CHAPTER NO. 2

PHYSICAL SET-UP OF THE REGION
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PHYSICAL SET-UP OF THE REGION

For any kind of socio-economic study, it is necessary to know the geographical background of the area under study. The physical and socio-economic environment of Pune district is as under:

LOCATION:

Pune district of Maharashtra State lies between 17° 15' and 19° 24' North latitudes and 73° 10' and 75° 10' East longitudes (Map No. 2.1).

The district is bounded in the west by western ghats; which runs in North-South direction, in the North-East by river Bhima and in the South by river Nira, which runs from West to East.

AREA:

The district has a total geographical area of 15,640 Sq. Kms.

SHAPE:

It has a triangular shape with its base towards the western ghats and apex in the extreme South-East corner near confluence of river Bhima and river Nira.
RELIEF:

The western ghats form the western boundary of the district and hence maximum altitude is observed in the western parts, having height about 1200 meters. The general slope of the region is from west to east. In the south-east corner, the average height is less than 600 meters.

There are two hill ranges. The main hill range runs about 117 Kms; in the north-south direction along the western edge of the district and the other consists of parallel ranges which stretch in the north-west and south-east directions. These ranges are locally known as Harijahanchopargad range, Sinhaged range and Besawd range. These ranges act as major water-divides between the main rivers of the district which rises in the west and flow towards the east, south-east direction, the main rivers of the district are Bhima, Indrayani, Mula-Mutha and Nira (Map No. 2.2).

CLIMATE:

The impact of the location of the district and the change in the relief is seen on the variation in the climatic conditions. The variation in temperature is not that consequential (The average annual temperature of the district is 24.5°C, which changes from 17.4°C to 31°C from west to east).
The maximum temperature is recorded in the month of May (31° C) and the minimum in the month of January (19° C) (Table No. 2.1).

It is mainly the variation in the amount of rainfall which has made a remarkable impact on the nature of economic activities mainly on the agricultural activities in the district.

**RAINFALL**

The district receives bulk of the rainfall from South-west monsoon which starts by the first week of June and ends by the middle of September. December, January, February, March, April and May are the months which record less than 10 mm. rainfall in all over the district. This low rainfall in the month of December and January does not create the problem of the water shortage, due to low evaporation but in the months of February, March, April and May when the evaporation rate is high and the rainfall is low,
### TABLE NO. 2.1

**DISTRIBUTION OF MEAN MAXIMUM AND MEAN MINIMUM TEMPERATURE IN PUNE DISTRICT**

*(Figures in Centigrade)*

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
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<td>34.3</td>
<td>14.1</td>
<td>35.5</td>
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<tr>
<td>Min.</td>
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<th>September</th>
<th>October</th>
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<th>December</th>
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<tr>
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<td>21.0</td>
<td>26.9</td>
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</table>

*(Source: The Director, Regional Meteorological Department, Pune.)*
the problem of water shortage becomes more serious which leads to ill-health mainly through water-borne infections such as dysentery, round-worms, cholera etc. (Table No. 2.2).

**DISTRIBUTION OF MEAN ANNUAL RAINFALL**

On the basis of the distribution of annual rainfall, the district has been divided into three regions. (Map No. 2.3).

1) The Eastern region - receiving more than 150 cms. of rainfall.

2) The Central region - receiving rainfall between 150 cms. and 50 cms.

3) The Eastern region - receiving less than 50 cms. rainfall.

**AGRO-CLIMATIC ZONES**

On the basis of the nature of soil, type of climate and the crops cultivated, the district has been divided into following four zones:

1) The ghat zone,

2) The transitional zone I,

3) The transitional zone II,

4) The scarcity zone. (Map No. 2.4)
PUNE DISTRICT
DISTRIBUTION OF ANNUAL RAINFALL

Index

\[ \begin{align*}
\text{\ldots} & \quad \leq 50 \text{ cms.} \\
\text{\ldots} & \quad 50 - 150 \text{ cms.} \\
\text{\ldots} & \quad > 150 \text{ cms.}
\end{align*} \]
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<th>Shodegaon</th>
<th>Shirur</th>
<th>Khed</th>
<th>Pune</th>
<th>Daund</th>
<th>Valhe</th>
<th>Sewal</th>
<th>Indapur</th>
<th>Beramati</th>
<th>Paud</th>
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</tbody>
</table>

Source: Directorate of Agriculture, Maharashtra State, Pune-1.
1) **THE GHAT ZONE**

This region is extremely rugged and is mainly traversed by the western ghats. In this area, the rainfall is very heavy; the average annual rainfall being more than 150 cms.

From west to east, the colour of the soil changes from deep red to reddish-brown. The hill tops and hill slopes are covered by forest and grass. The small strips of lands on the slopes are under cultivation. The main crops are paddy, millets and ragi. In general, the soil is less fertile.

2) **THE TRANSITIONAL ZONE I**

This region consists of the western parts of Junner, Ambegaon, Khed and Bhor tehsils and the central parts of Mawal, Mulshi and Velhe tehsils.

This area is extremely rugged and it consists of small hills and offshoots of the western ghats. In this region, the rainfall varies between 150 cms. and 200 cms. The colour of the soil changes from red to reddish-brown. In the valley region, paddy is the main crop, while on the slopes Narali and ragi are cultivated. Out of the total geographical area about 57% is under forest and grass.
3) **THE TRANSITIONAL ZONE II:**

This region comprises of the middle and western parts of Junnar, Khed, eastern parts of Ambegaon, Valhe, Mulshi and Bhor Tehsils.

This region lies on the eastern-side of the western ghats. As a result of the rain-shadow effect, the average annual rainfall declines from 150 cms. in the west to 50 cms. towards east.

The colour of the soil changes from dark-brown to light-brown. Jowar, bajara and wheat are the main crops.

4) **THE SCARCITY ZONE:**

This zone covers the area of Shirur, Daund, Purnechar, Baramati and Indapur tehsils and the east parts of Naveli tehsil. The zone occupies about 50% of the total geographical area of the district. The average annual rainfall of the region is less than 50 cms., with a very high variation by which this has become a drought-prone region.

The colour of the soil changes from brown to black. In the river basins, the black-alluvial soil is found. Due to scanty rainfall, for years, the region was economically very backward. In the recent past, however, extension of irrigation from Nira left bank canal, has made it possible the cultivation of sugarcane, cotton,
sunflowers and ground-nuts on a larger scale. This has improved the regional economy to a significant extent.

**ADMINISTRATIVE DIVISIONS:**

For the administrative purpose, the district has been divided into the following fourteen tehsils.

(Map No. 25).

1) Junnar,  
2) Ambegaon,  
3) Khed,  
4) Pawal,  
5) Pulsai,  
6) Velha,  
7) Shor,  
8) Naveli  
9) Pune City,  
10) Shirur,  
11) Daund,  
12) Puranchar,  
13) Sarameti and  
14) Inaspur.

Out of all these tehsils, Pune City tehsil has the minimum area of 175 Sq.Kms, and Shirur tehsil has the maximum area of 1557 Sq.Kms.

In the following chapter, the socio-economic set-up of the region has been explained.