CHAPTER - I

GEOGRAPHICAL SETTING
OF DHAMTARI DISTRICT
Dhamtari district is situated in the fertile plane of Chhattisgarh region. Word 'Dhamtari' comprises two words ‘Dhamma’ and ‘Tari’. Dhamtari district is officially formed on 6th July, 1998 dividing the Raipur district currently the capital of Chhattisgarh alongwith the Mahasamund. The distance is of this district 76 km from Raipur, Dhamtari, Kurud, Nagri are included in Dhamtari district as Tehsils and Dhamtari, Kurud, Nagri, Magarlod are included as Blocks. The district headquarter is itself Dhamtari. The district is 305 meter above sea level. The total number of Gram Panchayat in the district is 299. Mahanadi is the principal river of this district originated in the hills of Sihawa flows at the direction of East & falls into Bay of Bengal. The chief crop of this region is Paddy. More than 100 rice mills are found in this district. Dhamtari district falls between two Lok Sabha constituencies. The district covers an area of 4081 sq.km. with a population of 706591 persons. The National Highway No.-43 Raipur-Vijaynagaram (Andhra Pradesh) passes through Dhamtari.

HISTORICAL BACKGROUND OF DHAMTARI DISTRICT:

Dhamtari district of Chhattisgarh state was an integral part of Dakshin Koshala of ancient period. In 1854 when Chhattisgarh came under British rule Dhamtari was one of the tehsil of Raipur district. In 1906 few villages were taken away from Dhamtari tehsil to form Durg district. In 1953 twenty one villages were again taken to make Bindra Nawagarh Tehsil. Dhamtari tehsil has come into existence as a district from the 6th of 1998 excluding from Raipur district with other three blocks namely Kurud, Magarlod and Nagri.

PHYSICAL SETTING:

The geographical setting of any district composed of physical and cultural setting of the district.

The physical setting means the physical condition or environment in which district or any region is situated. The physical setting is explained as follows –
Location:

Dhamtari is the most important developing centre of the new born Chhattisgarh state. This is situated between $20^01'30''$ N to $21^01'30''$ N latitude and $81^025'\ E$ to $82^013'\ E$ longitude. From the global point of view the city lies in the North-Eastern hemisphere at a distance 326 km South from the Tropic of Cancer. The total area is 1,58,774 hectares. In this region 108789 hectares area is under agricultural land.

The gentle slope of this region found West to East direction. Southern part is devoid of forest. The river Mahanadi flows from SW to NE direction. Kharun river also flows in the NW part of this region.

Site:

"The site embraces the precise features of the terrain on which the settlement began and over which it has spread."


Site means the area on ground on which a town or city or a region stands. The district has an altitude of 305m above mean sea level. The best conditions for development of the region are mainly central and Northern part of the region. The southern part of this region having normal surface conditions is in the process of development.

Situation:

"Situation shows the position of a particular area in relation to its surroundings. The situation is usually taken to mean the physical condition over a much wider area around the settlement."

- A.E. Smiles.

The situation of a region tells about position of the region and its surroundings. Dhamtari district is situated middle east part of Chhattisgarh state. This region consists of one national highway (NH-43) & one narrow gaze railway. This region shares its border by Raipur, Durg, Kanker, Baster district and Orissa state in the southern position.
Geology:

"Geology is the first factor to developments of a land forms".

- Spate, 1967.

Dhamtari is composed of geologically ancient rocks of diverse origin, most of which have undergone much crushing and metamorphism. The archean rocks are predominantly granitic, and the granites and gneisses belonging to the crystalline complex have originated through different process of granite intrusion, regional metamorphism etc. are different organic cycle.

From the geological map of Dhamtari district, we can observe 4 main parts. They are –

1. Gunderdehi Formation:
   It is observed in the Northern part of Dhamtari district. It is about 10 percent of total geological area.
   
   Soft rocks are main rocks of Gunderhi formation. It is because here the height of absolute relief is less than 400m.

2. Charmuria Formation:
   It is observed just below of the northern part and above the Chandrapur group of the Dhamtari district. It covers about 15 percent of total geological area.

   It is because the height of the absolute relief here is between 400m and 500m.

3. Chandrapur Group:
   It is observed in the central portion of the Dhamtari district but south of Charmuria formation. It cover about 15 percent of total geological area.

   The hardness of the rocks of the Chandrapur group is moderate in nature.

