SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

PROFILE OF RAYALASEEMA-A DRAFT

Thaniru Yella Sai[1], Prof. M. Muninarayanappa[2]

[1]*Research Scholar(Ph.D.), Dept. of Rural Development and Social Work, Sri Krisnadevaraya University, Anantapur, Andhra Pradesh, India.*

[2]*Professor, Dept. of Rural Development and Social Work, Sri Krisnadevaraya University, Anantapur, Andhra Pradesh, India.*

Article DOI: https://doi.org/10.36713/epra21312
DOI No: 10.36713/epra21312

ABSTRACT

Rayalaseema region which underwent a significant change of forming new 8 districts from 4 districts raised a thrust for defining new profile of Rayalaseema. This study is based on secondary data which incorporated A.I. assistance for interpretation to define geographical, climatic, demographic and agricultural profile of the Rayalaseema region.

KEY WORDS: *Profile, Climate and Rainfall, Population, boundaries.*

INTRODUCTION

Rayalaseema region is a section of Andhra Pradesh State of India. Before bifurcation of districts Rayalaseema region had 4 districts (Anantapuramu, Chittoor, Kadapa and Kurnool) which later divided into 8 districts (Anantapuramu, Annamayya, Chittoor, Kadapa Kurnool, Nandyal, Sri Satya Sai and Tirupati). After bifurcation the profile of Rayalaseema is changed due to addition of non-rayalaseema regions into newly formed districts which changed the geographical profile of Rayalaseem region.

RESEARCH PROBLEM

As a researcher, it is observed that most of the studies in Social Science are conducted on region based (District/State/Geographical, etc.). In regarding to Rayalaseema region which have a change in its geographical boundaries there is a surge for defining them.

METHODOLOGY

Current study is an exploratory descriptive study that purely based on secondary data to define the possible profile of Rayalaseema region.

A.I. tool of 'Chat G.P.T.' was utilized to interpret the possible profile from the collected data.

PROFILE OF NEW DISTRICTS OF RAYALASEEMA

Anantapuramu

Area Details

Ananthapuramu district' covers 10,443 sq. km as per GEC 2023 and lies between north latitude of 14°12'42" - 15°15'16" and east longitude of 76°45'43" - 78°08'47". The district is bounded on the north by Kurnool, on the east by Nandyal and Y.S.R.Kadapa districts, on the south by Sri Sathya Sai and Pavagada taluk of Tumkur district, Karnataka state and on the west by Chitradurga district of Karnataka state. Administratively, the area is governed by 3 Revenue Divisions (Ananthapuramu, Guntakal and Kalyandurg), 31 Revenue Mandals and 506 revenue villages.

Climate and Rainfall

It is one of the driest places in the state as well as in South India. The climate of the district is characterised by hot summer and generally dry weather except during S-W monsoon season. The normal mean daily minimum and maximum temperature are 26 °C and 38.3 °C during May and 17.1°C and 30.2 °C during January.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

The annual normal average rainfall (water year June 2022 to May 2023) of the district is 508 mm and actual rainfall is 901 mm with deviation of 77% where as the decadal rainfall for the period from June 2014 to May 2023 indicated that the normal annual average rainfall is 481 mm and actual average rainfall is 549 mm with deviation of 14%.

The hot season lasts for 3 months from April to June with an average daily high temperature above 38°C. The hottest month of the year in the district is May with an average high of 40°C and low of 28°C. The Southwest monsoon enters into the district in June and lasts until second week of October (as per IMD report) and Northeast monsoon from October to December. The Southwest monsoon contributes 75%, Northeast monsoon contributes by 18.5% and remaining 7% by January to May months of normal annual rainfall.

Drainage and Rivers

The district falls under Krishna basin and Krishna Middle Sub-Basin. The major river flowing in the district is Pennar, Pedda Hagari, Chinna Hagari, Tadakaleru and Pandameru river. The major ground water flow is towards S-N and E-W.

Land use/ land cover

Based on the land use study, several major classes have been delineated in the district viz., agricultural land (kharif and rabi), double crop, plantations, deciduous open forest, plantations, current fallow, waterbodies, etc. Out of the total area, majority of the area (>50%) falling under kharif category followed by double crop and deciduous open forest. The double cropped area is noticed on either side of the river courses within the district. The Forests in the district are thin and scanty and are mostly confined to hill and unproductive regions, as plain areas in the division are occupied for agricultural purposes. The reserve forests occur either in continues or separate groups of hills and some of them are isolated.

Soils

The majority of the soils in the district are covered with clayey skeletal, followed by fine montmorillonitic soils, fine mixed and loamy skeletal soils. They constitute >80% of the district. The other soils include rock lands, clayey mixed, loamy mixed, fine loamy soils. They are grouped into many classes (NBS & LUP) based on geomorphology and landscapes and further sub-divided based on physiography, relief and drainage.

