	1191
(e)	Pharma	:	03
(f)	Total	:	1194

**3. Format dispatched to Delhi:**

(a)	DIC	:	1038
(b)	ASI	:	30
(c)	KVIC/KVIB	:	123
(d)	Total	:	1191
(e)	Pharma	:	03
(f)	Total	:	1194

## Census General Analysis

<b>1.</b>	<b>Total Units</b>	<b>:</b>	<b>1194</b>	
<b>2.</b>	<b>Working</b>	<b>:</b>	<b>862</b>	<b>(72.19%)</b>
<b>3.</b>	<b>Closed</b>	<b>:</b>	<b>289</b>	<b>(24.20%)</b>
<b>4.</b>	<b>Not Traceable</b>	<b>:</b>	<b>43</b>	<b>(3.60%)</b>

## **CHAPTER-VI**

### **Prospect of Industrial Development**

In analysis of available resources material as well as human and the existing infrastructural facilities was made in Chapter III & IV respectively. It can be easily seen that the district is endowed with fair amount of resources. On the basis of the information available in the earlier Chapter and list of candidate industries may be divided into following four Categories.

- 1) Resource based
- 2) Demand based
- 3) Skill based
- 4) Ancillary Industries & other industries based.

#### **1) Resource based:**

1. Rice Mill (Mini)
2. Poha Mill
3. Cattle feed
4. Hand made paper
5. Oil Mill
6. Papad, pickle, ketchup manufacturing
7. Chilly powder
8. Turmeric powder
9. Spices

10. Jam & jelly
11. Ice cream
12. Soft drink
13. Particle board
14. Fruit processing
15. Bakery & confectionery
16. Saw mill
17. Wooden furniture
18. Bamboo basket and mats
19. Wooden ammunition boxes
20. Wooden panel
21. Wooden works industries (Toys, frames)
22. Charcoal
23. Mineral processing units
24. Stone crushing unit
25. Mosaic tiles
26. Cement tiles
27. Ricks manufacturing
28. Pulverizing & grinding of minerals etc.
29. Leather tanning unit
30. Bone crushing unit

31.Semi furnished leather and other

32.Office gum

33.Fruit and vegetable canning.

**1) Demand Based Industries:**

1. PVC pipes

2. RCC pipes

3. Agricultural implements

4. Paints and varnishes

5. Air coolers

6. Polythene bags

7. Phenyl

8. Steel furniture

9. Cement furniture

10.Ferric alum

11.Stamp pad ink

12.Agarbatti manufacturing

13.Cleaning powder

14.Manglori tiles

15.Fabrications

16.Printing stationery

17. Animal foods
18. Bleaching powder
19. RRC water tanks
20. Utensils

**2) Other Demand Based Items:**

1. DTP Job work
2. Switches lock/covers
3. Soldering wire
4. Clutch wire
5. Paper conversion
6. Printing ink
7. Offset printing
8. Xerox & other
9. STD booth
10. Ready made garments/hosiery
11. Household apparels
12. Wooden garments
13. Powerloom
14. Dying & printing
15. Handkerchiefs & ribbon manufacturing

16. Flooring tiles
17. Roofing tiles
18. Fireclay bricks/blocks
19. PVC bags and films
20. Plastic nylon buttons
21. Plastic moulded items
22. Tomato products

**3) Skill Based Industries :**

1. Utensil polishing
2. Brass Utensil M
3. Auto Rickshaw servicing
4. Scooter / motor cycle servicing
5. Photo forming
6. Petticoats manufacturing
7. MS Gate & grills
8. Offset printing press
9. Dustless check
10. Tube light fitting
11. Industrial Leather gloves
12. Bamboo & cane products

13. Decorative ceramic articles
14. Repairing & Rewinding of Electric motor
15. Seat covers
16. School bags
17. Wooden furniture
18. Cardboard boxes
19. Steel furniture
20. Lac bangles
21. Petroleum jelly
22. Cardboard boxes
23. Leather purses and hand bags
24. Disposable plastic cups
25. Electrical transformers
26. Date processing unit
27. Tailoring institute
28. Transport services
29. Screen printing
30. Photo studio
31. Video shooting
32. Tyre retreading
33. Bidi manufacturing

34.Papad, pickle making

35.Bubble gum

36.Jam and jelly

37.Tooth paste and powder

**4) Other Industries:**

There are about 03 large scale enterprises in the district, which can offer ancillarisation to MSMEs.

Name and Address of Large Scale Enterprises:

1. M/s Ashok Leyland Ltd. MIDC, Gadegaon, Tah. Lakhani
2. M/s Maharashtra Metal Products Pvt. Ltd. Maregaon, Bhandara
3. M/s Sunflag Iron & Steel Ind. Ltd. Warthi.

Also,

1. M/s Manganese ore India Ltd., Chikla Mines, Tumsar
2. M/s Ordnance Factory, Jawhar Nagar, Bhandara

## **CHAPTER-VII**

### **SUMMARY, CONCLUSION & RECOMMENDATION**

- Agriculture is the primary sector of the district economy. Tremendous opportunities exist to exploit horticulture, floriculture and fish culture.
- Agriculture product like Paddy is grown substantially, processing unit based on paddy could be considered.
- Bhandara district is rich in mineral deposit like Manganese Ore, Chronite, Corundum, Kyanite, Silliminite, Phyrophyllite and Quartz. A few unit based on Mineral resources could be developed.
- Forest based Industries like wooden Furniture, Particle board and Gum can be considered at Bhandara district.
- Based on the requirement of Large scale Enterprises few more MSMEs can also come up and become ancillary units to these Enterprises.
- The available data regarding livestock indicates scope for industrial development. Availability of skin and raw Indus of animal based on these, there is good scope for establishing unit for Leather tanning, footwear, Leather goods and other.
- Mechanical based industries like Steel Furniture, Desert Cooler, Tin container, M.S.gate and grills, Agriculture implements, Fabrication, Engg. Workshop, Automobile repairing service centre are suggested due to local demand.

- Agro based industries like Mini Rice Mill, Dal Mill, Spices, Tomato Sauce, Jam and Jelly are suggested at Bhandara district.
- Under Demand based industries in Chemical such as Detergent powder, Cleaning powder, Phenyl, Wax Candle, Poha Mill, Surgical Bandage, Broom, Note Books, Cardboard boxes, Agarbatti stick are suggested due to local demand.
- There is a good scope for expansion of dairy activity and Inland Fishery in the District. This activity can serve as major subsidiary activity for cultivators, if proper tie-up arrangements through milk collection Societies and Marketing of fish/fish products are made available. There are total 297 registered Co-operative milk collection societies in the District. Taking into consideration the number of milk collection societies and expected scope for this activity in the district, Government has already established 4 chilling centers with average milk capacity of 55000 liters per day as under.

## **CHAPTER-VIII**

### **Cluster of Brass Industries at Bhandara**

#### **Introduction**

The Bhandara district derives its name from the town Bhandara which has its origin in the “Bhan Area” a place where metal utensils are manufactured. It is also quoted to have derived from the sound of brass “Bhan...Bhan”.

#### **Present Status**

There are about 87 registered SSI units in the district (out of which 44 units are in working condition) along with 200 unregistered SSI units engaged in manufacturing of various brass products mainly Brass utensils like Gundi, Ghagara, Lota, Bucket, Thali & other household utensils, generating direct employment to 750 persons & indirect employment to 300 persons.

Raw material in the form of scrap, boring, turning is sufficiently available in the area.

Turnover of brass industries during 2000-01 was around 2.50 crores whereas in 2001-02 it was 2.75 crores with production of 370 M.T. & 354 M.T. respectively.

With their uniqueness in design & craft technology and also because of traditions and customs in society, particularly in rural areas, there was good demand for brass utensils from all over Maharashtra, M.P., A.P. & Orissa. But due to emerging trends in technologies in recent years, brass utensils are replaced by Aluminium, Stainless steel, Non-stick cookware &

other crockery which are comparatively cheaper & have attractive looks also. This has led to decrease in the demand of brass utensils resulting into the coming down of the industrial production significantly.

### **Factors affecting the scenario**

On the other hand there is regular & scheduled load shading from Maharashtra state electricity board for 3 hrs. min. during peak hours of production which is frequently followed by unscheduled load shading without any notice or intimation to the industrial area drastically affecting the production & ultimately leading to increase in the cost of production.

### **Prospects of Brass industries**

Brass industry in Bhandara, needs diversification along with distinct state of the art technologies keeping in view the new emerging trends in the taste of common people, as this industry revolves around the common people, not the big industries.

Identification of new products like brass handicrafts items such as decorative items, statues and hardware items such as Aldrops, Handles, water taps is very much required. Diversified items especially in the field of cookwares such as Brass Non-stick ware should also be identified. Taking into account the market demand for the products new technology for manufacturing & finishing process should be adopted.

As adequate basic infrastructure for the development of new diversified products already exists in the district, initiative for adoption of state of the art, latest technology especially for handicrafts items like decorative items, statues etc., shall be taken very soon. At present handicrafts items are mostly manufactured at Muradabad district of U.P.

state. with excellent market not only in all over India but also in Foreign countries.

Attempts for transfer of technology from Muradabad Artists has to be carried out & other technologies may be adopted from leading engineering institutions like Visveshvaraya National Institute of Technology, Nagpur especially for Non stick coating on brass utensils, which may prove to be of great potential market for brass industries in Bhandara district.