4. Dongargarh Granite:
   It is observed in the southern portion of the Dhamtari district. It is about 60 percent of total geological area.
Source: Central Ground Water Board of Raipur
July, 1986 to 1993
Granite is main rock of the Dongargarh granite geological group. It is a hard rock formation. As a reason some dissected plateau are observed here. The average absolute height of the area is between 600-700m.

**Physiography:**

"The term physiography refers to a study of the earth’s physical features, their conses and interrelations and it is sometimes held to be synonymous with term Geomorphology".


The physiography is helpful in revaluing the complexities of various urban land uses. The physiographic division of Dhamtari is divided into four types-

a. Mahanadi Kharun Doab
b. Trans Mahanadi Plane
c. Middle upland
d. Southern Hilly area

Mahanadi Kharun Doab area spreads found in Northern to North Western part of Dhamtari districts. Trans Mahanadi Plane area found in North East to North Western part. Middle part of Dhamtari district situated in the upland and southern part of this region is found as hilly area.

**Relief:**

"Relief of an area has an important but rather complex relation to infiltration. Surface runoff, soil moisture and groundwater contribution to stream flow”.

- Wister and Brater, 1959.

In an area or region relief features depend upon some geomorphic factors. Dhamtari district is basically a plane area. Mahanadi flows under this region. Southern part of this region is found as plateau area. Some residential hills are found here. Height of this region is more than 700m. Height of the northern part of this region is below 400m. Height of North Central part is between 400 to
DHAMTARI DISTRICT
SLOPE

SLOPE (in metres per km)

- less than 10
- 10 - 20
- 20 - 80
- 80 - 150
- 150 - 300

Source: National Atlas & Thematic Map Organization

Fig. No. 16
500m. and the height of South Central part of this region is between 500-600m. Relief of Dhamtari district is generally smooth in nature.

**Drainage:**

"The pattern of drainage is one of the most revealing features of a landscape".

- **Miller, 1965.**

The natural drainage of Dhamtari district is governed by the land form. The drainage pattern has been shown dendritic and linear pattern. The study of drainage conditions is important for understanding the situation of land utilization in a region. The entire region is drained by two principal river systems, which are non-perennial in nature.

**Mahanadi:**

Mahanadi is one of the main river of Chhattisgarh state. This river originates from Sihawa hills region of Dhamtari district. This river is flowing North-East direction.

**Kharun:**

The Kharun River, a tributary of Seonath, drains the North West part of Dhamtari district. Surrounding areas, which get water from this river logged during rainy seasons. But during summer most of these areas remain dry.

The water resource can be utilized for industrial and irrigated purposes. But unfortunately these have not been utilized so far mainly because for the seasonal character of the river.

**Climate:**

"Climate is the intergration of weather and weather is the differentiation of climate. The distinction between weather and climate is therefore, mainly one of time".

- **G.F. Taylor.**

"Climate represent a composite of the day to day weather condition and of the atmospheric elements, within a specific area over a long period of time".

- **Trewartha.**
GROUND WATER HYDROLOGY

Water table contour in metres

GROUND WATER POTENTIAL
(yield in litres/sec)

Sources: Central Ground Water Board
The astronomical location of the region affirms that it comes in the equator ward at the tropic of cancer. This region experiences the climate of AW of Koppen characterized by the hot summer, peasant cold winter with dryness except during the monsoon season.

This climate represents three seasons –

i) A cold dry winter season from November to the end of February.

ii) A hot wet rainy season from middle June to the end of October.

iii) A hot dry summer season from March to second week of June.

Mainly climate is effected by three indicators like-

i) Temperature

ii) Rainfall

iii) Relative Humidity

**Temperature:**

After January, the temperature rises steadily till May which is usually the hottest month of the year.

The mean daily maximum temperature in May is about $40.1^\circ C$. In this month sandstorm is a painful experience for the citizens. After November the temperature starts declining and naturally in the month of December, the lowest temperature is observed $12.70^\circ C$ and mean temperature is $20.75^\circ C$. In the winter cold wave often causes the temperature to fall drastically. It may be noted that the temperature never goes below freezing level.