The soils in Ananthapuramu District are predominantly red except Kanekal, Bommanahal, Beluguppa, Vidapanakal, Peddavadugur, Tadipatri, Yellanur, Peddapappur and Putlur mandals. In these Mandals, 35% of red soils and 65% black cotton soils occurs. More than 50% of Red Soils in Guntakal, Gooty, Pamidi, Yadiki, Kanaganapalli, Atmakur, Bramhasamudram, D.Hirehal, Garladinne, Singanamala, B.K. Samudram, Narpala, Ramagiri Mandals. In Uravakonda, Vajrakarur Mandals red soils and Black cotton soils are in equal proportion. And purely red soils in Ananthapuramu, Raptadu, Chennekothapalli, Kalyandurg, Kundurpi, Settur, Kambadur, Rayadurg, Gummagatta and Kuderu Mandals.

Cropping Pattern and Land utilisation

The total geographical area of the district is 11.36 lakh Hects. The total cropped area is 6.01 lakh Hects. Out of which 4.49 lakh Hects. is under Kharif and 1.52 lakh Hects. is under Rabi Season, the net area sown is 5.61 lakh Hects., which forms 49.38% of the total area and area sown more than once is 0.40 lakh Hects. as per 2019-20 Agriculture census. The District occupies the low position in respect of Irrigation facilities with only 23.94% of the gross cropped area. Out of the gross irrigated area of 1.44 lakh Hects., canals accounted for 15.23%, Tanks 1.36 %, Tube wells 82.58%, Dug wells 0.03 % and other sources 0.80%. All the principal sources except canals are non-precarious. (1)

Population

Anantapuramu district have population of 2241105 with a population density of 219.9/km^2, among which 1132902 are male and 1108203 are female. It is also observed that 1487751 of them live in rural while 753354 live in urban. As of caste wise, 334142 belong to SC, 70161 belong to ST and 1836802 belong to remaining castes. As of literacy 1272382 are literate that is 63.9%. (2)

Annamayya District

Area Details

The Annamayya district is the extreme south eastern district of Andhra Pradesh having geographical area of 7,951 km^2 and situated within the geographical co-ordinate of 13°19’50” and 14°42’32” of northern latitude and 78°18’55”and 79°20’26” Eastern longitude. The latitude varies from 269 to 3787 meters above sea level. The District is bounded on North by YSR Annamayya District, South by Chittoor District, West by Anantapur District and East by Nellore & Chittoor Districts. It is part of the River Pennar basin wherein

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

Cheyyeru River joins Penneru at Gundlamada in Vontimitta mandal. Administratively the district is governed by 3 revenue Division, 30 mandals with 462 Gram Panchayats and 463 revenue villages.

Climate and Rainfall: The climate of the district is characterised by tropical wet and dry climate, characterized by year round high temperatures. The District gets rainfall from both the South west monsoon as well as the North East Monsoon. June to October is usually the monsoon period. The average annual rainfall of the district is 743.13 mm, of which 373.41 mm falls as 50% South-West (June-September) monsoon and 285.2 mm as 38% North-East (October-December) monsoon. The mean minimum and maximum temperatures recorded in the district are 19°C in January and 40°C in May, respectively.

Drainage and Structures: The important river in the district is Pennar river and covered with 96% of the total area. The remaining part of the district partially covered with Swarnamukhi and Palar rivers. The Pennar river flows towards north direction and its major tributaries are Cheyyeru, Papagni, Bahuda, Pincha and Pedderu.

Land use and cropping pattern (2019-20): The total geographical area of Annamayya District is 7,95,126 hectares which constitutes an extent of forest is 1,62,692 hectares, Barren & Uncultivable land is 1,24,111 hectares, Land put to Non-agricultural uses is 84,311 hectares, Cultivable Waste is 27,056 hectares, Permanent Pastures and other grazing lands is 16,151 hectares, Land under Miscellaneous Tree crops & Groves not included in net area sown is 12,834 hectares, Other Fallow land is 1,05,574hectares,Current Fallow land is 1,07,748 hectares, TotalCropped Area is 1,71,617hectares, Net Area Sown is 1,54,649 hectares and area sown more than once is 16,968 hectares during the year 2019-20.

