CHAPTER II
INTRODUCTION TO THE STUDY REGION:

PHYSICAL SETTING

2.1 DEMARCATION OF THE REGION :-

The state of Maharashtra has two major physiographic divisions, namely the Konkan Coastal Lowlands to the west and the Plateau Maharashtra to the east separated by the Western Ghats. The Western Ghats form the western edge of the Deccan Plateau and roughly run in the north – south direction separating east flowing plateau rivers from west flowing rivers of the Konkan. The average altitude of the crest of the Western Ghats is more than 900 mtrs. From the Western Ghats a number of offshoots run towards south – east forming divides between the valleys of major east flowing rivers like Godavari, Bhima, Nira and Krishna. River Pravara is a major tributary of River Godavari. East – west divide between Godavari and Pravara starts at about 19°45’ North Latitude with an altitude of 900 mtrs. This forms the northern boundary of the region. The western boundary of the region is formed by the crest of the Western Ghats. To the south the region is bounded by Balaghat range, which is a major offshoot running in the west – east direction from the Western Ghats. The region thus demarcated has an area of 2539.46 Km² and has 672 villages. It includes Akole, Sangamner, Rahuri, Newasa talukas and some parts of Shrirampur, Parner and Nagar Talukas of Ahmednagar District of the State of Maharashtra.

Ahmednagar district is situated partly in upper Godavari basin and partly in the Bhima basin occupying a somewhat central position in Maharashtra State. The district is irregular in shape, it is surrounded by Nasik district to the north, Aurangabad district to the north – east, Beed district to the east, Osmanabad and
Solapur district to the south, Pune district to the west and Thane district to the north – west.

2.2 LOCATION :-

The region under study extends from 19°15' to 19°45' North Latitude and 73°30' to 74°50' East Longitude. The region entirely lies to the east of the crest of the Western Ghats and wholly on the Deccan Plateau. It occupies a small portion of the Central part of Maharashtra Plateau. (Fig. 2.1)

Fig. 2.1
2.3 GENERAL GEOLOGY OF THE REGION :-

The region is formed by the outpouring of enormous lava flows that spread over the vast areas. Due to the tendency to form flat topped plateau like features and their dominantly basaltic composition, the lavas are called ‘Plateau Basaltic’. Such flows are called ‘Traps’ because of their step like or terraced appearance. The rock is dark gray to greenish gray in colour. There are two types of rock formation. The non-vesicular type and hard, tough, compact and have medium to fine grains with conchoidal fractures. The vesicular types are comparatively soft and break more easily.

Structurally the region is homogeneous except the area at the confluence of Pravara with Godavari, which is covered by the alluvium, remaining portion is covered by pahoehoe flow.

2.4 RELIEF :-

The relief of the region has an immense variety. This is partly on account of its size (west – east) and partly on account of its location immediately adjoining the crest of the Sahyadries (Western Ghats). Topographically the region can be divided into three parts.

1. The Sahyadry hill range or western part where the highest altitude above mean sea level is recorded and also a highest peak of the Western Ghats namely Kalsubai with an altitude of 1646 meters. The Baleshwar range a spur of Sahyadri runs in west – east direction and traverses in the Akole and Sangamner talukas and forms a divide between Pravara and Mula river, which is a main tributary of Pravara in the south.

2. The Akole plateau, which covers the area of the Akole and Sangamner taluka, have an altitude over 600 meters.
3. Eastern plain area where altitude decreases toward east and in extreme eastern part of the region merges into Godavari Basin with an altitude of between 500 to 600 meters (Fig.2.2)

2.5 CLIMATE :-

Since region lies away from the coast, it experiences a continental type of climate. The climate in the region is characterized by a hot summer and general dryness except during the south – west monsoon season. The year can be divided into four seasons. The cold season from December to February is followed by the hot season from March to the first week of June. The south – west monsoon season is from the second week of June till the end of September while October and November constitute the post monsoon or retreating monsoon season.

The average annual rainfall in the region is 600 mm. The distribution of rainfall is very uneven. The western part of Akole tahsil gets enough rainfall and the rainfall decreases in the central portion of the region and as one proceeds towards east it increases. The region mostly lies in the rain shadow to the east of the Sahyadris. September is the rainiest month.

Seasonal variation in the temperature is quite large. From March onwards is period of continuous increase in day temperatures, the nights remaining comparatively cool. May is the hottest month of the year with mean daily maximum temperature at 38.9°C. On individual days temperatures occasionally rise to 43° or 44°C. December is coldest month of the year with the mean daily minimum temperature at 12°C. In association with the passage of western disturbances across north India during winter season, the minimum temperature in the district sometimes drops to 2° to 3°C.

Except during the south – west monsoon season the air is generally dry particularly so in afternoons. Skies are generally clear or lightly clouded during
most of the year except monsoon season. Winds are generally light to moderate in force with some strengthening during the monsoon season (Fig.2.3).

2.6 NATURAL DRAINAGE :-

The Godavari is the most celebrated river of the whole of Peninsular India. It rises in the Sahyadri ranges near Trimbak in Nasik district. It flows in a south-east direction through rich alluvial plains and forms an almost continuous boundary between Ahmednagar and Aurangabad district.

The Pravara is an important tributary of the Godavari. The region is traversed by river Pravara and its tributaries. It originates in Akole tahsil in the eastern slopes of the Sahyadris, at an altitude of 1200 meter, and flows toward east. It has a length of about 200 Km and meets the Godavari at village Toka in Newasa taluka. River Mula which is the main right bank tributary of Pravara rises on the eastern slope at an altitude of more than 1000 meters and flows towards east and meets the Pravara at Newasa. River Adula, which is a left bank tributary. River Adula rises in the northern part of Akole taluka and joins Pravara in Sangamner taluka. River Mahalungi is another tributary of the Pravara river (Fig. 2.4).

2.7 SOILS :-

The soils of the region can broadly be classified into three groups viz. black or kali, red or tambat and the gray of inferior quality (locally known as barad).
PRAVARA BASIN

Rainfall distribution

Fig. No. 2.3
The plains in Kopergaon and Shrirampur talukas have comparatively a good depth of soil. Near the Pravara river wide tracts of deep rich lands are found. The soil in the Mula valley are comparatively lighter. In the Adula valley, there is a good deal of fertile land bordering the river banks. Further up in the hilly areas to the west of Akole, red soil derived by residual weathering of the basalts in a tropical humid climate, deeper on the slopes than on the levels, is found.

Soils in the plateau vary considerably depending upon the terrain and slope conditions. Over the plateau of Parner taluka the soil though not very deep have a good admixture of lime. On terraces the soils are too inferior and hill slopes are stony. In the western parts of Sangamner taluka the soils are fertile along the banks of the Pravara and Mula that develop only in narrow strips. In the middle portion of the region soils are coarse shallow.

In general soil is neither too acidic nor too alkaline. From the texture point of view the valley contains sandy, loamy, clayey soils and along the divides the soils are residual and sandy (Fig. 2.5, Fig. 2.6).
Reference:

2. Ahmednagar District Census Hand Book 1991
5. Arunachalam, B – “Maharashtra” 1967