AGRICULTURE DEVELOPMENT IN THE CONTEXT OF DYNAMICS OF LAND USE UNDER GEOGRAPHIC CONDITIONS OF ANDHRA PRADESH

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Abstract

Agricultural advancement signifies the nature of an agricultural framework regarding efficiency; expansion and commercialisation affirming to a condition of agrarian connection and ecological adjust. Agricultural improvement is in this manner an all encompassing idea which perceives the complexity and interestedness’ of various factors impacting the effectiveness of horticulture in a zone. It passes on more thorough and more extensive importance which incorporates changed frameworks, practices, creations and exhibitions of farming. While the term agricultural efficiency is more observational and indicates the genuine execution of land as far as quantum of return of harvest creation per unit of land. Agricultural profitability is the exhaustive and composite record of the total execution of different crops in a zone in connection to their yield per hectare. It indicates the greatest normal physical or fiscal yield per hectare in connection to include under the predominant environmental, financial, innovative and authoritative milieu. Be that as it may, more often than not, such a more extensive and wide importance of agricultural advancement is limited and to the extent to compare it with the level of agricultural efficiency. It is likewise seen that in the vast majority of the investigations, the criteria chose for the estimating’ of agricultural advancement design is neither characterized legitimately nor they depend on any solid reasonable system.

1. CONCEPT OF AGRICULTURAL DEVELOPMENT

An audit of land writing covering agricultural improvement in India uncovers that occasional an endeavor is made to characterize agricultural advancement and to choose criteria in the light of any conceptual structure. It is discovered that the criteria decided for the evaluation of the levels of agricultural improvement are on a liquor premise contingent on comfort of information accessibility. No single endeavor is made to clarify the criticalness of the specific criteria utilized. At the point when contrasted and this concept, a noteworthy spotlight on the concept of agricultural profitability measurement is overwhelming in geographic writing [1]. Onaccount of the estimation of the levels of agricultural advancement, the agricultural factors which were picked shifting starting with one investigation then onto the next examination. investigation of the levels of agricultural improvement of different States in India, picked three essential factors.
to be specific, the development rate of agricultural yield, the utilization of modern contributions
to farming and the per hectare agricultural efficiency. He limited his consideration basically to
the profitability segment for the appraisal of agricultural advancement [2]. The agricultural
advancement ought to be evaluated by the levels of agricultural efficiency as well as with the
assistance of different information sources like water system, composts, enhanced seeds and
degree of developed territory. Territorial incongruities being developed of Andhra Pradesh, he
chose six markers for the agricultural sector, of which two pointers identified with agricultural
yield and the staying four markers identified with water system and cropped territory [3].

The systematic analytical investigation of "Local Disparities in India - A Preliminary
Exploration of the Regional Dimension of Agricultural Development'. Taken 40 indicators of
agricultural advancement assembled into four sub-gatherings of (I) profitability (10 pointers), (ii)
generation condition (17 markers), (iii) agrarian relations (7 markers), and (iv) change in
horticulture (6 pointers). He opined that the most critical and additionally the most troublesome
errand in an activity of this sort of study relates to the selection of markers through which the
procedure of advancement is explained both for reasons for recognizable proof - arrangement -
regionalisation and for investigating easygoing connections and developing logical frameworks.
It is clarified that agricultural efficiency, by a long shot, is the best measure of agricultural
improvement since it speaks to the consolidated exchange of an assortment of components that
vary from territory to region. Be that as it may, due to the non-accessibility of creation
information at taluk level for Tamil Nadu State, they gauged the agricultural improvement by
different pointers (7 markers - power of editing, water system, force of water system, manure
utilization, motorization, precipitation and number of little possessions) which impact the
agricultural efficiency [4].