The Majority of the people in the district are depending on Agriculture only. The major crops in the district are Paddy, Groundnut, Sunflower, Cotton, Betel Leaves and Horticultural crops like Mango, Papaya, Banana, Lemon and Sweet Orange. The gross cropped area in the District is 126845 hectares, out of this, gross irrigated area is 66,281 hectares during 2019-20. (1)

Soils: The area is predominant soil types in the district are shallow gravelly red soils 4435.93 (56%), followed by loamy to clayey skeletal deep reddish brown soils 1182.74 (15%), clayey to gravelly clayey moderately deep dark brown soils 1029.35 sq .km, (13%), loamy to gravelly clay deep dark reddish brown soils 920.64 (12%) , gravelly clayey moderately deep red soils 461.3 sq. km sq. km sq.km sq. km, (6%) gravelly clayey shallow dark brown soils 457.75 (6%), gravelly loamy dark brown moderately deep soils 274.52 sq.km sq. km, (4%) moderately deep calcareous black soils 190.41 sq.km, (2.3%) deep black clayey soils 59.88 sq.km (0.8%) and moderately deep calcareous moist clayey soils 19.74 sq.km.(0.3%). (3)

Population

Annamaya district have population of 1697308 with a population density of 188.3/km^2, among which 853247 are male and 844061 are female. It is also observed that 1305797 of them live in rural while 361511 live in urban. As of caste wise, 229601 belong to SC, 62475 belong to ST and 1405232 belong to remaining castes. As of literacy 1002830 are literate that is 66.6%. (4)

Chittoor

Area Details

The Chittoor district, Andhra Pradesh having geographical area of 15151 km^2, lies between north latitude 12°37´23"-13°59´27" and east longitude 78°04´12"-80°03´36". It is bounded on the east by Tirupati District of Andhra Pradesh and Tamilnadu State, on the west by Annamayya District and Karnataka State, on the North by Annamayya and Tirupati Districts of Andhra Pradesh and on the south by Tamilnadu State(5). It is with an area of 6859 Square Kilometers which accounts for 4.21 percent of the total area of the state. The general elevation of the mountainous part of the district is 2500 feet above sea level. The Chennai & Bangalore cities are located in 150 Kms. and 165 Kms. respectively to Chittoor Town. The District has good business and marketing for Mango, Tomato and Other Products. Administratively the district is governed by 3 revenue divisions consisting 66 revenue mandals and 1540 revenue villages.

Climate and Rainfall: The climate of the district is characterised by dry. The upland mandals are comparatively cooler than eastern mandals except Chittoor where climate is moderate. The normal mean daily minimum and maximum temperature are 27.9 °C and 40.3 °C during May and 18.7 °C and 29.9 °C during January. The normal annual rainfall of the district is 934 mm (India Meteorological Department). This varies between 600 mm (Mulkalcheruvu) and 1294 mm (Satyavedu). The South west monsoon contributes ~48 %; North east monsoon contributes ~42%, and remaining by winter season. Rainfall increases from west to eastern part and low rainfall recorded in the central and north-western parts. During the year 2013-14 the district received rainfall of 745.1 mm (-20% less) rainfall.

Drainage and Structures: The rivers flowing in the district are non-perennial in nature of which river Ponnai flows towards south-east along the prominent NW-SE fault and joins river Palar in Tamil nadu. Swarnamukhi is another important river originates in Eastern

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

Ghats and flows in NE direction before flowing into Nellore district. Other important rivers are river Bahuda, river Pincha, river Kushastali, river Kalyani, river Bheema, river Araniyar and river Pedderu etc. The drainage pattern is dendritic to sub-dendritic in nature and divided into 75 watersheds.

Land use and cropping pattern (2013-14): Forests occupy 4520 km^2 (~30%) of the total geographical area.Total gross cropped area is 417066 ha (~28 %) (Khariff: 324712 and Rabi: 92354) and net area sown is 371717 ha (25%) (Khariff: 324118 and Rabi: 47600) and area sown more than once is 45350 ha (3%). Forests occupy ~30% of area, barren and un-cultivable land is 152700 ha (10%), land put to non-agricultural uses is 157842 ha (10%), permanent pastures and other grazing lands 34246 (2%), tree crops 30722 (2%) etc. of the total geographical area. The major crops grown in the district are groundnut 155078 ha (37%) (Khariff: 143027 and Rabi: 12051), paddy 49860 ha (12%) (Kharif: 15206 and Rabi: 34654), sugarcane 28152 ha (5%), vegetables 21890 ha (5%) (mainly tomatoes, brinjal, beans etc), pulses 20352 ha (5 %) (Kharif: 16913 and Rabi: 3439) other crops grown are maize, ragi, bajra etc. (1)

Population

Chittoor district have population of 1872951 with a population density of 279.8/km^2, among which 939538 are male and 933413 are female. It is also observed that 1504307 of them live in rural while 368644 live in urban. As of caste wise, 394327 belong to SC, 51574 belong to ST and 1427050 belong to remaining castes. As of literacy 1173708 are literate that is 70.7%. (6)

Y.S.R. Kadapa

Area Details

Y.S.R Kadapa District is the extreme south eastern district of Andhra Pradesh situated within the geographical co-ordinate of 14°9'40" and 16°0'57" of Northern Latitude and 78° 07'02" and 79° 59'58" Eastern Longitude.The District is bounded on North by Kurnool, Prakasam Districts, South by Annamayya District West by Anantapur District and East by Nellore and Chittoor District. It have 3 Revenue Divisions, 36 mandals, 557 Gram Panchayats, 726 Revenue Villages.

