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Distribution of Land Use Pattern: A Study on Rayalaseema Region of Andhra Pradesh, India

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ABSTRACT

Land is the fundamental factor that forms the basis for economic activity and it is the crucial natural resource that produces food and non-food products. India has a varied land use pattern, the geographical diversity of the country. The nature and the extent of economic activities mainly depend upon the quantum of land resources and approach in which these are applied. Land resource plays a lively part in preparing the agricultural economy of any neighborhood. Crop and land use statistics form the spine of the Agricultural Statistics System. Dependable and timely data on crop area, crop yield and land use are of great magnitude to planners and policy makers for effective agricultural development and for adopting decisions on production, procurement, warehousing, public distribution, export and import and many other interrelated topics. The present study attempt has been constituted to evaluate the distribution of land use pattern in Rayalaseema region. Andhra Pradesh is the primarily an agricultural state. The state is conventionally splits into two geographical regions, one is Coastal Andhra and another one is Rayalaseema. Rayalaseema region covering an expanse of 67,298 Sq Kms (42 % of land area), also it comprises four districts namely Anantapur, Chittoor, Kadapa and Kurnool. The land utilization statistics were available under different categories of the region.

KEYWORDS Land use pattern, Agricultural economy and development

Introduction:

The land use pattern is more intricate and dynamic in nature and regional. "The complex land use pattern in an area manifests the outcome of trial and errors of many thousand years of colonization.n. The present form of land utilization in India is the termination of long sustained operation of the whole scope of environmental components, but modified by socioeconomic and historical fundamentals" (Veerannachari, 2015). India delivers a varied land use pattern given the geographical variety of the nation. Land use pattern in India is as follows: Net Sown Area is 46% of the total geographic area because of the wide availability of flat terrain in India. Near 22% area of the nation is under forest cover. Barren and uncultivable waste land to around 8.5%, nearly 5.5% is under non-agricultural uses like houses, industries, etc. Rest of the area is under tree crops, grooves, permanent pastures and grazing lands, etc. The ground area under forest has increased only marginally from about 18% in the 1960s to around 22% at present. This is because of increasing requirements for non-forest uses like farming, industries and so on,

The objectives of the study:

1. To assess the categories of land use pattern of Rayalaseema region 2013-14.
2. To examine the findings and suggestions of the study area.

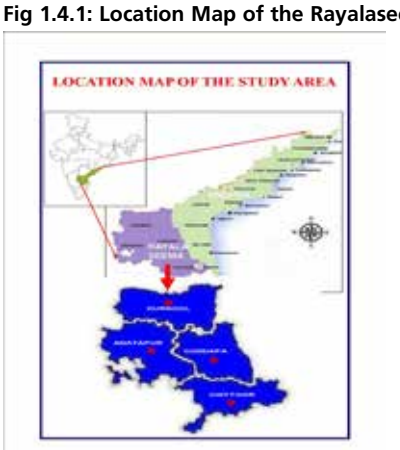
Methodology:

The present research study has been based on secondary information. The data had calculated from the distribution of land use pattern at district level. The information has been garnered from the Chief Planning, Office of the Anantapur, Chittoor, Kadapa and Kurnool districts and District Handbook of statistics 2013-2014.

Profile of the study region:

Rayalaseema is a landlocked region with an expanse of 67,298 Sq Km accounting for 42% of the total geographical area of Andhra Pradesh. The region from its location extends approximately from 12°3'N to 16°15' North Latitude and 76°55' E to 79°55' East Longitude. Geographically the Rayalaseema region forms the south and southeastern portion of the Deccan Plateau. It is located nearly in the middle of the southerly portion of the Indian peninsula. It includes within its fold the districts of Anantapur, Chittoor, Kadapa and Kurnool. It is bordered on the south by the states of Tamil Nadu and Karnataka, on the west by Karnataka state, on the north by Telangana and on the east by coastal region of Andhra Pradesh (Fig 1 Location map of the work area). The Rayalaseema region has no coastline and is approachable only by land. The area lies mostly at an altitude of approximately 300 to 700 meters above mean sea level. Rayalaseema region is the still neglected and economically backward region when compare to Coastal Andhra and also the region faces so many problems (Rao G.N. Et al., 1994). Rayalaseema receives more rain from the South-West monsoon than the North-East monsoon. The average annual rainfall is hardly 672mm. South-West monsoon spreads from early June till the remainder of September. The North-East monsoon is generally from October to December. The cropping pattern also varies (Radhakrishnaiah et al., 2015) with the effect of temperature, soil and other irrigation facilities. The food crops occupy a significant place, among them paddy, jowar and other millets are main. Among the commercial crops, groundnut is the most predominant crops followed by sugarcane and cotton.