The summer season become intolerable particularly in month of May due to blowing of hot wind through this region which is known as ‘Navatapa’.
Table No. – 1.1
Monthly Temperature in Dhamtari District, 2006

<table>
<thead>
<tr>
<th>Months</th>
<th>J</th>
<th>F</th>
<th>MA</th>
<th>A</th>
<th>M</th>
<th>JU</th>
<th>JL</th>
<th>AU</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Temperature °C</td>
<td>28.70</td>
<td>33.40</td>
<td>33.20</td>
<td>38.70</td>
<td>40.10</td>
<td>37.70</td>
<td>30.10</td>
<td>29.30</td>
<td>31.30</td>
<td>32.20</td>
<td>29.80</td>
<td>28.80</td>
</tr>
<tr>
<td>Average Temperature °C</td>
<td>20.90</td>
<td>23.60</td>
<td>25.75</td>
<td>30.65</td>
<td>33.30</td>
<td>32.30</td>
<td>27.45</td>
<td>27.05</td>
<td>27.75</td>
<td>26.80</td>
<td>23.45</td>
<td>20.70</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G).

Rainfall:

"Rainfall is deposition of atmospheric moisture and its perhaps the most important phase of the hydrological cycle".

- Froster.

Dhamtari receives its rainfall mainly from the South-West Monsoon winds. The commencement of the rainy season usually begins in the middle of June and continues up to October & this period is known as in whole of India as the ‘Blast of Monsoon’. The amount of rainfall increases till September and decreases afterwards. Last year, month of December, January, February are observed as dry and rainfree. Usually winter season is dry and rainfree. The rainfall data in 2000 illustrates that the region receives the maximum rainfall during the monsoon (87.66 percent) and a small amount (12.34 percent) during most of other seasons.

Table No. – 1.2
Monthly Rainfall in Dhamtari District, 2006

<table>
<thead>
<tr>
<th>Months</th>
<th>J</th>
<th>F</th>
<th>MA</th>
<th>A</th>
<th>M</th>
<th>JU</th>
<th>JL</th>
<th>AU</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall (in cm)</td>
<td>0.00</td>
<td>0.00</td>
<td>4.52</td>
<td>4.66</td>
<td>6.22</td>
<td>9.49</td>
<td>36.31</td>
<td>40.96</td>
<td>23.23</td>
<td>0.59</td>
<td>0.16</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G).

Relative Humidity:

Relative Humidity is define as a ratio amount of water vapour actually present in the air having definite volume and temperature to the maximum amount the air can hold.
Absolute Humidity
Relative Humidity = ------------------------------- X 100
Humidity Capacity

There is positive relationship between rainfall and relative humidity. High humidity occurs during the month of rainfall reason with relatively high temperature resulting muggy type of weather condition. After the monsoon season humidity decreases and during the winter season air is fairly dry. Last year high amount of humidity (85 percent) is found in August month, because large amount of rainfall (40.96cm) is observed and low amount of humidity is found in April month.

**Table No. – 1.3**
Monthly Relative Humidity in Dhamtari District, 2006

<table>
<thead>
<tr>
<th>Months</th>
<th>J</th>
<th>F</th>
<th>MA</th>
<th>A</th>
<th>M</th>
<th>JU</th>
<th>JL</th>
<th>AU</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Relative Humidity (%)</td>
<td>87</td>
<td>79</td>
<td>75</td>
<td>57</td>
<td>59</td>
<td>69</td>
<td>88</td>
<td>92</td>
<td>92</td>
<td>91</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Min. Relative Humidity (%)</td>
<td>27</td>
<td>22</td>
<td>33</td>
<td>22</td>
<td>29</td>
<td>40</td>
<td>74</td>
<td>78</td>
<td>71</td>
<td>50</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>Average Relative Humidity (%)</td>
<td>57</td>
<td>50.5</td>
<td>54</td>
<td>39.5</td>
<td>44</td>
<td>54.5</td>
<td>81</td>
<td>85</td>
<td>81.5</td>
<td>71</td>
<td>67</td>
<td>60.5</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G.).

**Wind Velocity:**

**Table No. – 1.4**
Monthly Wind Velocity (km/h)

<table>
<thead>
<tr>
<th>Months</th>
<th>J</th>
<th>F</th>
<th>MA</th>
<th>A</th>
<th>M</th>
<th>JU</th>
<th>JL</th>
<th>AU</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Velocity (km/h)</td>
<td>2.3</td>
<td>8.2</td>
<td>4.0</td>
<td>5.7</td>
<td>8.0</td>
<td>8.3</td>
<td>2.3</td>
<td>10.4</td>
<td>5.0</td>
<td>2.9</td>
<td>2.6</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G.).

High winds velocity found in July month and low velocity found in December month.