Climate and Rainfall

The climate of the district is characterised by tropical wet and dry climate, characterized by year round high temperatures. Kadapa gets rainfall from both the South West monsoon as well as the North East Monsoon. June to October is usually the monsoon period. The normal mean daily minimum and maximum temperature of 34 °C and 40 °C during May and 25°C and 35°C during December. As per the IMD rainfall data, during the year 2022, normal an-nual rainfall varies between 500 mm (Vemula) to 906 mm (Porumamilla) with average of 682 mm (Fig. 1.2). SW monsoon contributes 56 % and 36 % is contributed by retreating mon-soon (NE) season and rest by winter and summer rainfall. Rainfall increases from West to East.

Drainage and Structures

Y.S.R Kadapa District is drained by the Pennar Basin and its tributaries. This River rises in the Karnataka State and after passing through Anantapuram district enters this District at the North-Western corner near Tallaproddatur in Kondapuram Mandal. The chief Northern tribu-taries to Pennar are the Kunderu(Kundu), Sagileru and the southern tributaries – the Cheyyeru, Papagni and the Chitravathi. The drainage pattern is dendritic to sub- den-dritic and parallel. The drainage is also regularly parallel to sub parallel demonstrat-ing basic control. The Cuddapah basin is a major synformal structure with minor anti-forms and synforms. Many lineaments trend NE-SW and are sub-parallel to the trends of geological formations, other lineaments run either in a ENE-WSW or E-W direction.

Land use and cropping pattern

The total geographical area of Y.S.R Kadapa District is 11,22,760 hectares which constitutes an extent of forest is 4,03,690 hectares, Barren & Uncultivable land is 1,29,042 hectares, Land put to Non-agricultural uses is 1,37,621 hectares, Cultivable Waste is 29753 hectares, Current Fallows is 1,15,748 hectares, Other Fallow land is 53,801 hectares,Total Cropped Area is 2,53,458 hectares and Net Area Sown is 2,43,931 hectares and area sown more than once is 9,527 hectares during the year 2019-20. The gross area cropped dur-ing Khariff season is 1,84,410 ha and the major crops sown during khariff season are paddy, jowar, turmeric, pulses, cotton and oil seeds; while The gross area cropped during Rabi sea-son is 454385 ha and the major crops sown during rabi season are paddy, jowar, bajra, pulses, cotton and oil seeds.

Soils

The area is mainly occupied by clayey soils (51%) (deep, well drained, gravelly clay with low avaialable water content (AWC) and loamy soils (40%) (red and sandy soils, which are shal-low with low water holding capacity). Red loamy soils are predominant in eastern and south-ern parts of the district, Clayey soils are mostly seen in northern and small areas in southern part of the district and clayey to loamy mixed soils are mostly observed in central parts of the district. (1)

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

Population

Y.S.R. district have population of 2060654 with a population density of 203.6/km^2, among which 1037867 are male and 1022787 are female. It is also observed that 1251364 of them live in rural while 809290 live in urban. As of caste wise, 337860 belong to SC, 40994 belong to ST and 1681800 belong to remaining castes. As of literacy 1249585 are literate that is 68.3%. (7)

Kurnool

Area Details

Kurnool District lies between North latitudes of 15°07´58"-15°57´58"and East longitudes of 76°58´12"-78°16´06". The altitude of the district varies from 100 ft above the mean sea level. This district is bounded on the north by Tungabhadra and Krishna rivers as well as Mahabubnagar district of Telangana State, on the south by Kadapa and Anantapur Districts on the west by the Bellary district of Karnataka State and on the east by Nandiyal District. At present Kurnool District comprises 3 Revenue Divisions, 26 Revenue Mandals 25 Mandal Parishads, One Municipal Corporation, 3 Municipalities, 484 Gram Panchayats, 472 Revenue Villages.(8)

Climate and Rainfall

The Climate of the district is normally good and healthy. January, February and March months are usually pleasant with moderate winds from South-East. April and May are hottest months of the year, during these months the wind shifts to Southwest with increased force and brings welcome showers by the end of May. During the succeeding four months the wind blows from Western side in Major parts of the district and brings fair quantum of rainfall. By the end of September the wind is light and pleasant forecasting the onset of Northeast monsoon. In November and December the weather is fine, Rainfall is rare and wind is light with occurrence of heavy dew. District normal rainfall of the year is 670.5 mm. The Normal rainfall in 2019-20 is 513.9 mm. During the Year 2018-20, the rainfall contribution from south west monsoon is 347.3 mm and whereas in north east monsoon the contribution is 102.2mm. It is indicating that the district receives about 67 % of rainfall from south west monsoon only.