Fig 1.4.1: Location Map of the Rayalaseema region



General Land use Pattern:
The survey about the land use pattern is significant not just in agricultural dominated, over populated developing regions, but throughout the globe because of its relationship with different human phenomena. Its importance also increased during the population pressure and decreasing human and land ratio, increasing demand for food and raw materials they require for optimal use of land in an integrated manner has assumed greater relevance. Land use is any kind of stable or cyclic human being intervention on the environment to satisfy human needs and the land use capability or land suitability is the potential capability of giving tract and to support different types of land utilization under given cultural and socioeconomic conditions (Vink A.P.A. 1975).

Classification of Land use pattern:
Land use classifications are the systematic arrangement of land on the basis of certain related characteristics, mainly to identify and understand their basic utilities intelligently and effectively. The land use pattern indicates the spatio-temporal sequence of field under different uses. It too indicates that net available land for cultivation, which is an significant factor since it is the foundation for agricultural planning (Arsud. 2000).

The Classification and major categories of Land use pattern is as follows:
1. Forest Land
2. Barren & Uncultivable Land
3. Land put to non-agricultural uses
4. Cultivable waste Land
5. Permanent pastures & other grazing Land
6. Land under miscellaneous tree crops & groves not 'included in net sown'
7. Current fallow Land
8. Other fallow Land
9. Net area sown
10. Total cropped area
11. Area sown more than once
12. Land under Fish & Prawn culture.

The above land use classifications have been taken on all the provinces leading to comparability in land use pattern (Veerannachari, 2015). Some land is for a particular use depending mostly on the physical characteristics of land to its suitability for a particular usage is concerned.

1.6 Land utilisation Pattern in Rayalaseema region:
The area about 4484200 (in hectares) of the total geographical area of Rayalaseema region was under forest 1108968 (in hec) in the year 2013-2014. Out of these the total area under Barren and uncultivable land is 519441 (in hec), Followed by the area under Land put to non- agricultural uses is 532789 (in hec), Cultivable waste 146181 (in hec), Permanent pastures & other grazing is 48196 (in hec), Land under miscellaneous tree crops & groves not 'included in net sown' is 52370 (in hec), Current fallows is 386349 (in hec), Other fallow lands is 453359 (in hec), Net area sown is 2604981 (in hec), Total cropped area is 2894749 (in hec), Area sown more than once is 292494 (in hec) and Fish & Prawn culture is 1184 (in hec). There is change in photographic, soil types, rainfall and geology all these factors played important part in setting the agricultural practices. The categories include any land classified as a forest legal enactment. The land use of the Rayalaseema region (in hectares) for various aspects is furnished in the Table no: 1.6.1.

Table No: 1.6.1 Land Utilisation Pattern in Rayalaseema region 2013-14 (Area in Hectares)

S. No	Land use Category	Name of the District				Rayalaseema Total
		Anantapur	Chittoor	Kadapa	Kurnool	
1	Total geographical area	1913000	151500	653900	1765800	4484200
2	Forests	196978	452018	119303	340669	1108968
3	Barren & Uncultivable land	166425	152700	73003	127313	519441
4	Land put to non-agricultural uses	150140	157312	77678	147659	532789
5	Cultivable waste	48533	46097	4243	47308	146181
6	Permanent pastures & other grazing	5848	33540	5231	3577	48196
7	Land under miscellaneous tree crops & groves not 'included in net sown'	9416	30561	10535	1858	52370
8	Current fallows	86502	120944	64058	114845	386349
9	Other fallow land	209067	150207	23150	70935	453359
10	Net area sown	1038980	371717	276630	917654	2604981
11	Total cropped area	1106371	417066	372619	998693	2894749
12	Area sown more than once	67381	45349	95989	83775	292494
13	Fish & Prawn culture	1111	4	69	0	1184
Rayalaseema Total		4999752	2129015	1776408	4620086	13525261

Source: **Chief Planning Officer, Anantapur, Chittoor, Kadapa and Kurnool (2013-2014)**