**The relevant Brass industries association established in the region are:**

1. Bhandara Laghu Udyojak Sanstha  
Station road, Bhandara.  
President: Shri Ramvilas Sarada  
Ph.(07184) 252037, 254268
  
2. Bhandara Metal Manufacturer's Association  
Station road, Bhandara.  
President: Shri Dinesh Garg  
Ph. (07184) 254939, 252598. Mobile: 9422130191
  
3. Bhandara Co-operative Industrial Estate  
Bhandara  
President: Shri Sunil Rambhad  
Ph. (07184) 252697. Mobile: 9822722112

## **CHAPTER-IX**

### **Potential Industries in Bhandara**

#### **(1) AGARBATTI STICKS**

The burning of incense in religious and social functions has been practiced in India since early times. Dhup an aromatic powder or paste is burnt in Indian houses as a fragrant fumigant and is reputed to possess insecticide and antiseptic properties. Agarbatti also known as Udabattis similar to joss sticks are a development of Dhup.

Agarbatti are obtainable in different colours and with different perfumes. The burning time of an argarbatti varies from 15 minutes to 3 hours according to quality and size. Agarbattis are used by all communities in India. Owing to the low level of technology involved in this industry. This can be taken to rural area without much difficulty.

Production capacity per annum On single shift basis	27,00,000 pkts
Investment in plant & machinery	10,06,005/-
Machinery and equipment	1) Wooden planks for rolling size 2' x 1' x 1" 2) Weighing balance 10 kg.capacity 3) Hand sieves 100 mash 4) Wooden racks 8' x 6' x 2" 5) Plastic trays 20 ltr. Capacity 6) Aluminium trays for dipping 7) Delivers van / cycle 8) Plastic buckets, mugs misc. equipment

## (2) GINGER & GARLIC PROCESSING

Garlic & Ginger are two important commercial crops widely grown in our country. Garlic which is mainly used as a condiment in food preparation also serves as carminative and gastric stimulant in many medicinal preparations. As a condiment it is used for flavoring food products such as tomato ketchup or sauces, meat sausages, gravies, stews, chutney, pickles, Curried dishes etc. It aids in digestion and absorption of food, possesses anthelmintic and antiseptic properties. Because of these properties it is used in a number of medicinal preparations.

The main products from ginger are ginger pickles, candy, dehydrated ginger, ginger powder, ginger oil and oleoresins. There is a good scope for the development of a ginger – garlic based industry.

Production target	1) Dehydrated Ginger	10.5 MT
	2) Ginger Oil	180KG
	3) Oleoresin	1440KG
	4) Dehydrated garlic	3MT
	5) Ginger candy	10MT
Investment in plant & machinery	Rs.7,91,500/-	

### Machinery and equipment-

- 1) M.S. drier with insulative cap. 650 kgs. With thermostatic control electric heater with additional arrangement of steam heating with 2 nos. 24" 1 HP fans, and complete with trolleys, other accessories.
- 2) Skin peeling barrel drum with 2 HP motor and other accessories @ Rs. 6,000/-
- 3) Concrete washing tank
- 4) S.S. Steam distillation unit 400 litres capacity with MS Jacket fitted with condenser and other accessories
- 5) S.S. Vacuum distillation unit 150 litres capacity complete with condenser receiver and 2 HP vacuum pump.
- 6) S.S. Solvent percolator 200 ltrs. Capacity complete with all accessories
- 7) S.S. Steam jacketed kettle par. 225 litre capacity

- 8) S.S. Vessel 10 litres cap. With 2 KWH heating arrangement for vacuum dyeing of oleoresin complete with vacuum pump.
- 9) Processing table 10 sq. mtr.
- 10)Boiler 100 psig 200 kgs/hr. evaporation cap.
- 11)Tube well with 3 HP pump and storage tank
- 12)Storage tank for solvent
- 13)Weighing balance 300 kgs. Cap. Platform type 406x635 m gradation 10 kgs. X 100 gms
- 14)Laboratory equipment
- 15)Cooling tower.

### (3) WAX CANDLES

Although it is an age of electrical, illumination, however, light out of wax candles has got its charm and pleasure. Wax candles in fact, are daily household necessity for a few and occasional necessity for all including for Churches, other religious places. Hotels, restaurants etc. these are available in various shapes and forms, sizes and colour to suit different occasions and requirements. The sizes may vary from 4 cm in length and a few millimeters in diameters to about a meter or more in length and 15 cm or more in diameter. A part from the straight cylindrical shape of uniform shade for general lighting purpose, artistic and decorative candles are also manufactured in a variety of fascinating shades and imaginative figures.

Candles are mass consumption items and are widely used for lighting and illuminations in household, churches and other religious places hotels and restaurants etc. The demand for candles is increasing day by day to its various usages. Artistic & decorative candles also have very good expected potential.

Production target (Per annum)	59M.T.wax candles
Investment in plant & machinery	Rs.236400/-
Machinery and equipment	1)6" x 1" with 300moulds 2)8" x 3" with 300moulds 3)Wax melting vessels Aluminium 4)Coal/wood fired furnace 5)Miscellaneous items like jug, weighing seaks etc. 6)Testing equipment physical balance calipers etc.





## (6) DAL MILLING

Pulses such as Black gram, Red gram, Green gram from etc. form an important component as a protein source in the Indian diet. Pulses after harvesting on the farm have to undergo various processes such as cleaning splitting into dal, removal of husk etc. before it is consumed. In the earlier days, the processing of pulses used to be done in most of the household in the rural areas and it is used to be time consuming involving strenuous manual labour besides more loss in form waste material. Now new machinery is available to make various operations efficient in pulses processing. Average yield of dal obtained by new method is comparatively more as compared to old method. CFTRI has made improvements in the existing Dal mill machinery to obtain more dal portion from pulses with less breakage.

Depending upon the scope for processing of pulses. These units could be set up in rural areas so that waste material available from this industry could be beneficially used for cattle feed and other purposes.

Production target (Per annum)	2400MT Tur –800MT Moong-800MT Urad-800MT
Investment in plant & machinery	Rs.2831760/-
Machinery and equipment	1)Grain cleaning and sorting sieves
2)Gota machine	3)Oiler/water mixer
4)Husk separator	5)Disc sheller
6)Elevator of suitable size & weight	
7)Necessary frame work for erection of machinery % accessories Hot air blowing drier	8)Maintenance tools etc
9)Weighing machines	10)30 HP Motor with starter
	11)Jute bag stitching machine
	12)Office equipment and furniture

## **(7) INJECTION MOULDED THERMOPLASTIC PRODUCTS**

Plastic processing industry in small scale sector in the country today presents a broad and colourful spectrum, comprising a large number of units producing varied and extensive range of item of a very simple to sophisticated nature. There are a number of household item like soap boxes, mugs, picnic ware, caps and closures for containers, jars, small baskets, tumblers, etc. being used in almost in every household in urban area as well as villages. Plastic items are light in weight, easily washable, durable and cheap and hence they are replacing metallic household utensils rapidly. The process of manufacturing is very simple by injection moulding without any complications and offers an expanding field in India. The proposed injection moulding machine is suitable for the manufacture of any thermo plastic injection moulded article made of LDPE, PP,HDPE, PS,PVC,ABS,ACRYLICS, polycarbonate, nylon, etc.

With the rise in the standard of living in the country there has been a steady growth in the usage of plastic moulded products. The demand of injection moulded plastic household goods is increased day by day due to its moulded uses.

Production target (Per annum)	120MT of different moulded products
Investment in plant & machinery	Rs. 1971700/-
Machinery and equipment	1)Automatic injection moulding machine complete
2)Scrap grinder	3)Dry colour mixture
4)Buffing machine	5)Material heating oven
6)Mould lifting equipment	7)Sets of moulds
8)Water cooling arrangement	9)Weighing scale

## (8) CAMPHOR TABLETS

Camphor is an essential item for almost all religious functions in the house as an incense material in temples and during religious festivals. Camphor is offered as a part of worship right from the ancient days. Earlier camphor was produced from medicinal plants. Purified Camphor produced from medicinal plants was also used for preparation of medicines in Ayurveda and sidha branches of treatment. The advancement of science and technology has resulted in this product being made synthetically.

The product is a mass consumption item and is practically being consumed in all religious festivals in temples. The consumption is increasing every year. It is expected that there may not be much difficulty in marketing product.

Production target (Per annum)	18000kg. Camphor tablets
Investment in plant & machinery	Rs. 444000/-
Machinery and equipment	1)Tableting machine power operated 2)Dies of various sizes 3)Misc. equipment

## (9) INJECTION MOULDED FOOTWEAR

Injection moulded footwear are popular in Indian market due to their cheapness, durability, easy maintenance and affordability by a common man. Used PVC can be again re-used for making cheaper types of footwear. The plant and machinery and raw material for making PVC footwear is available indigenously.

Injection moulded footwear is supposed to be the essential item for human being to protect their foot mainly in rainy seasons. Whereas in rural areas these type of footwear are used through out the year due to their affordable price, durability and easy to maintain. Initially the plants, moulds and raw material were used to be imported due to which the production was restricted. Now a days the machinery, moulds and raw-material being available indigenously there is a good scope for setting up unit for PVC footwear in rural areas and has a good market potential within the country through out the year.

Basis and presumptions.

The basis of production is based on Single shift of 8 hrs. per day with 25 working days per month.