**Vapour Pressure:**

It is an another criteria of weather. It has been seen in morning and evening by following table.
DHAMTARI DISTRICT
CLIMATOGRAPH

STARGRAPH
Showing Monthly Variation Of Temperature & Rainfall

INDEX
HOT
WARM

INDEX
Rainfall in cm
Temp in °C

Fig No. - L10
Table No. – 1.5
Monthly Vapour Pressure (mm)

<table>
<thead>
<tr>
<th>Months</th>
<th>J</th>
<th>F</th>
<th>MA</th>
<th>A</th>
<th>M</th>
<th>JU</th>
<th>JL</th>
<th>AU</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>8.7</td>
<td>10.1</td>
<td>13.3</td>
<td>14.3</td>
<td>17.9</td>
<td>26.1</td>
<td>22.1</td>
<td>22.2</td>
<td>22.9</td>
<td>19.8</td>
<td>15.0</td>
<td>15.7</td>
</tr>
<tr>
<td>Evening</td>
<td>7.7</td>
<td>8.2</td>
<td>13.8</td>
<td>10.2</td>
<td>14.1</td>
<td>17.3</td>
<td>22.0</td>
<td>22.6</td>
<td>22.6</td>
<td>17.7</td>
<td>12.8</td>
<td>9.3</td>
</tr>
<tr>
<td>Average</td>
<td>8.2</td>
<td>9.15</td>
<td>13.55</td>
<td>12.25</td>
<td>16</td>
<td>21.7</td>
<td>22.05</td>
<td>22.4</td>
<td>22.75</td>
<td>18.75</td>
<td>13.9</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G.).

Soil:

"Soil constitute the physical basis of an agricultural enterprise and play a very important role in the agricultural economy of a region".
- Coppock, 1964.

"The history of the civilization is the history of soil and the education of a individual begins from the soil".

Soil is upper weathered layer of earth’s surface. It is formed from the denudational effect of the parent rock materials. Soils is defined as, “The biologically modified weathered mantle”, again “the staff in which plant grows”.

1. Red Sandy Soil (Bhata)
2. Younger Alluvial Soil (Kachhari)
3. Red and Yellow Soil (Matasi)
4. Medium Black Soil (Kanhar)
5. Red Loamy Soil (Dorsa)

Red Sandy Soil:

It is located at the south, south west and covers some portion of the northern part. It’s local name is Bhata. Mainly Kharif, Kodo and specially Tilhan can be noted here.

Younger Alluvial Soil:

It is observe at the western part of Kurud Tehsil and middle portion of the Nagri Tehsil. It is mainly fertile. It’s local name is Kachhari.

Red and Yellow Soil:

It is located in eastern, middle portion of Dhamtari district. Local name is Matasi.
DHAMTARI DISTRICT

ERGOGRAPH

TEMPERATURE (°C)

RAINFALL (mm) & RELATIVE HUMIDITY (%)

Months

Temperature
Relative Humidity

Showing
Growing
Harvesting

WATER BALANCE GRAPH

RAINFALL (mm)

EVAPORATION (mm)

Water Deficit
Water Surplus
Soil Moisture Recharge
Soil Moisture Utilization

Fig. No.-1.12
DHAMTARI DISTRICT
CLIMATIC CONDITION

RAINFALL ZONE (mm)

// < 1400
// > 1400

Source: National Atlas & Thematic Map Organization

Fig No. 1.13
TEXTURAL COMPOSITION OF SOILS

Fig No.-116
Medium Black Soil:

It is located in some northern and eastern part of Dhamtari district. Local name is Kanhar.

Red Loamy Soil:

This soil is covered through at little portion of the central part. It’s local name is Dorsa.

**Table No. – 1.6**

Textural Composition of Soils (in percentage)

<table>
<thead>
<tr>
<th>Type of Soil</th>
<th>Sand</th>
<th>Silt</th>
<th>Clay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhata</td>
<td>60.25</td>
<td>22.50</td>
<td>17.25</td>
</tr>
<tr>
<td>Matasi</td>
<td>40.00</td>
<td>28.00</td>
<td>32.00</td>
</tr>
<tr>
<td>Kanhar</td>
<td>29.50</td>
<td>24.75</td>
<td>45.75</td>
</tr>
<tr>
<td>Dorsa</td>
<td>31.25</td>
<td>32.75</td>
<td>36.00</td>
</tr>
</tbody>
</table>

Source: Indira Gandhi Agriculture University, Raipur (C.G.).