Based on the rainfall analysis, 12 Mandals received the above the normal rainfall of the district. The lowest rainfall is recorded in Nandavaram Mandal. Orvakal, Adoni, Alur and Chippagiri Mandals had received rainfall more than the Mandals Normal rainfall. Kallur, Kodumur, Krishnagiri, Kowthalam, Nandavaram and Aspari Mandals are received less than the district normal monsoon.

Drainage

The principal rivers flowing in the district are the Tungabhadra (and its tributary is Hundri) The Krishna and the Kunderu. The Tungabhadra rises in the Western Ghats and after forming part of northern boundary for some distance separates Kurnool from the Telangana area flown in an Eastern direction receives Hundri and falls into the Krishna river at Kudali Sangam after winding Northwards. The Hundri, a tributary of Tungabhadra rises in the fields of Maddikera in Maddikera mandal receives a stream from Erramalas at Laddagiri in Kodumur Mandal and joins Thungabhadra at Kurnool. It drains much of Maddikera, Pathikonda, Devanakonda, Gonegandla, Kodumur and Kallur Mandals. This is turbid streams with sudden raise and fall. The Kunderu also called Kumudvathi rises on the western side of Erramalas winds its way into Kunderu valley and flows in a Southern direction collecting drainage all along its course from either side.

Land use and Cropping Pattern

Landuse / Landcover map was generated using satellite data for the study area. Agriculture land, forest land, waste land, settlement and waterbody are the main landuse/landcover in the area. The agriculture land which includes kharif crop and rabi crop areas are found in the district. About 90% of the area is covered by Kharif crop and it is mainly depending on rain fall. The double crop area is very scanty and mainly found where the Ground Water condition is good. The forest area is occurring in small pockets and predominantly in the western parts of the district. Waste land and barren rocks found in the western and eastern parts of the areas.

The total Geographical area of the district is 797740 ha. During the year 2020-21 the area covered by forest is 32062 ha which forms 4.02% to the total geographical area. The net area sown is 505573 ha, forming 63.38% to the total geographical area. The total cropped area in the district is 545157ha. The area sowed more than once during the year is 39584ha. The major crops cultivated in the district are cotton, Bengal Gram, Groundnut, Red Gram, Paddy, Jowar, Chilly Maize and Bajra. Based on 2020-21, the total area cultivated in the district is 503797ha. It is represented by 63% of the total geographic area. About 48% of the total cultivated area is covered by cotton in the district. (1)

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

Population

Kurnool district have population of 2271686 with a population density of 286/km^2, among which 1141778 are male and 1129908 are female. It is also observed that 1507585 of them live in rural while 764101 live in urban. As of caste wise, 398154 belong to SC, 30047 belong to ST and 1843485 belong to remaining castes. As of literacy 1123998 are literate that is 57%. (9)

Nandyal

Area Details

Nandyal District lies between the northern latitudes of 14 °54'9''N to 16 °9'4''N and eastern longitudes of 77 °38'54''E to 78 °55'47''E located in the south-west of Andhra Pradesh. This district is bounded on the north by Krishna Rivers as well as Nagarkurnool (Old Mahabubnagar) district of Telangana State, on the south by Kadapa and Anantapur districts on the west by the Kurnool district and on the east by Prakasam district.The Nandyal District comprises 3 Revenue Divisions, 29 Revenue Mandals 28 Mandal Parishads, 5 Municipalities, 1 Nagara Panchyats 489 Gram Panchayats, 449 Revenue Villages. (10)

Climate and Rainfall

The climate of the district is characterised by tropical wet and dry climate, characterized by year round high temperatures. Nandyal gets rainfall from both the South West monsoon as well as the North East monsoon. June to October is usually the monsoon period. The December is the coldest month and tempreture varies between 17.8° C an 30.5°C while May is the hottest month and tempreture varies between 25° C an 40° C. SW monsoon contributes 70% while retreating monsoon (NE) contributes 21% season and rest by winter and summer rainfall. Generally Rainfall increases from west to eastern part of district. As per the IMD rainfall data, during the year 2022, it received annual rainfall of 721.4 mm. The trend of decadal rainfall of the district shows negative slope value suggesting that annual rainfall is declining every year.

Drainage

Kunderu river, a tributary of Penna is the major stream flowing in N-S direction in the district. It flows through Midthur, Gadivemula, Nandyal, Gospadu, Koilakuntla, Dornipadu and Chagalamarri mandals and then enters Kadapa district. Nandyal district is also bounded by Krishna River in the North; which also act as natural boundary between Telangana and Andhra Pradesh.