2. GEOGRAPHICAL PROFILE OF ANDHRA PRADESH

Andhra Pradesh, the present investigation locale lies between the latitudes 12° 37'N and 19° 54'
N and longitudes 76° 46' E and 84° 46' E. It geographically involves the center bit of the eastern
portion of the Indian landmass. The State shapes limit with Orissa, Madhya Pradesh and
Maharashtra on the north; Maharashtra and Karnataka on the west; and Karnataka and Tamil
Nadu on the south; while the Bay of Bengal washes its shores framing a 972 Km traverse along
the drift line on the east. The State has an aggregate geographical region of 275,045 sq.km, and
an aggregate population of 63,354,559 (1991 registration). Based on geology, socio-economic
advancement and politico-historical forerunners, the State is partitioned into three locales, in
particular the Coastal plain, Rayalaseema and Telangana. Authoritatively, the State is isolated
into 23 areas, 1104 mandals [5].
Appropriation of Population

"Men and land are definitive elements of human society with the goal that the quantity of individuals in extent to the measure of land is a key thought". Level extension, vertical increase i.e. [6],

### Table 1 Distribution of Population in Andhra Pradesh - 1991

<table>
<thead>
<tr>
<th>SI. No.</th>
<th>District</th>
<th>Total Population</th>
<th>Population Density per Sq.Km.</th>
<th>% of Rural Population to the total population</th>
<th>% of literates to the total Population</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Srikakulam</td>
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<td>398</td>
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<td>36.22</td>
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<tr>
<td>2</td>
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<td>34.19</td>
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<td>3</td>
<td>Visakhapatnam</td>
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<td>294</td>
<td>60.17</td>
<td>45.51</td>
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<tr>
<td>4</td>
<td>East Godavari</td>
<td>4,541,222</td>
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<td>76.20</td>
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<tr>
<td>5</td>
<td>West Godavari</td>
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<td>454</td>
<td>79.29</td>
<td>53.38</td>
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<tr>
<td>6</td>
<td>Krishna</td>
<td>3,698,833</td>
<td>424</td>
<td>64.18</td>
<td>53.16</td>
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<tr>
<td>7</td>
<td>Guntur</td>
<td>4,106,999</td>
<td>360</td>
<td>71.11</td>
<td>46.35</td>
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<tr>
<td>8</td>
<td>Prakasam</td>
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<td>156</td>
<td>83.55</td>
<td>40.30</td>
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<tr>
<td>9</td>
<td>Nellore</td>
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<td>76.21</td>
<td>47.76</td>
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<td>10</td>
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<td>74.57</td>
<td>46.22</td>
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<td>11</td>
<td>Kurnool</td>
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<td>74.17</td>
<td>39.97</td>
</tr>
<tr>
<td>12</td>
<td>Anantapur</td>
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<td>76.51</td>
<td>42.18</td>
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<tr>
<td>13</td>
<td>Cuddapah</td>
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<td>75.97</td>
<td>48.12</td>
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<tr>
<td>14</td>
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<td>80.20</td>
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<td>15</td>
<td>RAYALASEEMMA</td>
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<td>52.78</td>
<td>49.07</td>
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<td>17</td>
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<td>3,145,939</td>
<td>14,247</td>
<td>00.00</td>
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<td>79.74</td>
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<td>19</td>
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<td>Nalgonda</td>
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<td>200</td>
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<tr>
<td>22</td>
<td>Warangal</td>
<td>2,818,832</td>
<td>219</td>
<td>80.61</td>
<td>39.00</td>
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<tr>
<td>23</td>
<td>Khammam</td>
<td>2,215,809</td>
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<td>79.87</td>
<td>40.50</td>
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<tr>
<td>24</td>
<td>Karim nagar</td>
<td>3,037,486</td>
<td>256</td>
<td>79.45</td>
<td>37.17</td>
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<tr>
<td>25</td>
<td>Adilabad</td>
<td>2,082,479</td>
<td>129</td>
<td>76.88</td>
<td>32.96</td>
</tr>
<tr>
<td>26</td>
<td>TELANGANA</td>
<td>26,089,074</td>
<td>227</td>
<td>69.82</td>
<td>41.29</td>
</tr>
<tr>
<td>27</td>
<td>ANDHRA PRADESH</td>
<td>66,508,008</td>
<td>242</td>
<td>73.11</td>
<td>44.09</td>
</tr>
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</table>
3. SPATIO-TEMPORAL VARIATIONS IN THE DEVELOPMENT OF IRRIGATION

Farming is a multi-dimensional and multi-variable complex and dynamic economic action. As a complex undertaking, agribusiness incorporates the elements like land, soil, water, crops and creatures which are fundamental parts of farming and assume a noteworthy part in deciding economic social and social advance of the man. The ideal utilization of these elements and their possibilities is central to all exchanges of agricultural issues and prospects. A striking development of economic and mechanical advancement has been mounting an expanding and huge weight on powerful and ideal usage of agricultural assets accessible to man. Every one of these endeavors are at last gone for the expansion of gross agricultural creation.