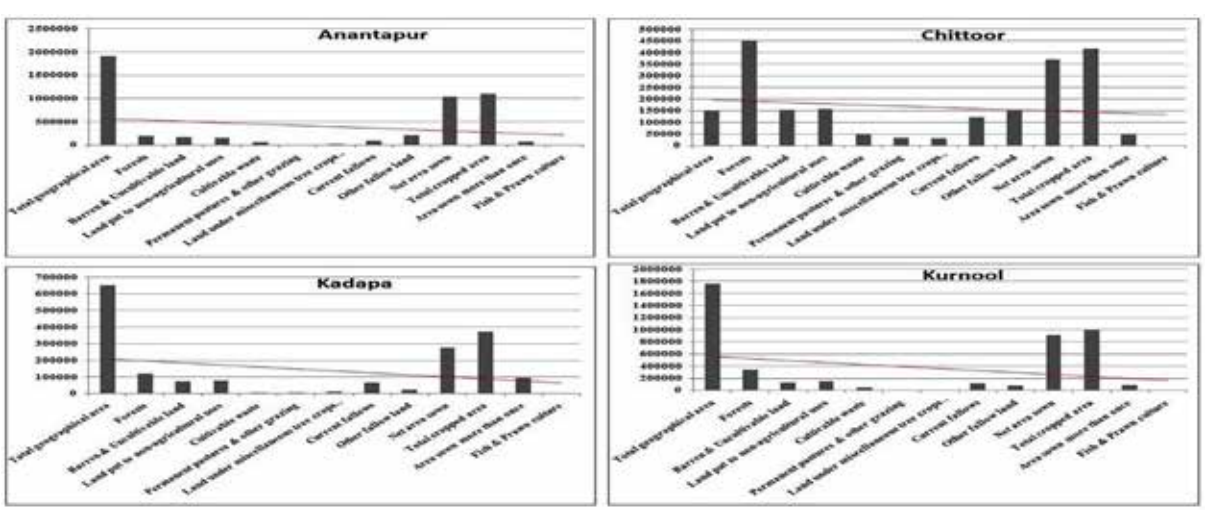


Figure : 1.6.1 Graphical representation of District wise Land Utilisation Pattern in Rayalaseema region 2013-14

Out of the entire area of Rayalaseema region, in Anantapur district the total geographical area is 1913000 lakh hectares and followed by the Chittoor total area is 1515100 lakh hectares, Kadapa total geographical area is 653900 lakh hectares and the total geographical area covered by Kurnool is 1765800 lakh hectares. In Anantapur district 196978 he of the total land area is covered by the Forest. Chittoor district has 452018 (hec) of Forests. Kadapa district has 119303 (hec) of the Forests in the total land area. In Kurnool district 340669 (hec) is under Forest area. Barren and uncultivable lands are rocky outcrops of hills, plateaus, mountains, etc., and this land put up under no conceivable circumstances be brought under farming. Merely a very high cost a little proportion may be classified as unproductive waste. This area occupies in Anantapur district is166425 (hec), Chittoor district has 452018 (hec), Kadapa district has 73003 (hec) and Kurnool district has 127313 (hec).

The concentration of land under land put to non-agricultural uses are high in Chittoor which amounts to 157312 (hec). In Anantapur district about 150140 (hec) and Kurnool districts about 147659 (hec) lands under this category of land use, about 77678 (hec) of the total lands put to non-agricultural use of the Kadapa district. The cultivable waste land is high in Anantapur district that is 48533 (hec), then Kurnool district has 47308. Chittoor district has 46097 (hec) and Kadapa district has 4243(hec) under cultivable waste. The entire acres under permanent pastures and other grazing land in Anantapur district is 5848 (hec), high in Chittoor district is approximately 33540 (hec). In Kadapa district it is about 5231 (hec) of the total land. In Kurnool district, an area of about 3577 (hec) of land is found under permanent pastures and other grazing lands. The land under miscellaneous tree crops & groves (not included in net sown), the Anantapur district posses 9416 (hec), the Chittoor district has 30561(hec), the Kadapa district posses 10535 (hec) and the Kurnool district has 1858 (hec) of the land under miscellaneous tree crops and groves. The current fallow land is high in Chittoor district followed by Kurnool, Anantapur and Kadapa. The absorption of other fallow land is high in Anantapur that is 209067 (hec) and Chittoor district has 150207 (hec), followed by Kurnool and Kadapa districts. The total land under net area sown high in Anantapur is about 1038980 (hec), then Kurnool district has 917654 (hec), followed by Chittoor and Kadapa districts. The total land under cropped area high in Anantapur district is about 1106371 (hec), followed by the Kurnool, Chittoor and Kadapa districts. The land under sown more than once is high in Kadapa district. The concentration of Fish & Prawn culture is high in Anantapur district, normal in Kadapa district, fewer amounts in Chittoor and Kurnool districts.

1.7 Important findings and Recommendations of the study:

The finding of the study is accompanied by

1. The land competence of the Rayalaseema region has been turned out taking positive variables like cropped area, total irrigated area and net area sown.
2. In the Rayalaseema region, out of the total geographical area majority of the land is under total cropped area followed by net area sown, forest cover, area sown more than once, land under non-agricultural use, other fallow lands, fallow land and under cultivable waste land etc.,
3. The maximum land use is found in Anantapur and Kurnool districts.
4. The dispersion of soil under forest is uneven in the Rayalaseema region.
5. The land under Fish and Prawn culture is very minuscule amount.
6. For any regional improvement, the planners must learn the spatial form of land use pattern for forthcoming developmental activities to be held at local stage and regional level.
7. Expansion of agricultural land with the assistance of technology may cause considerable changes in land use.

1.8 Conclusion:

Land use of any region is the relations of the operation of the entire range of environmental factors which modify by socio-economic and historical elements. The work of land utilization is of huge value in drawing out the best role of land its future course. Entirely done the survey of past land utilization one can be capable to foretell its future function and develop land use planning of a peculiar neighborhood. Thus, systematic regional, intensive and proper function of every tract of soil has become significant.

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