Production target (Per annum)	180000 Pairs per annum.
Investment in plant & machinery	Rs. 3138500/-
Machinery and equipment	1) Horizontal PVC injection moulding machine. 1 No.
	2) Vertical PVC injection moulding machine 1 No.
	3) Grinder and Mixture. 1 No.
	4) Compressor 1 No.
	5) Industrial sewing machine 1 No

### (10) SAFETY PINS

No home is complete without safety pins. It is very widely used while wearing garments by children, ladies etc. this has got some uses in the hospital as well as binding bandages. This industry is of such a type and can be started in rural/urban areas where cheap labour is available and no technology is involved. It is very widely used by ladies as a hair flower pin, Sari pin etc. there is tremendous demand for this product in urban and rural areas. There is a good demand of this product in international market.

Production capacity per annum                      2100000doz. / annum

On single shift basis

Investment in plant & machinery                      Rs.673950/-

Machinery and equipment

1)Wire Straightening m/c 1 H.P. motor  
capacity 200 pcs. Per minute.

2)Wire Grinding m/c 1 H.P. motor  
capacity 200 pcs. Per minutes

3)Cap making and assembling m/c 2  
H.P. motor capacity (60 pcs. Per  
minutes)

4)Automatic nickle polishing m/c double  
drum with 2 H.P. motor

## (11) SQUASHES AND SYRUPS

In a hot country like India, the use of refreshing and thirst-quenching beverages. Mostly falling under the category of aerated waters, has come to stay, For a long time, the use of flavored thick sugar syrups (with or without extracts of tonic herbs or roots) has been very common. During the last few decades, the products like fruit juices, squashes, cordials, crushes, syrup and ready to serve beverages have been introduced in the country on commercial scale to a greater extent. The rapid increase in the production of these products in the different parts of the country is a proof of the popularity of these products.

Manufacture of squashes like orange, lemon, mango and lime juice cordial have made a good progress on commercial scale to the different parts of the country. Besides consumption in the household it is served in the hotels, restaurants, clubs, airways, railways etc. in the recent years, there has been an appreciable increase in the export of produced foods which include squashes and syrups.

With the fast growth of the urban areas and to the growing higher living standards of our people, there is a good potential to develop this industry in the small scale sector in the different parts of the country to meet the increasing market demands.

Production target (Per annum)      1000cases of one dozen bottles each of680 ml.  
capacity

Investment in plant & machinery

Rs.800000/-

Machinery and equipment

1)Rosing Machine

2)Screw type juice ex-tractor

3)Bottle washing m/c

4)Pulping m/c ½ ton cap.

5)Fruit washing m/c with water spraying  
arrangement

6)Stainless steel mixing tank with stirrer  
cap. 200 litres.

**(12) FABRICATION (DOORS, WINDOWS AND  
VENTILATORS [METALLIC])**

As a right-step towards doors, windows and ventilators made out of steel sections may play an important role. More and more buildings are coming up to accommodate ever-increasing population in our country as well as for other developmental activities, viz Industry, institute and houses. The items have very good demand potential and can easily be taken-up by the skilled artisans.

There is a very good demand for the items due to increase in building construction industrialization and other developmental project in our country.

**INVESTMENT :-**

1.Fixed Capital	Rs.59500
2. Working Capital (for 3 months)	Rs.210000 -----
	<b>Rs.269500/-</b> -----

**PRODUCTION CAPACITY :-**

80 Tonnes of doors, windows, (per annum) and ventilators.

**VALUE:-**

Rs. 9,60,000(At a average rate of Rs.12,000/- per tonee) (per annum)

**EMPLOYMENT :-**

9 Persons.

**NAME AND ADDRESS OF MACHINERY SUPPLIER:-**

M/s International Machine Tools Corporation,  
5, Bank Street, P.O. Box No. 799, Fort,  
Mumbai-23.

### (13) DETERGENT POWDER

Detergent are also known as Synthetic Detergent. They are different from oil based soap though both soaps and detergent are surfactants. Their important application is cleaning. Because of a number of advantages Detergents are popular than soaps and its demand is always there if the product possesses both quality and price effectiveness. There are a number of varieties of detergent varying in percentages of active matter present in them and also different colours Manufacturing process is very simple and only mixing is involved. Hence this product is best suited for manufacturing in small scale sector.

#### **Market Potential :-**

Indeed, marketing is not a simple task. In the country, a number of public sectors. Govt. sectors are making Detergent powder, besides many small manufactures. Detergent is a consumer item. Hence there is a scope for this item, if production and marketing is done effectively.

#### **Technical Aspects :-**

There are two methods for the manufacture of Detergent powder, viz. Spray dried detergent powder and just mixing of Detergent powder, raw materials etc. Spray drying involves a lot of investment and hence the other simple mixing method is adopted by a number of small units. In this project, simple mixing method is followed.

Production target (Per annum)	15000kg. @ Rs.12 /-
Investment in plant & machinery	Rs.46000/-
Machinery and equipment	1)Stainless Steel/MS Ribbon Blender 50 kg. capacity (2 H P) 1No. 2)SS Trays/Plastic Trays/Enamelled trays 2 No. 3)Weighing balance (15 kgs.cap. )1No. 4)Misc. equipment like Plastic buckets. Storage drums etc. and plastic heat bending mc/(HO)

## (14) PAPAD

Due to the industrialization modernization, the purchasing power of the people of the people has increased with the result the food habits have also been changing. The people now prefer to have convenient foods of different taste. To have some spiced meals the consumption of Papads & Vadi has gone up in the recent past. In view of the above it is envisaged that there is a good scope for the development of this industry especially in the backward and the rural areas to generate more employment opportunities and to meet the demand of the urbanized markets.

The schemes is based upon single shift per day and 250 days per annum.

Production target (Per annum)	Papad 225MT
Investment in plant & machinery	Rs.64500/-
Working Capital	Rs.74730/-
Total Capital investment	Rs.245130/-
Machinery and equipment	1)Shifter 2)Dough mixer 3)Platform balance 4)Marble top tables, chalkers, rolling pins 5)Others miscellaneous equipment including aluminium utensils racks. Bamboo mats etc. 6)Check balances 7)Electrically operated & automatically controlled cabinet drier for cross flow.

### (15) POTATO WAFERS

The demand for the convenience foods like potato chips wafers, increasing day by day due to the urbanization and an improvement in the standards of living of the masses. There is a good scope of these items of good quality on a competitive price in the Gondia district.

There are numerous products which can be manufactured from potatoes but this scheme is based on the manufacture of potato chips only. This scheme is based upon single shift per day and 300 working days per annum.

Production target (Per annum)	-75MT
Investment in plant & machinery	- Rs.190000/-
Working Capital for 3 months	- Rs.150600/-
Total Capital Investment	- Rs.448600/-
Machinery and equipment -	<ol style="list-style-type: none"><li>1)Boiler Coal or Wood fired complete with all accessories</li><li>2) Drier</li><li>3)Trays made of aluminum</li><li>4)Extra trolies</li><li>5)Potato Peeler</li><li>6)Potato slicer</li><li>7)Steam jacketed kettles</li><li>8)Storage tank Aluminium</li><li>9)Sorting table. Rubber conveyour with motor.</li><li>10)Heat Sealing machine</li><li>11)Preparation table with Aluminim top</li><li>12)Aluminium utensils, knife and other misc. equipments.</li></ol>

PROJECT PROFILE  
ON  
PACKAGED DRINKING WATER  
(OTHER THAN NATURAL MINERAL WATER)

1. PRODUCT CODE (ASICC CODE) : **15221**
  
2. QUALITY CONTROL & STANDARDS : **As per IS 14543 : 1998**  
**The product is also covered under the Drug Control Act and all the specifications laid down their in are to be complied with.**
  
3. PRODUCTION CAPACITY : **1200 K.L. PER ANNUM**

**INTRODUCTION:**

Water is the source of life and nothing can survive without it. Rising population coupled with unplanned industrial growth and non spending of government on infrastructure projects has led to server scarcity of drinking water problem not only in metropolitan town, but also in small towns and rural areas.

In recent years there has been a great increase in the awareness towards safe drinking water in India. Till a few years ago, only foreigners visiting India used to buy bottled drinking water. But now even the average Indian has started buying bottled drinking water while traveling.

Mineral water is pure drinking water produced by reverse osmosis technology. It is well known that water is the main cause of the most of the diseases. As per WHO, the quality of Indian drinking water is not up to the mark in most of the places.

## **MARKET POTENTIAL:**

The availability of municipal water is scarce and the quality is deteriorating. Tube well water is seldom of drinking standard because most of the time it is found to be hard and saline. Considering all this and consciousness of average person towards his health, & the wide gap between domestic per capita consumption of bottled water (around 0.08 liters) versus the global everyday of 7.7 liters, it can be said that packaged drinking water is having fairly good market potential. The bottled drinking water is being used nowadays in restaurants, offices, hotels and social functions like marriages, parties, conference etc. The market is growing at faster rate and considering vast market potential, various multinationals have also entered in this business.