Yield profitability of any district is overall related with the nature of land, soil ripeness and water accessibility. Of these, during the time spent modernisation of agribusiness, the counterfeit use of water to crops where and when the regular precipitation is deficient is turning into a critical mechanical info which guarantees horticulture more profitable and economical and stable. Thus, water system is vital to secure and modernize agribusiness as well as to stretch out farming to the new outskirts to attain independence in agricultural creation and in addition outlines agricultural arranging at local scale.

Requirement for Irrigation in Andhra Pradesh

In Andhra Pradesh, water system assumes an unequivocal part in agricultural advancement because of high variability and deficiency of rainfall. Defensive water system is exceptionally basic to meet the danger of partial disappointment, deferred entry or early withdrawal of the monsoon which frequently cause dry spell and starvation. Notwithstanding amid the monsoon season, water system is important to alleviate the unfriendly impact of short droughts. In perspective of the premium on assist even development of horticulture, water system of land, different editing frameworks and ideal utilization of agricultural land assets are imperative to meet the expanding requests of food for the consistently expanding population. The physico-socio-economic requirement for water system has been very much x'ecognised in the state[7].

Spatio-transient varieties in water system advancement win in Andhra Pradesh because of enhanced landscape, atmosphere, edaphic and hydrological conditions. The regions of high power of water system are for the most part considered to the territories of high agricultural land utilize effectiveness. To have a superior comprehension of the example and sorts of water system, it is basic to recognize and depict the introduction of various water system composes, provincially separate the force of water system and look at the scope of contrasts in territorial appropriation of water system. Such an examination gigantically helps in provincial yield arranging and advancement.
Sources and Development of Irrigation in Andhra Pradesh

The provincial contrasts in water system advancement are normal in the State of Andhra Pradesh because of differentiated alleviation, atmosphere, edaphic and hydrological conditions. Trenches, wells, and tanks are the vital sources and sorts of water system in Andhra Pradesh. Andhra Pradesh has 40 noteworthy, medium and minor river bowls.

the aggregate region of the State, According to the Second Irrigation Commission Report 1972, Andhra Pradesh has a total water system capability of around 10.32 million hectares involving around 6.48 million hectares of surface water under major and medium water system; around 2.02 million hectares under minor water system and around 1.82 million hectares of ground water assets. As against this potential, the gross watered region in Andhra Pradesh in 1996-97 was just 5.78 million hectares representing just 56 per cent of the aggregate water system capability of the State. Hence an expansive extent of the State's water system potential still stays undiscovered.

Among the water system extends in the State, Nagarjunasagar venture on the river Krishna assumes pride of position. Other significant undertakings are the Pochampadu Project on the river Godavari, the Tungabhadra Low and High Level Canals and additionally K.C.Canal (Kurnool-Cuddapah Canal), the Prakasam Barriage at Vijayawada over the river Krishna, the Godavari Barriage at Dowleswaram on the river Godavari, the Kaddam Project on the river Kaddam (a tributary to Godavari) and Vamsadhara Project. Upwards of 54 noteworthy and medium water system ventures have been produced in the State up until now.

Of all the water system extends in the State, Nagarjunasagar Project is the biggest, composed at last to inundate an ayacut of 8.95 lakh hectares in Guntur, Krishna, Nalgonda, Prakasam and Khammam districts. By and by it waters just 7.99 lakh hectares. Pochampadu or Sree Ramsagar Project is the second biggest water system venture in the State intended to flood in its Stage-I a region of 4.11 lakh hectares in Nizamabad, Karimnagar and Warangal districts through 121 km. long waterway viz., South Kakatiya Canal. Notwithstanding, so far a capability of 2.52 lakh hectares just has been made under it. In the Stage-II, the task is required to water extra 0.10 lakh hectares in Khammam, Warangal, Karimnagar, Nizamabad and Adilabad Districts. Godavari Barriage Project which was initially worked by Sir Arthur Cotton and was later rebuilt and floods around 4.05 lakh hectares in East and West Godavari deltaic districts [8].