**NATURAL VEGETATION:**

"Vegetation is one of the various factors of soil formation and there may be cyclic and relationship between soil and vegetation".


The growth of natural vegetation shows the clear balance of meterological and physical aspects. In Dhamtari district 8,760 hectare land covered by natrual vegetation. In Dhamtari block 12.36 percent vegetation is found. In Magarload and Nagri blocks 30.31 percent and 57.33 percent of area are covered by vegetation respectively. Mainly southern part of Dhamtari district is covered by forest. Five types of Natural Vegetation are found this region. These are Tehsil Forest, Reserve Forest, Mixed Vegetation, Scrub, Protected Forest. Some important reserve forest are Maradapoti R.F., Kandrihan R.F., Kurra R.F. etc. Some important protected forest are Bodra P.F., Amjhef P.F. etc. The main trees of these forest area are Pipal, Neem, Mahua, Bija, Sal, Tendu, Bamboo, Kusum etc.
DHAMTARI DISTRICT

FOREST COVERAGE AREA

INDEX

- FORESTED AREA
- NON FORESTED AREA

Fig. No. - 1.17
CULTURAL SETTING

Population:

"Human capital refers to the process of requiring and increasing the number of persons who have skill in education and experience which are critical for the economic and political development of the country".

- Schultz.

Population serves as the point of reference from which all other geographic elements are observed. The pattern of human activities on the earth’s surface is the result of man’s initiative and mobility with in a frame work of natural forces. Man has dual role to play. He is both the dynamic agent of production and the benefiting of the entire process of resource development and utilization. Therefore an attempt has been made to examine the quantitative and qualitative aspects of population. The distributions, density, age group, sex ratio, literacy rate are the great modifying effect on the various human activities.

Table No. - 1.7
Block Wise Population Distribution in Dhamtari District, 2006

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Block</th>
<th>Total Population</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhamtari</td>
<td>249780</td>
<td>35.35</td>
</tr>
<tr>
<td>2</td>
<td>Kurud</td>
<td>191425</td>
<td>27.09</td>
</tr>
<tr>
<td>3</td>
<td>Magarlod</td>
<td>104712</td>
<td>14.82</td>
</tr>
<tr>
<td>4</td>
<td>Nagri</td>
<td>160674</td>
<td>22.74</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>706591</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: S.D.O. Office of Dhamtari.

Growth of Population in Dhamtari District:

Dhamtari is an ancient settled region (Town) with high population concentration. It has witnessed an over increasing growth of population. Agricultural and industrial revolution are responsible for rapid population growth in this region.
BLOCK WISE POPULATION DISTRIBUTION IN DHAMTARI DISTRICT

Fig. No. - 1.23
Measure of growth rate –

\[ R = \frac{P_2 - P_1}{P_1} \times 100 \]

Where,

- \( P_2 \) = Population of the next year
- \( P_1 \) = Population of the Previous year
- \( R \) = Growth Rate

Table No. – 1.8
Growth of Population in Dhamtari District

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1911</td>
<td>35305</td>
<td>10.33</td>
</tr>
<tr>
<td>1921</td>
<td>38418</td>
<td>08.50</td>
</tr>
<tr>
<td>1931</td>
<td>45390</td>
<td>18.39</td>
</tr>
<tr>
<td>1941</td>
<td>63465</td>
<td>39.82</td>
</tr>
<tr>
<td>1951</td>
<td>89804</td>
<td>41.50</td>
</tr>
<tr>
<td>1961</td>
<td>139792</td>
<td>55.66</td>
</tr>
<tr>
<td>1971</td>
<td>205906</td>
<td>47.35</td>
</tr>
<tr>
<td>1981</td>
<td>338973</td>
<td>64.46</td>
</tr>
<tr>
<td>1991</td>
<td>461851</td>
<td>36.25</td>
</tr>
<tr>
<td>2001</td>
<td>606541</td>
<td>31.16</td>
</tr>
</tbody>
</table>

Source: District Statistical Department, Raipur.

Density of Population:

"Among all different aspects of population its distribution in terms of number, degree of concentration and size and spacing of settlement are most important".

- Gosan, 1970.

The number of population related to area in a specific space is considered to be man land ratio, which generally indicates number of population per sq.km. It is called density of population.