## **BASIS AND PRESUMPTIONS:**

- The project profile is drawn on the basis of following presumptions:
- i) The estimates are drawn for manufacturing of Packaged Drinking Water by Reverse Osmosis technology.
  - ii) The estimates are drawn for a production capacity generally considered techno- economically viable of modal type of manufacturing activity.
  - iii) The costs in respect of machinery and equipments, raw materials and selling price of the finished product are those generally obtained at the time of preparation of project profile & may vary depending upon various factors.
  - iv) The production is based on single shift of 8 hrs per day and 300 working days per annum
  - v) The rate of interest on borrowed capital has been taken as 11% per annum.
  - vi) The unit is expected to work at 50% efficiency in the first year, 60% in the second year and 75% from the third year onwards.
  - vii) The labour charges have been taken as per the minimum wages act of the State Government.

## IMPLEMENTATION SCHEDULE:

The project implementation will take a period of about seven months from the date of approval of the scheme. Break up of activities with relative time for each activity is given below:

Sr. No.	Activity	Estimated time period (Month)
1.	Scheme preparation & approval	0-1
2.	SSI Provisional Registration	0-1
3.	FDA approval	1-5
4.	Sanction of loan	2-5
5.	Placement of order for delivery of machines	4-5
6.	ISI mark from B. I. S.	5-7
7.	Installation of machines	5-6
8.	Power connection	5-6
9.	Trial run	6-7
10.	Commercial production	8 <sup>TH</sup> month onwards

## TECHNICAL ASPECTS:

- (a) PRODUCTION CAPACITY : 1200 K.L. PER ANNUM  
(b) QUALITY CONTROL & STANDARDS : IS -14543 : 1998

**Table – 1**

### **(Organoleptic and Physical Parameters )**

Sr. No.	Characteristic	Requirement	Method of Test Ref. to IS
1.	Colour, colour units Max	2	3025 (Part 4)
2.	Odour	Agreeable	3025 (Part 5)
3.	Taste	Agreeable	3025 (Part 8)
4.	Turbidity, NTU, Max	2	3025 (Part 10)
5.	Total dissolved solids, mg/l, max.	500	3025 (Part 16)
6.	PH value	6.5 to 8.5	3025 (Part 11)

**Table – 2**

**( General Parameters concerning substances undesirable in excessive amounts )**

<b>Sr. No.</b>	<b>Characteristic</b>	<b>Requirement</b>	<b>Method of Test Ref. to IS</b>
1.	Barium (as Ba), mg/l, Max.	1.0	Annex F of IS 13428
2.	Copper (as Cu) mg/l, Max.	0.05	IS 3025 (Part 42)
3.	Iron (as Fe), mg/l, Max.	0.1	32 of IS 3025
4.	Manganese (as Mn), mg/1Max.	0.1	35 of IS 3025
5.	Nitrite (as NO <sub>3</sub> ), mg/l, Max.	45	IS 3025 (Part 34)
6.	Nitrite (as NO <sub>2</sub> ), mg/l, Max.	0.02	IS 3025 (Part 34)
7.	Fluoride (as F), mg/l, Max.	1.0	23 of IS 3025
8.	Zinc (as Zn), mg/l, Max.	5	IS 3025 (Part 49)
9.	Silver (as Ag), mg/l, Max.	0.01	Annex J of IS 13428
10.	Aluminium (as A1), mg/l, Max.	0.03	31 of IS 3025
11.	Chloride (as C1), mg/l, Max.	200	IS 3025 (Part 32)
12.	Selenium (as Se), mg/l,Max.	0.01	28 of IS-3025
13.	Sulphate (as SO <sub>4</sub> ), mg/l, Max.	200	IS 3025 (Part 24)
14.	Alkalinity (as HCO <sub>3</sub> ), mg/l, Max.	200	IS 3025 (Part 23)
15.	Calcium (as Ca), mg/l, Max.	75	IS 3025 (Part 40)
16.	Magnesium (as Mg), mg/l, Max.	30	IS 3025 (Part 46)
17.	Sodium (as Na), mg/l, Max.	200	IS 3025 (Part 45)
18.	Residual free chlorine mg/l, Max.	0.2	IS 3025 (Part 26)
19.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l , Max.	0.001	54 of IS 3025
20.	Mineral oil, mg/1Max.	0.01	IS 3025 (Part 39)
21.	Aniome smlace active (as MBAS), mg/1Max.	0.2	Annex K of IS 13428

**Table – 3**  
**(Parameters concerning Toxic substances )**

<b>Sr. No.</b>	<b>Characteristic</b>	<b>Requirement</b>	<b>Method of Test Ref. to IS</b>
1.	Mercury (as Hg), mg/1Max.	0.01	IS 3025 (Part 48)
2.	Cadmium (as Cd), mg/1Max.	0.01	IS 3025 (Part 41)
3.	Arsenic (as As), mg/1Max.	0.05	IS 3025 (Part 37)
4.	Cyanide (as CN), mg/1Max.	0.05	IS 3025 (Part 27)
5.	Lead (as Pb), mg/1Max.	0.01	IS 3025 (Part 47)
6.	Chromium (as Cr), mg/1Max.	0.05	Annex J of IS 13428
7.	Nicky (as Nil), mg/1Max.	0.02	Annex L of IS 13428
8.	Polychlorinated biphenyl(PCB)	Not detectable	Annex M of IS 13428
9.	Polychlorinated aromatic hydrocarbon	Not detectable	The test for Polynuclear aromatic hydrocarbons should be kept in abeyance till a test method is incorporated in the standard.

**(c) MANUFACTURING METHOD:**

Bottled water is also commonly known as mineral water. Mineral water specification are stringent as they contain amount of mineral and hence most of the water sold in the market is termed as pure water. Pure water for bottling is produced through DM water process or through reverse osmosis process. Water production through DM route is being prohibited and in future water would be produced only through reverse osmosis.

The production of Packaged Drinking Water through Reverse Osmosis takes place in five stages -

**State-I Sediment Filter:**

The filter uses 10 micron polypropylene filter to remove sediments to improve quality of water and protect membrane.

**State-II Carbon Filter:**

This removes chlorine from raw water to improve quality & to protect the membrane.

**State – III Carbon Block:**

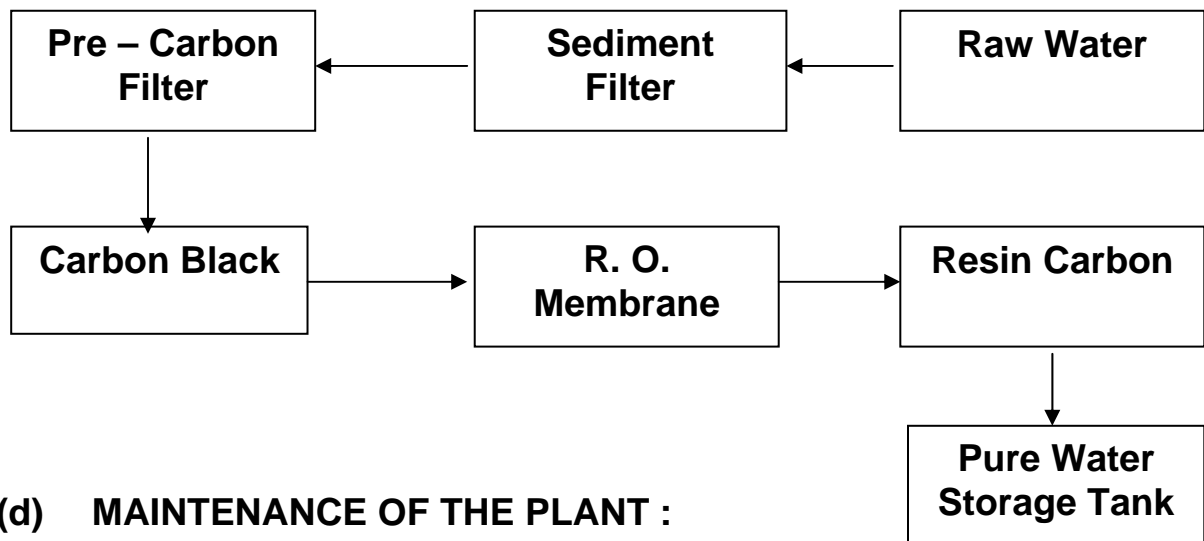
This stage removes bacteria and suspended impurities and enhances color / odour.

**State – IV R.O. Membrane:**

In this stage semi purified water is passed through world renowned reverse osmosis membrane with 0.001 micron pores. Dissolved salts heavy metals and impurities are reduced to 90% and higher.

**State – V Resin Carbon:**

In this stage carbon removes colour and bad odour and thereby restoring the water's natural taste.



**(d) MAINTENANCE OF THE PLANT :**

No chemicals are used in the plant. However following consumables are likely to be used.

- Change of sand and carbon : Once in a year Cost approx Rs.1,000/-
- Change of Resin : Once in a year, Cost approx Rs. 10,000/-
- Change of Membrane : Once in two years, Cost approx Rs. 20,000/-

## LEGAL ASPECTS:

(a) As per the prevention of Food Adulterations Act 1954 & the Maharashtra Prevention of Food Adulteration (MPFA), Rule 1962, Rule No. 50, license for Packaged Drinking water is compulsory. This license can be obtained from the office of the Food & Drug Administration (if manufacturing activity is outside Municipal Corporation ) and from Health Department of Municipal Corporation (if manufacturing activity is within the Corporation Limit ). Forms to obtain the license are made available to entrepreneurs free of cost.