Land use and cropping pattern

The total Geographical area of the district is 9.154 lakh Hect. During the year 2019-20 the area covered by forest is 3.017 lakh Hects. which forms 32.95% to the total geographical area. The net area sown is 3.37 lakh Hects, forming 36.87% to the total geographical area. The total cropped area in the district 38.23 lakhs Hects. The area sown more than once during the year is 0.45 lakh Hects. The gross area cropped during Khariff season is 2,29,446 ha and the major crops sown in khariff are paddy fields, bajra, maize, chillies, turmeric, cotton and oil seeds; while The gross area cropped during Rabi season is 1,77,088 ha and the major crops sown in grown during rabi season are paddy ,jowar, pulses, oilseeds and tobacco

Soils

The major types of soil in the district include fine, montmorillontic, loamy-skeletal, mixed, clayey-skeletal and very fine, montmorillonitic. The montmorillonitic soil is confined to drainage of the low lying streams of Kunderu River. The Erramalas and Nallamala ranges are characterized by clayey soils with rock fragraments, therefore clayey-skeletel. Loamy- skeletal is also observed in Nallamala hills. Highlands of the ranges have rock lands with little soil. Soil moisture for the months May to Nov is shown in graphical form. It increases from month of may to November indicating its direct relation to SW monsoon. Soil moisture range of 40-60% covers around 68% of the district area followed by 20-40% moisture which covers 24% of the geographical area. As the major soil type is montmorillontic (Clayey) it has tendency to absorb and hold more moisture due its small numerous pore spaces. (1)

Population

Nandyal district have population of 1781777 with a population density of 183.3/km^2, among which 897449 are male and 884328 are female. It is also observed that 1396592 of them live in rural while 384185 live in urban. As of caste wise, 339791 belong to SC, 52784 belong to ST and 1389202 belong to remaining castes. As of literacy 1003163 are literate that is 63.7%. (11)

Sri Sathya Sai district

Area Details

Sri Satya Sai District (Puttaparthy) lies between 13° -40' and 14°- 6' Northern Latitude and 76°-88' and 78°-30' Eastern Longitude. The district is bounded on North by Ananthapuramu District, on the East by YSR Kadapa District & Chittoor Distrct and on West and

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

South West by Karnataka State. The District has been divided to 2 Natural Divisions. They are 1) Northern Mandals of Dharmavaram, Bathalapalli, Tadimarri, Mudigubba are mainly made up of arid treeless, expense of poor red soils (2) High Level Land of Penukonda, Roddam,

Somandepalli, Hindupur, Lepakshi, Chilamathur, Madakasira, Rolla, Gudibanda and Agali which connects with Mysore plateau at higher elevation of the rest of the District. This part has average sandy red soils of normal productivity

Sri Satya Sai District Head quarter at Puttaparthy is formed with 3 Revenue divisions consisting of 29 Mandals (Kadiri Division- 8, Penukonda Division – 13, Puttaparthy (New Division-8 mandals i.e. 4 mandals from Dharmavaram Division and 4 mandals from Kadiri Division).(12)

Climate and Rainfall: The district receives fairly good amount of normal rainfall. The normal rainfall of the district is 590.9 mm. The normal rainfall for the South West Monsoon period is 356.5 mm which forms about 60.3 % of the total rainfall for the year. The normal rainfall for North East monsoon period is 170.8mm only, which forms 28.9% of the total rainfall for the year (October to December). The other months are almost dry. March, April and May are warm months where the normal Maximum temperature ranges between 37.60ºC to 39.20ºC, where as the actual Maximum temperature recorded during March, April and May are 38.20ºC, 40.40ºC and 40.40ºC respectively. The normal minimum temperature ranges between 17.50ºC to 17.70ºC in January and December, whereas the actual Minimum temperature recorded during January and December are 18.50ºC and 17.40ºC respectively.

Drainage and Structures: The district is mainly drained by the rivers Pennar and its tributararies Jayamangala, Chitravathi, Vedavathi Maddileru, Papagni, Vandamanneru, Tadakaleru and Pandameru.

Land utilization: The total geographical area of the district is 8.925 lakh Hects. During the 2019-20 period, the total gross sown area was 71,024 hectares, with 42,382 hectares sown during the Kharif season and 28,642 hectares during the Rabi season. Groundnuts are cultivated in 64% of the total area, followed by horse gram (13.4%), red gram (8.5%), maize (4%), paddy (3%), jowar (2%), green gram (1.5%), and other crops.

In the district, there are 158920 marginal farmers (<2.47 acres of land), 120126 small farmers (2.47-4.93 acres), 74301 semi-medium (4.94-9.87 acres), 11814 medium (9.88-24.7 acres) and 952 large farmers (>24.71 acres).