It is the measurement, which indicates the ever changing relation of man and land.

\[
\text{Density of Population} = \frac{\text{Total Population}}{\text{Total Area}}
\]
GROWTH OF POPULATION IN DHAMTARI DISTRICT

Year

Growth Rate in %

Fig. No. 1.24
Table No. - 1.9
Blockwise Density of Population in Dhamtari District

<table>
<thead>
<tr>
<th>Block Name</th>
<th>Area (Sq.Km.)</th>
<th>Population</th>
<th>Density (Person/sq.km.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhamtari</td>
<td>573.64</td>
<td>249780</td>
<td>435.42</td>
</tr>
<tr>
<td>Kurud</td>
<td>563.91</td>
<td>191425</td>
<td>339.46</td>
</tr>
<tr>
<td>Magarlod</td>
<td>401.91</td>
<td>104712</td>
<td>260.54</td>
</tr>
<tr>
<td>Nagri</td>
<td>489.27</td>
<td>160674</td>
<td>328.39</td>
</tr>
<tr>
<td>Total</td>
<td>2028.73</td>
<td>706591</td>
<td>348.29</td>
</tr>
</tbody>
</table>


Sex Ratio:

"Sex Ratio was an index of economy prevailing in an area and was an useful tools for responsible analysis".

- Franklin.

Sex Ratio is mainly a biological factor. The sex ratio signifies a number of females per thousand of males. Sex ratio generally influences the form of life in any country. The balance between sex, is an important aspect of population structures. The sex ratio of the region high due to population growth, migration and industrilization. Sex ratio increases decade after decade.

Formula, Sex Ratio = \[
\frac{Pf}{Pm} \times K
\]

Where,

- \( Pf \) = Female Population
- \( Pm \) = Male Population
- \( K \) = Constant (1000)

Table No. - 1.10
Block Wise Sex Ratio in Dhamtari District

<table>
<thead>
<tr>
<th>Block Name</th>
<th>Total Male</th>
<th>Total Female</th>
<th>Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhamtari</td>
<td>124925</td>
<td>124855</td>
<td>999</td>
</tr>
<tr>
<td>Kurud</td>
<td>95687</td>
<td>95738</td>
<td>1000</td>
</tr>
<tr>
<td>Magarlod</td>
<td>52215</td>
<td>52497</td>
<td>1005</td>
</tr>
<tr>
<td>Nagri</td>
<td>79697</td>
<td>80977</td>
<td>1016</td>
</tr>
<tr>
<td>Total</td>
<td>352524</td>
<td>354067</td>
<td>1004</td>
</tr>
</tbody>
</table>

BLOCKWISE DENSITY OF POPULATION IN DHAMTARI DISTRICT

[block chart showing population density per square kilometer for Dhamtari, Kurud, Magarlod, and Nagri]

BLOCKWISE SEX RATIO IN DHAMTARI DISTRICT

[block chart showing sex ratio for Dhamtari, Kurud, Magarlod, and Nagri]
Caste Structure:

"Caste refers to inequality in theory as well as in practices, where not simply opposite of equality".

It is an attribute to the Indian social scenario. It is revealed from the social hierarchy of millions of Indian. It is an important social unit and it possesses various social characteristics of population. It influences the entire population distribution of the country which has four broad castes. They are –

1. General
2. schedule Caste (SC)
3. Schedule Tribe (ST)
4. Other Backward Class (OBC)

In this region highest caste structure is in Nagri block and lowest found in Dhamtari block.

Table No. – 1.11
Blockwise Caste Structure of Dhamtari District

<table>
<thead>
<tr>
<th>Block Name</th>
<th>SC</th>
<th>%</th>
<th>ST</th>
<th>%</th>
<th>Other</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhamtari</td>
<td>8280</td>
<td>19.48</td>
<td>10815</td>
<td>25.44</td>
<td>23413</td>
<td>55.08</td>
<td>42508</td>
<td>100</td>
</tr>
<tr>
<td>Kurud</td>
<td>7529</td>
<td>17.79</td>
<td>11588</td>
<td>27.38</td>
<td>23204</td>
<td>54.83</td>
<td>42321</td>
<td>100</td>
</tr>
<tr>
<td>Magarlod</td>
<td>6954</td>
<td>28.35</td>
<td>6512</td>
<td>26.55</td>
<td>11060</td>
<td>46.00</td>
<td>24526</td>
<td>100</td>
</tr>
<tr>
<td>Nagri</td>
<td>1949</td>
<td>7.75</td>
<td>15454</td>
<td>61.42</td>
<td>7758</td>
<td>30.83</td>
<td>25161</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>24712</td>
<td>18.37</td>
<td>44369</td>
<td>32.98</td>
<td>65435</td>
<td>48.65</td>
<td>134516</td>
<td>100</td>
</tr>
</tbody>
</table>


Literacy Level:

"Literacy and educational status of individual of society serves as one of the indicators of the family of population”.