The General requirement for obtaining license are as under:

- i) Land and Plant Layout.
- ii) Proof of ownership of land or consent letter of owner, if the land is taken on rent, as the case may be.
- iii) Copy of memorandum of articles of association or partnership deed, list of Directors etc. as the case may be.
- iv) Photocopy of the packing material specimen.
- v) If the plant is in the limit of Municipal Corporation then NOC from Municipal Corporation or if the plant is in MIDC area then NOC from MIDC.

(b) For manufacturing of Packaged Drinking Water ISI mark is compulsory. This license can be obtained from **Bureau of Indian Standards**. For Vidarbha this office is situated at – **2<sup>ND</sup> Floor, NIT Complex, Opp: Sudama Talkies, Gokulpeth, Nagpur. Tel. No. (0712)2565171, 2554268.**

## FINANCIAL ASPECTS:

Sr. No.	Description	Qty.	Value (Rs.)
(a)	<b>Land and Building:</b> Covered area of 3000 Sq. ft. on rent		10,000/-
(b)	<b>Machinery &amp; equipments:</b>		
i)	Water Purifier	1	3,50,000/-
ii)	Raw water storage tank (Cap :1000 Ltrs.)	2	4,000/-
iii)		2	4,000/-

iv)	Pure water storage tank (Cap :1000 Ltrs.)	1	47,500/-
v)	Semi-automatic filling m/c. with 1 H.P. motor.		
	Semi-automatic plastic bottle sealing machine	1	22,500/-
vi)	with 0.25 H.P. motor	1	1,10,000/-
vii)	Automatic Pouch Filling Machine	L.S.	20,000/-
viii)	Bore well	1	5,000/-
ix)	Cycle Rikshaw	L.S.	2,00,000/-
x)	Laboratory Equipments ( as per BIS		25,000/-
xi)	requirements)		86,300/-
	Preoperative & expenses		
	Electrification & Installation charges @ 10% of the cost of machinery & equipments		
		<b>Total</b>	<b>9,74,300/-</b>
		<b>Orsay</b>	<b>9,74,000/-</b>

**(c) RAW & PACKING MATERIALS PER MONTH:**

Sr. No.	Description	Qty.	Value (Rs.)
i)	Bottle, 1 litrs. Capacity each @ Rs.3/- per pc.	25,000/-	75,000/-
ii)	Pouch. @ Rs.0.25 per pc.	1,25,000/-	31,250/-
iii)	Master cartons @ Rs.7/- per pc.	4,200/-	29,400/-
iv)	B.O.P.P. tape @ Rs. 40/- per roll	60 rolls	2,400/-
iv)	Misc. Laboratory Chemicals	L.S.	10,000/-
		<b>Total</b>	<b>1,48,050/-</b>

**(d) STAFF & LABOUR PER MONTH:**

Sr. No.	Description	Qty.	Value (Rs.)
i)	Manager/Chemist	1	5,000/-
ii)	Operator	2	5,000/-

iii)	Unskilled	3	6,000/-/-
iv)	Accountant	1	2,500/-
v)	Salesman	1	2,500/-
		<b>Total</b>	<b>21,000/-</b>

**(e) UTILITIES PER MONTH:**

Sr. No.	Description	Qty.	Value (Rs.)
i)	Power	5 H.P.	3,000/-
ii)	Fuel, Oil & Lubricants	L.S.	1,000/-
		<b>Total</b>	<b>4,000/-</b>

**(f) OTHER EXPENSES PER MONTH:**

Sr. No.	Description	Value (Rs.)
i)	Rent	10,000/-
ii)	Telephone	1,000/-
iii)	Insurance @ 2% of the cost of machinery & equipments	1,440/-
v)	Repair & Maintenance	5,000/-
vi)	Marketing & traveling expenses	10,000/-
vii)	Fees towards ISI mark etc.	10,000/-
	<b>Total</b>	<b>37,440/-</b>

**(g) WORKING CAPITAL PER MONTH:**

Sr. No.	Description	Value (Rs.)
i)	Raw & Packing Materials	1,48,050/-
ii)	Staff & labour	21,000/-
iii)	Utilities	4,000/-
iv)	Other expenses	37,440/-
	<b>Total</b>	<b>2,10,490/-</b>

**Or say 2,10,000/-**

**(h) TOTAL CAPITAL INVESTMENT:**

Sr. No.	Description	Value (Rs.)
i)	Machinery & equipment	9,74,000/-
ii)	Working capital for three months	6,30,000/-
	<b>Total:</b>	<b>16,04,000/-</b>

**FINANCIAL ANALYSIS:**

**(a) COST OF PRODUCTION PER ANNUM :**

Sr. No.	Description	Value (Rs.)
i)	Raw & Packing Materials	17,76,600/-
ii)	Staff and Labour	2,52,000/-
iii)	Utilities	48,000/-
iv)	Other expenses	4,49,280/-
v)	Deprecation on machinery & equipments @ 10% per annum	86,300/-
vi)	Interest on total capital investment @ 11% per annum	1,76,440/-
	<b>Total</b>	<b>27,88,620/-</b>
	<b>Or say</b>	<b>27,89,000/-</b>

**(b) TURNOVER PER MONTH:**

Sr. No.	Description	Value (Rs.)
i)	3,00,000 Litres in Bottles of 1 Ltr. Each @ Rs.6 per bottle	<b>Rs.18,00,000/-</b>
ii)	3,00,000 Litres in Pouches of 200 ml each @ Rs.1.00 each	<b>Rs.15,00,000/-</b>
	<b>Total</b>	<b>Rs.33,00,000/-</b>

**(c) NET PROFIT PER ANNUM:**

Net Profit = Total Turnover - Total cost of Production

$$= \text{Rs.}33,00,000/- - \text{Rs.}27,89,000/-$$

$$= \text{Rs.} 5,11,000/-$$

**(d) PROFIT ON TURNOVER:**

$$\% \text{ Profit on Turnover} = \frac{\text{Net Profit}}{\text{Total Turnover}} \times 100$$

$$= \frac{\text{Rs.} 5,11,000/-}{\text{Rs.} 33,00,000} \times 100$$

$$= \mathbf{15.5 \%}$$

**(e) RATE OF RETURN ON TOTAL CAPITAL INVESTMENT:**

$$\text{ROR} = \frac{\text{Net Profit per year}}{\text{Total Capital Investment}} \times 100$$

$$= \frac{\text{Rs.} 5,11,000}{\text{Rs.} 16,04,000/-} \times 100$$

$$= \mathbf{31.9 \%}$$

**(f) BREAK EVEN ANALYSIS:**

**FIXED COST:**

Sr. No.	Description	Value (Rs.)
i)	Deprecation machinery & equipment @ 10% p. a.	86,300/-
ii)	Interest on total capital investment @ 11% p. a.	1,76,440/-
iii)	40% on salary & wages	1,00,800/-
iv)	40% of other expenses	1,79,712/-
	<b>Total</b>	<b>5,43,252/-</b>
	<b>Or say</b>	<b>5,43,000/-</b>

## **BREAK EVEN POINT (B.E.P.) :**

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{Fixed Cost}}{\text{Fixed cost} + \text{Profit}} \times 100 \\ &= \frac{\text{Rs.5,43,000/-}}{\text{Rs.5,43,000/-} + \text{Rs. 5,11,000}} \times 100 \\ &= \frac{\text{Rs.5,43,000/-}}{\text{10,54,000/-}} \times 100 \\ &= \mathbf{51.5 \%} \end{aligned}$$

## **NAME AND ADDRESSES OF MACHINERY SUPPLIES:**

1. M/s. Kent R-O System, C-15, Sector-7, Noida-201 301 (U.P.)  
Cont. Person : Shri Mahesh Gupta, Tel. No. 0118-525704, 537984, 526941.
2. M/s. Indian Water Treatment Co. Pvt. Ltd., 792, Bhawani Peth, Agarwal Colony, Pune – 411 042 (M.S.). Tel. No. 0212-657973, 652887
3. M/s. Ion Exchange (I) Ltd., 105, Sipcot Industrial Complex, P.O. Hosur, Dist. Dharampur – 6351126 ( Tamilnadu ).
4. M/s. Ion Exchange (I) Ltd., P.O. Box No. 6273, Tiecicon House, Dr. E. Moses Road, Mumbai – 400 001.
5. M/s. The Master Mechanical Works, 7/10, Dittalwala Apartments, 1<sup>st</sup> Floor, 17, Tilak Road, Santacruz (West), Mumbai – 400 054 Tel. No. 6491680, 6493457.
6. M/s. Unique Marketing, Shubhechha Kinkhede Layout, Civil Lines, Nagpur – 01.  
Tel. No. (0712)2538546, Mb. 09822704042, 09373101709.

## **NAME AND ADDRESS OF PACKING MATERIAL SUPPLIERS:**

### **(a) Plastic Bottles:**

1. M/s. Nagpur Polyfilms Pvt. Ltd., F-9/18, MIDC Hingna Road, Nagpur-440 016.

2. M/s. Rajendra Plastic Products, Near Wardhaman Nagar, Power House, Bhandara Road, Nagpur – 440 008, Tel. No. 0712-2762270.

3. M/s. Uday Plastics, W-71, MIDC Hingna Industrial Area, Nagpur – 440 016.

Tel. No. (07104) 235419.