Soils: The area is mainly occupied by clayey skeletal soils, fine, mixed loamy soils, loamy soils, montmorillonitic and rock out crops.(1)

Population

Sri Satya Sai district have population of 1840043 with a population density of 205.8/km^2, among which 931593 are male and 908450 are female. It is also observed that 1447686 of them live in rural while 392357 live in urban. As of caste wise, 248993 belong to SC, 83966 belong to ST and 1507084 belong to remaining castes. As of literacy 1038578 are literate that is 63.1%.(13)

Tirupati

Area Details

Tirupati Balaji district derives its name from Lord Sri Venkateswara Swamy of Tirumala Hills and covers an area of 8229 sq.km. Tirupati is headquarters of the district and it is one of the eight districts in the Rayalaseema region of the Andhra Pradesh state. The district is located between the Northern Latitudes of 13°21′54″ and 14°30′40″and between the Eastern Longitudes 79°05′42″ and 80°04′10″ and surrounded by Nellore district in the North, Chittoor and Annamayya districts in the west Chittoor and Tiruvallur district of Tamil Nadu in the south and Bay of Bengal in the East.

Tirupati district has four revenue divisions, namely Gudur, Srikalahasti, Sullurupeta and Tirupati and it has 34 mandals. Tirupati city is the only municipal corporation. The district also comprises five municipalities namely, Srikalahasti, Gudur, Sullurpeta, Puttur and Venkatagiri as well as one nagar panchayat at Naidupeta. Tirupati district also comprises 822 Gram Panchayats and 1107 villages.

Climate and Rainfall

A tropical wet and dry climate prevails in Tirupati district. In winter the minimum temperatures are between 18° and 20 °C the summer extends from March to June and the temperature ranges from 40°*C* to26.6°*C*The hottest month is May with temperature of 38.30CThe coldest month of the year in Tirupati is December, with an average low of 17.7°C and high of 28.8°C. The relative humidity ranges

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

from 37 % (May) to 69 % (November). The district experiences heavy rainfall in the month of November during the North- East monsoon season. The area receives an average annual normal rainfall of 1124.40 mm of which 37 % is contributed by South-West monsoon and 55 % by North-East monsoon. The North-East Monsoon is more copious compared to the South-West Monsoon in the district. The rainfall pattern of the area changes from east to west where the rainfall gradually decreases towards western side of the study area. Further it is observed that the rain fall drastically decreases in the south western part of district.

Drainage and Structures

Swarnamukhi is important river originates in Eastern Ghats and flows in NE direction and this is non-perennial in nature other important rivers are Kushastali and Kalyani River. The drainage pattern is dendritic to sub-dendritic in nature. The district is blessed with huge number of village tanks and water bodies, which are seen in most places and are used for irrigation purposes. Drainage map of Tirupati given in Fig.4

Land use and Cropping Pattern

As per the land use and land utilization data of 2019-20, Forests occupy 271318 (33%) of the total area. Barren and un-cultivable land is 51035 ha (06 %), land put to non-agricultural uses is181459 ha (22%), permanent pastures and other grazing lands 20846, 2.5% of the total geographical area. The major crops grown in the district are paddy, groundnut, sugarcane, vegetables, pulses and other crops grown are maize, ragi, bajra etc. Total cropped area of the district is 181013 (22%) ha and net area shown is 163724 (20 %) of total area. The major crops grown are paddy 104669 (57%) ground nut 12785Hec (7%) sugarcane 3580 (2%) and vegetables and pulses contributing around 6 %.In this district there are 5.15 lakh farmers and agriculture laborers spreading all the mandals.

Soils

The soils are mainly red loamy (Fine mixed red soils57%), red sandy soil (34%) and black soils (9%). The rest of the area covered by Black Clay(3%),Black Loamy(2%),Black Sandy(1%)and Red Clay(3%).In the eastern part of the area kaolinite mixed soil are seen.(1)

Population

Tirupati district have population of 2196984 with a population density of 258.9/km^2, among which 1098515 are male and 1098469 are female. It is also observed that 1346928 of them live in rural while 850056 live in urban. As of caste wise, 519388 belong to SC, 170779 belong to ST and 1506817 belong to remaining castes. As of literacy 1411117 are literate that is 71.1%. (14)

Profile of Rayalaseema Region (Interpretation)

Area Details

Rayalaseema region is to the southwest region of Andhra Pradesh.It have 8 districts namely Anantapuramu, Annamaya, Chittoor, Kurnool, Nandyal, Sri Satya Sai, Tirupati and YSR Kadapa. Rayalaseema lies between 12°37´23"N to 16 °9’4’’N latitute and 76°45’43” E to 80°04′10″E longitude with an area of 71115 Km^2. North of Rayalameema is bounded with Telangana districts, east is bounded by Bay of Bengal , south is bounded by districts of Tamil Nadu and west is bounded by districts of Karnataka. Krishna river separates Andhra Pradesh and Telangana. Major Rivers of Rayalaseema are Krishna, Tungabhadra, Pennar, Kunderu, Chayyeru, Swarnamukhi, Papagni and Palar. After bifurcation of districts Rayalaseema also have coastal line that falls in Tirupati district. Topology of Rayalaseema is the mix of plains, hilly tracts and plateau regions. Rayalaseema experiences hot summers, moderate to scanty rainfall overall Rayalaseema have tropical wer and dry climate.