- G.S. Ghosal.

The development of any city mainly is officiated by literacy of their population. The level of education is the best composition of socio-economic development of a region. In this region male literacy rate is very high but female literacy rate is moderate. Because of many social barriers and backdated
mentality female literacy rate is moderate. But, today female literacy rate increases through social awareness.

**Table No. – 1.12**

**Blockwise Literacy Rate of Dhamtari District, 2001**

<table>
<thead>
<tr>
<th>Block Name</th>
<th>Male Literacy (%)</th>
<th>Female Literacy (%)</th>
<th>Male Illiteracy (%)</th>
<th>Female Illiteracy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhamtari</td>
<td>89.05</td>
<td>67.77</td>
<td>10.95</td>
<td>32.23</td>
</tr>
<tr>
<td>Kurud</td>
<td>88.40</td>
<td>66.64</td>
<td>11.60</td>
<td>33.36</td>
</tr>
<tr>
<td>Magarlod</td>
<td>84.67</td>
<td>59.87</td>
<td>15.33</td>
<td>40.13</td>
</tr>
<tr>
<td>Nagri</td>
<td>81.60</td>
<td>55.25</td>
<td>18.40</td>
<td>44.75</td>
</tr>
<tr>
<td>Total</td>
<td>86.78</td>
<td>63.66</td>
<td>13.22</td>
<td>36.34</td>
</tr>
</tbody>
</table>

*Source: Census of Chhattisgarh, 2001.*

**Occupational Structure:**

Population of any region can be judged by its occupational structure. Occupational structure of a region mainly depends on the environment of that particular region. Dhamtari is basically an agro based region. So in this region primary activity remains dominant. Economic activity mainly three type –

i) Primary

ii) Secondary

iii) Tertiary

In this region 93 percent people engage in primary activity. Likewise 5 percent and 2 percent people engage in secondary and Tertiary activities.

**Table No. – 1.13**

**Occupational Structure of Dhamtari District**

<table>
<thead>
<tr>
<th>District</th>
<th>Primary Workers</th>
<th>%</th>
<th>Secondary Workers</th>
<th>%</th>
<th>Tertiary Workers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhamtari</td>
<td>233191</td>
<td>92.89</td>
<td>11766</td>
<td>4.68</td>
<td>6083</td>
<td>2.43</td>
</tr>
</tbody>
</table>

*Source: Statistical Department of Raipur.*

**TRANSPORT:**

"Transport plays a critical role in economic development being an important economic infrastructure. It acts as a development catalyst".

- Ramesh and Tiwari, 1983.
BLOCKWISE LITERACY RATE OF DHAMTARI DISTRICT, 2001

OCCUPATIONAL STRUCTURE OF DHAMTARI DISTRICT

Fig. No.-1.27
DHAMTARI DISTRICT
INDUSTRIES

Source: Directorate of Industries, Government of Chhattisgarh
DHAMTARI DISTRICT
TRANSPORT

INDEX
- UNMETALLED ROAD
- METALLED ROAD
- RAIL LINE
- TELEPHONE LINE

For No.-1.19
INDEX

- Arable Irrigated
- Arable Unirrigated
- Forest
- Settlement
- Water bodies

Source: National Atlas & Thematic Map Organization
Transport is important for the development of economic and social activities of any region.

As Dhamtari district is a plain land so in this region transport system is well developed. Mainly two types of transport system are observed here. i.e.

i) Railway Transport

ii) Road Transport

i) Railway Transport:

In this region Raipur – Dhamtari narrow gauge rail line are passed.

ii) Road Transport:

In this region road transport is well developed. Raipur Dhamtari road passes in this region. NH-43, Raipur to Vijayanagaram passes through this region. Total length of the metalled road is 851.4 km out of 1219.7 km total length of the road.

Industries:

Industrially the district does not claim a sound position as there is no large scale industry. It is a big trade centre dealing in forest produce and rice. Mainly agro-based industries like edible oil etc. exist here. There is good scope for forest produce processing unit as lot of raw materials available for the same.