**(b) Master Cartons:**

1. M/s. Amber Board Industries, 63, Varma Layout, Nagpur – 440 010.

**I Pet Bottles Mfg. M/cs.:**

1. M/s. Deshmukh Industries, Adinath Nagar, Gavane Area, Bhosari, Pune – 411 039, Tel. (020) 27121359.

**(d) Pouch Filling M/cs:**

1. M/s. Labh Machines Pvt. Ltd., S/10/A, Phase-I, Behind R.M. Engineering, G.I.D.C. Valva, Ahmedabad – 3892201.

E-mail: [labhgroup@vsnl.com](mailto:labhgroup@vsnl.com) , Website: [www.labhgroup.com](http://www.labhgroup.com)

2. M/s. Packera, S.No. 44/1, Near Ganapati Matha Mandir, NDA Road, Warje Malwadi, Pune – 411029 (India). Tel. (020)25290565, Fax No. (020) 25201120

Cont. Person : Shri Mukund Kirdat , E-mail : [packera@vsnl.com](mailto:packera@vsnl.com)

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# PROJECT PROFILE

## ON

# WAX CANDLE

1. PRODUCT CODE (ASICC CODE) : **36405**
2. QUALITY CONTROL & STANDARDS : **As per Customer Specifications.**
3. PRODUCTION CAPACITY : **24 M.T. PER ANNUM**
4. MONTH & YEAR OF PREPARTION : **FEBRUARY, 2007**

### **INTRODUCTION:**

These are basically made of wax and used for lighting purposes in the houses, temples, Gurudwaras, Church etc. Some times Stearic Acid in small percentages is also used in combination with Wax to give extra strength and Shine to the candles. Candles are sold in the market from as small as 1inch to 4 feet in length and diameter ranging up to one feet.

### **MARKET POTENTIAL:**

Candles are used on the occasion of Birthdays, Anniversary in most of the houses now a days. In Hotels and Restaurants candle dinner is very popular. In Temples, Gurudwaras, Church etc. candles are regularly used for lighting purposes. Candles are having very good market potential especially in the festival session like Diwali, Gurunanak Birthday, Christmas etc. In view of increasing power cuts in rural areas as well as in urban areas, candle business is gaining momentum.

## **BASIS AND PRESUMPTIONS:**

The project profile is drawn on the basis of following presumptions:

- i) The estimates are drawn for a production capacity generally considered techno- economically viable of modal type of manufacturing activity.
- ii) The costs in respect of machinery and equipments, raw materials and selling price of the finished product are those generally obtained at the time of preparation of project profile & may vary depending upon various factors.
- iii) The production is based on single shift of 8 hrs per day and 300 working days per annum
- iv) The rate of interest on borrowed capital has been taken as 11% per annum.
- v) The unit is expected two works at 50% efficiency in the first year, 60% in the second year and 75% from the third year onwards.
- vi) The labour charges has been taken as per the minimum wages act of the State Government.

## **IMPLEMENTATION SCHEDULE:**

The project implementation will take a period of about six months from the date of approval of the scheme. Break up of activities with relative time for each activity is given below:

<b>Sr. No.</b>	<b>Activity</b>	<b>Estimated time period (Month)</b>
1.	Scheme preparation & approval	0-1
2.	SSI Provisional Registration	0-1
3.	Sanction of loan	1-4
4.	Placement of order for delivery of machines	4-5
5.	Installation of machines	5-6
6.	Power connection, Trial run	5-6
7.	Commercial production	7 <sup>TH</sup> month onwards

## TECHNICAL ASPECTS:

- (a) PRODUCTION CAPACITY : **24 M.T. PER ANNUM**
- (b) QUALITY CONTROL & STANDARDS : As per Customer Specifications.

### (c) MANUFACTURING METHOD:

Paraffin Wax and Stearic Acid are melted together in an Aluminium vessel . Then Colour is mixed with molten wax & Stearic Acid. Simultaneously moulds are kept ready by applying some vegetable oil on the inner surface to avoid sticking of wax to moulds. Wick is placed properly in the moulds. Now molten wax along with stearic acid is poured in to the moulds. The cold water is allowed to circulate out side the moulds to allow the wax mixture to solidify. Now candles are taken out and wick is cut, and the same are packed in preprinted cardboard boxes.

## LEGAL ASPECTS:

For manufacturing of Wax Candle , no license is required. However one should go for registration with State Directorate of Industries under MSME Act 2006.

## FINANCIAL ASPECTS:

Sr. No.	Description	Qty.	Value (Rs.)
(a)	<b>Land and Building:</b> Covered area of 500 Sq. ft. on rent		3,000/-
(b)	<b>Machinery &amp; equipments:</b>		
i)	Semi- automatic Machine	1	50,000/-
ii)	Moulds of Different Shapes and Sizes	10	15,000/-
iii)	Misc. Equipments.	L.S.	5,000/-
iv)	Furniture	L.S.	5,000/-
v)	Electrification @ 10% of machinery &		7,000/-
vi)	Equipments Preoperative Expenses	L.S.	15,000/-
		<b>Total</b>	<b>97,000/-</b>

**(c) RAW & PACKING MATERIALS PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Value (Rs.)</b>
i)	Wax @ Rs.45/- per Kg	950 Kg	42,750/-
ii)	Stearic Acid @ Rs.50/- per Kg	50 Kg.	2,500/-
iii)	Wick, Oil etc.	L.S.	500/-
iv)	Unit Cartons @ 25 paisa per pc.	8000 Nos.	2,000/-
v)	Corrugated Boxes @ 7/- per pc.	100 Nos.	700/-
vi)	BOPP tape @ Rs. 50/- per Roll	2 Rolls	100/-
		<b>Total</b>	<b>48,550/-</b>

**(d) STAFF & LABOUR PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Value (Rs.)</b>
i)	Skilled Worker	1	2,500/-
ii)	Unskilled	2	4,000/-
		<b>Total</b>	<b>6,500/-</b>

**(e) UTILITIES PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Value (Rs.)</b>
i)	Power	L.S.	2,000/-
ii)	Fuel, Oil & Lubricants	L.S.	1,000/-
		<b>Total</b>	<b>3,000/-</b>

**(f) OTHER EXPENSES PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Value (Rs.)</b>
i)	Rent	3,000/-
ii)	Telephone	1,000/-
iii)	Insurance @ 2% of the cost of machinery & equipments	117/-
iv)	Repair & Maintenance	500/-
vi)	Marketing & traveling expenses	5,000/-
	<b>Total</b>	<b>9,617/-</b>

**(g) WORKING CAPITAL PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Value (Rs.)</b>
i)	Raw & Packing Materials	48,550/-
ii)	Staff & labour	6,500/-
iii)	Utilities	3,000/-
iv)	Other expenses	9,617/-
	<b>Total</b>	<b>67,667</b>

**(h) TOTAL CAPITAL INVESTMENT:**

<b>Sr. No.</b>	<b>Description</b>	<b>Value (Rs.)</b>
i)	Machinery & equipment	97,000/-
ii)	Working capital for three months	2,03,000/-
	<b>Total</b>	<b>3,00,000/-</b>

## FINANCIAL ANALYSIS:

### (d) COST OF PRODUCTION PER ANNUM :

Sr. No.	Description	Value (Rs.)
i)	Raw & Packing Materials	5,82,600/-
ii)	Staff and Labour	78,000/-
iii)	Utilities	36,000/-
iv)	Other expenses	1,15,404/-
v)	Deprecation on machinery & equipments @ 10% p. a.	7,500/-
vi)	Interest on total capital investment @ 11% p.a.	33,000/-
	<b>Total</b>	<b>8,52,504/-</b>
	<b>Or say</b>	<b>8,53,000/-</b>

### (e) TURNOVER PER ANNUM :

Total Sales Value of 12 M.T. of wax candle @ Rs.80 per Kg.

**9,60,000/-**

### (f) NET PROFIT PER ANNUM:

Net Profit = Total Turnover - Total cost of Production  
= Rs. 9,60,000/- - 8,53,000/-  
= Rs. 1,07,000/-

### (g) PROFIT ON TURNOVER:

% Profit on Turnover =  $\frac{\text{Net Profit}}{\text{Total Turnover}} \times 100$   
=  $\frac{\text{Rs. 1,07,000/-}}{\text{Rs. 9,60,000/-}} \times 100$   
= **11.2 %**

**(e) RATE OF RETURN ON TOTAL CAPITAL INVESTMENT:**

$$\begin{aligned} \text{ROR} &= \frac{\text{Net Profit per year}}{\text{Total Capital Investment}} \times 100 \\ &= \frac{\text{Rs. 1,07,000/-}}{\text{Rs. 3,00,000/-}} \times 100 \\ &= \mathbf{35.7 \%} \end{aligned}$$

**(f) BREAK EVEN ANALYSIS:**

**FIXED COST:**

Sr. No.	Description	Value (Rs.)
i)	Deprecation machinery & equipment @ 10% p. a.	7,500/-
ii)	Interest on total capital investment @ 11% p. a.	33,000/-
iii)	40% on salary & wages	31,200/-
iv)	40% of other expenses	46,162/-
	<b>Total</b>	<b>1,17,862/-</b>
	<b>Or say</b>	<b>1,18,000/-</b>

**BREAK EVEN POINT (B.E.P.) :**

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{Fixed Cost}}{\text{Fixed cost} + \text{Profit}} \times 100 \\ &= \frac{\text{Rs. 1,18,000/-}}{\text{Rs. 1,18,000/-} + \text{Rs. 1,07,000/-}} \times 100 \\ &= \frac{\text{Rs. 1,18,000/-}}{\text{Rs. 2,25,000/-}} \times 100 \\ &= \mathbf{52.4 \%} \end{aligned}$$