Rainfall and Climate

Annual rainfall ranges from 500mm to 1124 mm, where south-west monsoon and north-east monsoon as the source of rainfall that contributes from 55-75% and 20-40% of rainfall respectively. The summer and winter temperature ranges from 38-41 °c and 17-20°c respectively.

Population

Total population of Rayalaseema is 1562508 from which 8032889 are male and 7929619 are female. Rural and urban population is 11248010 and 4713498 respectively. The population density is app. 229 persons/km². As per the caste, 2802256 belong to SC, 562780 belong to ST and rest 12597472 belong to other remaining castes Literacy rate of Rayalaseema region is 58.15%, with 9281361 as literates.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

Land use and Agriculture

Forest cover ranges from 4% to 33% of district areas. Net area sown is from 50 to 60 % in most of districts. Cropping pattern shows that groundnut, cotton, red gram, paddy and maize dominate the kharif crops. Paddy, pulses, oilseeds and tobacco dominate rabi crops. Mango, papaya, banana and citrus dominate horticulture in rayalaseema.

Soil Types

Types of soils in Rayalaseema are red soils, black cotton soils, clayey and skeletal soils.

Red soils are predominantly red loamy and red sandy soils in most districts. Black cotton soils present in parts of Anantapur, Kadapa and Nandyal districts. Clayey and skeletal soils present especially in hilly areas and catchments. The soils of Rayalaseema are well suitable for agriculture but with irrigation limitations.

Economy and Livelihood

Rayalaseema is primary sector dependent which is mainly on agriculture and allied activities. In most of districts gross irrigation coverage is less than 30 % which falls under low to moderate, with the limitations of few irrigation facilities, dependence on monsoon and drought-prone areas

CONCLUSION

The most identifiable add-on to Rayalaseema region is the coastal line that falls under Tirupati district. A minor geographical extension in Rayalaseema region can also be observed which is also observed in Tirupati District. Besides these Rayalaseema stayed similar in climate and cropping after bifurcation.

REFERENCES

1. *Central Ground Water Board.(n.d.). Public and Media Warehouse. https://cgwb.gov.in/cgwbpnm/search?type=2&cat_id=7&state_id=28&district_id=&year_of_issue=&name_of_author=&keywords=&search=search&page=1*
2. *City Population.(n.d.). Anantapur. https://www.citypopulation.de/en/india/admin/andhra_pradesh/553__anantapur/*
3. *Government of Andhra Pradesh.(n.d.). About District. Annamayya District. https://annamayya.ap.gov.in/about-district/*
4. *City Population.(n.d.). Annamayya. https://www.citypopulation.de/en/india/admin/andhra_pradesh/813__annamayya/*
5. *Government of Andhra Pradesh.(n.d.). About District. Chittoor District. https://chittoor.ap.gov.in/about-district/*
6. *City Population.(n.d.). Chittoor. https://www.citypopulation.de/en/india/admin/andhra_pradesh/554__chittoor/*
7. *City Population.(n.d.).Y.S.R. https://www.citypopulation.de/en/india/admin/andhra_pradesh/551__y_s_r_/*
8. *Government of Andhra Pradesh.(n.d.). About District. Kurnool District. https://kurnool.ap.gov.in/about-district/*
9. *City Population.(n.d.). Kurnool. https://www.citypopulation.de/en/india/admin/andhra_pradesh/552__kurnool/*
10. *Government of Andhra Pradesh.(n.d.). About District. Nandyal District. https://nandyal.ap.gov.in/about-district/*
11. *City Population.(n.d.). Nandyal. https://www.citypopulation.de/en/india/admin/andhra_pradesh/815__nandyal/*
12. *Government of Andhra Pradesh.(n.d.). About District. Sri Satya Sai District. https://srisathyasai.ap.gov.in/about-district/*
13. *City Population.(n.d.). Sri Satya Sai. https://www.citypopulation.de/en/india/admin/andhra_pradesh/814__sri_sathya_sai/*
14. *City Population.(n.d.). Tirupati. https://www.citypopulation.de/en/india/admin/andhra_pradesh/812__tirupati/*