**NAME AND ADDRESSES OF MACHINERY SUPPLIES:**

1. M/s. Vijay Industries, 1787, Lal Kunwan, Delhi – 110006.
2. M/s. Devi Dayal & Co., 17, Lal Kunwan, Delhi – 110006.
3. M/s. Unitech Marketing, Shop No. 6, Dhanshree Complex, Near Hotel Hardeo, Sitabuldi, Nagpur.  
Cont. Person : Shri Naveen Kumar

**NAME AND ADDRESS OF PACKING MATERIAL SUPPLIERS:**

1. M/s. Surya Chemical Industries, Panjawani Market, Tinnal Chowk, Gandhibagh, Nagpur – 440002.  
Contact Person : Shri H.D.Nagpal, Tel. No.(0712)2761286, 2767536.
2. M/s. Jaysons, 2 / 22, Earth House, 1<sup>ST</sup> Floor, Princess Street, Mumbai-400002.  
Tel. No. (022)22050264, 2260611.
3. M/s. Gujarat Paraffin Pvt. Ltd., 909, Embassy Centre Nariman Point, Mumbai.  
Tel. No. (022) 22047593.
4. M/s. Amber Board Industries, 63, Varma Layout, Nagpur – 440 010.
5. M/s. Prabhu Packaging Products (P) Ltd., N-74, MIDC Hingna, Nagpur – 440016.
6. M/s. Packaging Products, B-1, MIDC Industrial Area, Hingna Road, Nagpur – 16.

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# Sodium Hypochlorite

## 1. INTRODUCTION :

Hypochlorites are chemical compounds containing the chlorate (I) anion(  $[\text{OCl}]^-$  ). It is a greenish – yellowish liquid commonly referred to as “Bleach”. Sodium Hypochlorite ( $\text{NaOCl}$ ) is a compound that can be effectively used for surface purification, water disinfectants ( Disinfectants are microbial agents that are applied to nonliving objects to destroy microorganisms, the process of which is known as disinfection), bleaching, odour removal etc. It has a relative density of 1.1 [ 5.5% water solution]. It is unstable and Chlorine evaporates. It is strong oxidizer and reacts with flammable compounds however it’s solution is a weak base that is inflammable.

## 2. MARKET POTENTIAL:

It has following applications in general :

- It is the main ingredient in laundry bleach. It is used extensively as a bleaching agent in the textiles, detergents paper & pulp industries.
- It is used as disinfectant in water and waste water treatment plants and sanitary equipments.
- State Government, Corporations, Nagar Parishad etc. are the major customers of the product to use it as disinfectant in water.
- It is applied in swimming pools for water disinfection.
- In Food Processing Industry , it is used to sanitize food preparation equipments.
- In petrochemical industry, it is used in petroleum products refining.

The following table shows some of the varying strengths of the product and how the variations are typically used :

<b>Wt % of Sodium Hypochlorite</b>	<b>Common Uses</b>
2 %	Shock Chlorination of Wells
3-6 %	Household Disinfectant, Laundering Clothes, Dentistry Root Canal Treatment Disinfectant in Hospitals, Food Processing, Fish Processing etc.
12-16 %	Disinfectant in Swimming Pools, Water Treatment, Waste Water Treatment etc.

### 3. BASIS & PRESUMPTIONS :

- a. The production is based on single shift of eight hours and 300 working days per annum.
- b. The cost in respect of Plant & Machinery has been taken at the time of preparation of Project Profile, which may vary from place to place and time to time.
- c. Labour charges has been taken as per Govt. norms.
- d. It is presumed that plant will work at 50% efficiency in the first year, 60% in the third year and 70% in the third year.

### 4. IMPLEMENTATION SCHEDULE :

It will take about eight months to start commercial production as under :

Sr. No.	Activity	Estimated Period
01.	Registration under MSME Act	0 – 1 Month
02.	Preparation of Scheme	0 – 1 Month
03.	Sanction of Loan	1 – 5 Month
04.	Placement of Order for Plant & Machinery	5 – 6 Month
05.	Power & Water Connection	5 – 6 Month
06.	Installation of Plant & Machinery	6 – 7 Month
07.	Procurement of Raw material & Trial Run	7 – 8 Month
08.	Commercial Production	8 <sup>th</sup> Month onwards

### 4. TECHNICAL ASPECTS:

- a. **Production Capacity** : **1200 K.L. per Annum**
- b. **Quality Control & Standards** : **As per IS 11673:1992**

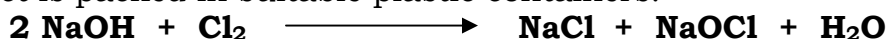
The requirements for Sodium Hypochlorite Solution are as under :

Sr. No.	Charateristics	Requirements	
		Grade 1	Grade 2
01.	Relative density (at 25 <sup>o</sup> / 25 <sup>o</sup> C)	1.07 to 1.118	1.20 Min.
02.	Available Chlorine (as Cl), percent by mass by volume	4.0 to 6.0	12.5 to 15.0
03.	Total Chlorine, percent by volume ( as	4.0 to 6.0	12.5 to

	Cl)		15.0
04.	Free Alkali (as NaOH), g/l. Min.	1.0	5.0
05.	Free Sodium Carbonate (as Na <sub>2</sub> CO <sub>3</sub> ), g/l, Min.	0.5	0.5
06.	Iron ( as Fe), ppm, Max.	0.4	1.0
07.	Sodium Chlorate, percent by mass, Max.	0.05	0.3

**c. Manufacturing Method :**

It is produced by Hooker process in the large scale. At the small scale it is produced by reacting Caustic Soda Lye (35%) with dosing of Chlorine gas accompanied by cooling. In a plastic tank first we take Caustic Soda Lye (35%) and then chlorine dosing is done. After 7-8 hours of chemical reaction, sodium hypochlorite (NaOCl) is produced. It is exothermic reaction and temperature is about 35 – 40°C. The sample is taken out for checking Chlorine percentage and only after Q.C. approval the product is packed in suitable plastic containers.



**(d) Packaging, Marking & Storing**

The material shall be packed in air tight plastic containers or as agreed between the purchaser and the supplier. The containers used shall be dry and free from grease, dirt or other foreign matter likely to cause decomposition of the material.

Each package shall bear legibly and indelibly the following information :

- Name & Grade of the Material
- Indication of the source of the manufacture.
- Gross & Net mass.
- Date of Packing.
- Lot Number
- Available Chlorine i.e. the measure of the oxidizing power of the chlorine present as hypochlorite expressed in terms of chlorine with a gram equivalent mass of 35.46 ( to be declared by the manufacturer.)

The material shall be stored in a cool and dark place. While shipping, the material shall be stored away from boilers or any other source of emanating heat and light.

**5. FINANCIAL ASPECTS :**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Value (Rs.)</b>
<b>a.</b>	<b>Land &amp; Building</b> Total Area of 2000 Sq. Feet including 1000 Sq Feet covered area on Rent		5,000.00
<b>b.</b>	<b>Machinery &amp; Equipments</b>		
i)	PVC Tank Capacity 2000 Ltrs each	2 Nos.	70,000.00
ii)	Laboratory Equipments	L.S.	50,000.00
iii)	Other Misc. material handling equipments	L.S.	10,000.00
iv)	Office Furniture & Equipments	L.S.	25,000.00
v)	Installation of Machinery & Equipments	L.S.	10,000.00
vi)	Preoperative Expenses	L.S.	20,000.00
		<b>Total</b>	<b>1,85,000.00</b>

**c. RAW & PACKING MATERIAL PER MONTH :**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Amount (Rs.)</b>
01.	Caustic Soda Flakes @ Rs.25 per Kg.	12500 Kg.	3,12,500.00
02.	Chlorine gas @ Rs.14 per Kg.	7500 Kg.	1,05,000.00
03.	Plastic cans 40 Ltrs. Capacity @ Rs.120 per can.	1250 Nos.	1,50,000.00
04.	Other Misc items	L.S.	10,000.00
		<b>Total</b>	<b>5,77,500.00</b>

**d. SALARY & WAGES PER MONTH :**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Amount (Rs.)</b>
01.	Manager	01	Self
02.	Supervisor / Chemist	01	5,000.00
03.	Skilled worker	01	3,000.00
04.	Unskilled Worker	02	5,000.00
04.	Accountant	01	3,000.00
		<b>Total</b>	<b>16,000.00</b>

**e. UTILITIES PER MONTH:**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Amount (Rs.)</b>
01.	Power @ Rs.5.50 per unit	10 H.P.	6,000.00
02.	Water & Fuel	L.S	1,000.00
		<b>Total</b>	<b>7,000.00</b>

**f. OTHER EXPENSES PER MONTH :**

<b>Sr. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Amount (Rs.)</b>
01.	Rent		5,000.00
02.	Telephone Expenses	L.S.	1,000.00
03.	Postage & Stationery	L.S.	500.00
04.	Marketing & Traveling Expenses	L.S.	5,000.00
05.	Maintenance	L.S.	500.00
06.	Other Misc. Expenses	L.S.	1,000.00
		<b>Total</b>	<b>13,000.00</b>

**6. WORKING CAPITAL PER MONTH :**

**6,13,500.00**

( c + d + e + f )

**7. TOTAL CAPITAL INVESTMENT :**

<b>Sr. No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
01.	Fixed Capital	1,85,000.00
02.	Working Capital for three Months	18,40,500.00
	<b>Total</b>	<b>20,25,500.00</b>

**8. FINANCIAL ANALYSIS :**

**a. COST OF PRODUCTION PER ANNUM:**

<b>Sr. No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
01.	Raw & Packing Materials	69,30,000.00
02.	Salary & Wages	1,92,000.00
03.	Utilities	84,000.00
04.	Other Expenses	1,56,000.00
05.	Interest on borrowed capital @ 13% p.a.	2,63,315.00

06.	Depreciation on Machinery & Equipments @ 10 % p.a.	15,500.00
	<b>Total</b>	<b>76,40,815.00</b>
	<b>Or say</b>	<b>76,41,000.00</b>

**b. TURNOVER PER ANNUM :**

Total 600 K.L.. of Sodium Hypochlorite  
 @ Rs. 14 Per Ltrs.  
**84,00,000.00**

**c. PROFIT PER ANNUM :**

Profit = Total Turnover - Cost of  
 Production  
 = 84,00,000 - 76,41,000  
 = 7,59,000

**d. PROFIT ON SALES :**

% Profit =  $\frac{\text{Profit}}{\text{Total Turnover}} \times 100$   
 =  $\frac{7,59,000}{84,00,000} \times 100$   
 = **9.0 %**

**e. RATE OF RETURN ON TOTAL CAPITAL INVESTMENT (ROR):**

ROR =  $\frac{\text{Profit}}{\text{Total Capital Investment}} \times 100$   
 =  $\frac{7,59,000}{20,25,500} \times 100$   
 = **37.5 %**

**f. BREAK EVEN ANALYSIS :**

**FIXED COST :**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (Rs.)</b>
01.	Interest on borrowed capital @ 13% p.a.	2,63,315.00
02.	Depreciation on Machinery & Equipments @ 10 % p.a	15,500.00
03.	40% of Salary & Wages	76,800.00
04.	40% of other Expenses	62,400.00
	<b>Total</b>	<b>4,18,015.00</b>
	<b>Or say</b>	<b>4,18,000.00</b>

**BREAK EVEN POINT (B.E.P.) :**

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{Fixed Cost}}{\text{Fixed cost} + \text{Profit}} \times 100 \\ &= \frac{4,18,000}{4,18,000 + 7,59,000} \times 100 \\ &= \mathbf{35.5 \%} \end{aligned}$$

**NAME & ADDRESSES OF MACHINERY & EQUIPMENT SUPPLIERS:**

01. M/s. Unique Enterprises, 201, Konarka Mugdha Apartment, Plot No.36, Saraswati Cooperative Housing Society, Deendayal Nagar, Nagpur - 22.  
Cont. Person : Dr. Mukund Moholkar, Mb: 09823116709  
Tel. No.(07104)235675,(0712)2224362  
Visit us at : <http://www.uniquepulveriser.com> ,  
E – mail : [uniquepulveriser@mahamail.com](mailto:uniquepulveriser@mahamail.com)
02. M/s. Plasto Containers (India) Pvt. Ltd.  
J – 3, MIDC, Hingna, Nagpur – 440016.  
Cont. Person : Shri Neelesh Agrawal. Mb: 09373104501  
Tel No. (07104)236672, 236671

03. M/s. Vaibhav Plastimoulds Pvt. Ltd.  
J – 2, MIDC Area, Nagpur - 440016  
Cont. Person : Shri Vishal Agrawal Mb:09890016601  
Tel. No. (07104)395486, 395487  
Vist us at: [www.vaibhavplastimoulds.com](http://www.vaibhavplastimoulds.com) , E-mail  
:plastotanks@yahoo.com

**NAME & ADDRESSES OF RAW & PACKING MATERIAL  
SUPPLIERS:**

01. M/s. Swastik Acids & Chemicals,  
Near Sai Mandir, Opp: Methi Hospital, Chandrashekhar Azad  
Square,  
Behind Arafat Hotel, Central Avenue, Nagpur – 440032.  
Tel. No.(0712)2764908, 2763548, Fax No. No. (0712)2770343.  
E – mail: [swachem@gmail.com](mailto:swachem@gmail.com)

02. M/s. Jain Acids & Chemicals  
19 / A, Central Avenue Road, Gandhibagh, Nagpur.  
Cont. Person : Shri Suraj Jain / Shri Satish Jain  
Tel No.(0712)2766923, 2761233

03. M/s. Vaibhav Plastimoulds Pvt. Ltd.  
J – 2, MIDC Area, Nagpur - 440016  
Cont. Person : Shri Vishal Agrawal Mb:09890016601  
Tel. No. (07104)395486, 395487  
Vist us at: [www.vaibhavplastimoulds.com](http://www.vaibhavplastimoulds.com) ,  
E-mail :plastotanks@yahoo.com

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## **BIO-MASS FUEL BRIQUETTES**

Bio-Mass Fuel Briquettes are also known as Bio Coal or White Coal. It is substitute of coal/wood in industrial boiler and brick kiln for thermal application. Bio Mass croqueting is the process of converting low bulk density bio mass in to high density and energy concentrated fuel briquettes. These are non conventional source of energy, renewable in nature, Eco-friendly, non polluting and economical. Process of converting biomass to solid fuel is also non polluting. IOt is also not required to add any binder/chemicals, so it is 100% natural. Briquettes are made from agricultural and forest waste residues, which can be effectively used to replace coal and firewood by converting waste in ti solid cylindrical form, by applying heavy mechanical pressure known as Briquetting. Due to existence of solid form lignin in the agro waste which acts as a natural binder, there is no need to add chemicals or any other foreign substance to the process. Therefore it is called Binderless Technology. This technology is based on very high compact characteristics of combustible cellulose agro waste such as Sugarcane Baggasse, Saw Dust, Groundnut Straw, Rice Husk, Cotton Stalk,Custard Shell, Wheat Straw, Coconut Dust, Paddy Straw, Jute Waste, Bamboo Dust, Soya Bean Husk, Sunflower and Mustard Stalks etc. Biomass Briquettes have high bulk density of about 800 Kg./ M<sup>3</sup> as compared to 6-180Kg/M<sup>3</sup> of loose Biomass.

Production Capacity	: 6000 MT Per Annum
Total Capital Investment	: 40,28,000/- (including working capital for three months)
Break Even Point	: 40.5%

## WHOM TO CONTACT AND FOR WHAT

Sr.No.	Office Address	Activity	Contact person
1.	Directorate Of Industries, Udyog Bhavan,Civil Lines, Nagpur.	Development of Industries	The Joint Director of Industries.
2.	District Industries Centre, Bhandara.	Promotion and Registration of S.S.I. Units.	General Manager
3.	The Trademark Registry Old C.G.O. Building, 101, Mahashri Karve Rd. Mumbai.	Trademark Registration	Director
4.	Food & Drugs Administration Limbana Building, Mount Rd. Sadar, Nagpur.	Licensing	Jt. Commissioner
5.	Bureau Of Indian Standards II nd Floor, N.I.T. Complex, Gokulpeth, Nagpur	ISI Mark & BIS Books on Quality Standards.	Director
6.	Central Agmark Laboratory North Ambazari Rd. Nagpur	Testing of food Products	Director
7.	Directorate Of Marketing & Inspection, New Secretariat Building, Civil Lines, Nagpur.	“Agmark” on food products	Jt. Agricultural Marketing Advisor

8.	Khadi & Village Industries Board, D.I.C. Bhandara.	Promotion of cottage Industries & finance.	Manager
9.	National Research Centre For Citrus, Opp. NBSS & LUP, Amravati Road, Nagpur.	Development of Citrus Production	Director
10.	Maharashtra Pollution Control Board, Udyog Bhavan, Civil Lines, Nagpur.	Pollution Control From Industries	Regional Officer
11.	Maharashtra S.S.I. Development Corporation Ltd. Gondia.	Supply of raw materials & Marketing of products from S.S.I.Units.	Manager
12.	Small Industries Service Institute, C.G.O. Complex, Seminary Hills, Nagpur	Technical Support Service, Trainings Development & Promotional Programmes For S.S.I.	Director
13.	Small Industries Development Bank Of India, Shri Mohine Complex, Kingsway, Nagpur	CGTSI/ Loan	DGM
14.	The National Small Industries Corporation Ltd. N.D.T.A. Complex, Sadar, Nagpur	Hire Purchase, Equipment Leasing. Raw Material Financial Services, Marketing Support Technology Transfer Etc.	Manager

15.	Food & Drug Administration Kala Nagar, Bhandra (East) Mumbai –51.	To Issue Food & Drug Licenses	Commissioner
16.	Maharashtra Industries Development Corporation D.I.C. Bhandara	Arranging Industrial Plots In M.I.D.C. Area	Manager
17.	Maharashtra Agro Industries Development Corporation Ltd. Manoj Building, Ramdaspath, Nagpur.	Development Of Agriculture Based Industries	Manager
18.	National Bank For Agriculture & Rural Development (NABARD), Bhandara.	Development Of Poultry Goat Farm & Agril. & Rural Development DRIP Scheme. Short Term Trainings	Asst.Gen. Manager  Director
19.	Food & Civil Supplies Food Nutrition Extn. Center, 85 Canal Rd. Ramdaspath Nagpur.		Register
20.	Registrar Office of the Collectorate, Bhandara.	Registration Of Partnership Firms	