4. DYNAMICS OF LAND USE IN ANDHRA PRADESH

In Andhra Pradesh where agriculture is the dominating essential financial action of the general population, the utilization of land resources assume a crucial part in deciding the financial and social advance of the general population of the State and builds up the pace of the regional
monetary development. Naturally the investigation of land resources is of vital importance where and when, the resource base of any district is under assessment. The need of the land utilize contemplates is substantially more fundamental especially in the regions where the kind and level of land utilize frame the essence of the regional economy (Ramanaiah and Reddy, 1990). The regularly expanding populace and diminishing man-land proportion on one hand and the land utilize issues like over-use, under-use and mis-use of land resources then again posture testing issues to the organizers and approach producers. Henceforth the procedure of land utilize administration and ideal usage of land resources for the double destinations of monetary development and biological reclamation are getting to be one of thee most complex articulations of human financial movement at display, performed in the circle and range of Man-Environment association. In perspective of the importance of land utilize planning for both regional monetary development and environmental development, land utilize ponder involves a huge place in the investigations of geology of agriculture for discovering regional contrasts in land utilize designs and geographic relationship among land utilize parts.

**Table 2: Dynamics of Spatial Pattern of Crop Regions in Andhra Pradesh**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>District</th>
<th>Primary crop regions</th>
<th>Secondary crop regions</th>
<th>Tertiary crop regions</th>
</tr>
</thead>
</table>
| 1       | Srikakulam | P P G L L | G L L | L
| 2       | Vizianagaram | P P P P | G L L | S S
| 3       | Visakhapatnam | P P P P | G S L | F F
| 4       | East Godavari | P P P P | L L F | F F
| 5       | West Godavari | P P P P | F F S | S S
| 6       | Krishna       | P P P P | L L J | F F
| 7       | Guntur        | P P P P | L L J | G C
| 8       | Prakasam      | J P N L | T T T | T T
| 9       | Nellore       | P P J P | F G G | G G
| 10      | COASTAL ANDHRA | P P L L | J P J | F F
| 11      | Kurnool       | J G N J | G C C | C C
| 12      | Anantapur     | G G N P | J L L | L L
| 13      | Cuddapah      | G G J P | P P P | D D
| 14      | Chittoor      | G G P P | R R S | S S
| 15      | RAYALASEEMA   | G G J P | N N N | N N
| 16      | Ranga Reddy   | - J - L | * P * | D D
| 17      | Hyderabad     | J P L D | P P V | V V
| 18      | Nizamabad     | P P J M | M M M | S S
| 19      | Medak         | J P P L | L L J | J J


Spatial preference for paddy cultivation. Paddy cultivation forms the largest contiguous agricultural region comprising 16 districts. The development of canal irrigation, pliant topographical conditions, fertile alluvial soils in the coastal plains, and the dietary habits of the people of Andhra Pradesh strongly determined the paddy cultivation in an overwhelming spatial dominance in the crop scenario of the State.

- **Groundnut Region**: Groundnut region is the second biggest essential crop region in the State found in four districts. This second biggest touching region spreads the whole Rayalaseema region. This is a rain-shadow region with undulating landscapes, low precipitation conditions, broad red and dark soil cover and sparse water system offices which favors groundnut development.

- **Jowar Region**: Jowar area is the third biggest first-arrange crop locale in the State covering three districts in particular Ranga Reddy, Mahabubnagar and Adilabad. All the three districts have a place with Telangana area where blended red and dark soil cover, low precipitation conditions, undulating landscape and low water system offices and the dietary propensities for Telangana individuals have given fundamental conditions to the development of this crop.

- **Change in the Primary Crop Regions**: In 1973-74 additionally there were three crops engaged with shaping essential crop areas as comparable as in the year 1996-97. In any case, there was a variety in the spatial spread of each crop area. Paddy was the main crop in 1973-74 additionally keeping to 10 districts. Be that as it may, in 1996-97 paddy has been developed as the biggest essential crop locale with 16 districts. With the improvement of water system, paddy development has made a huge pick up in the districts of Medak, Khammam, Warangal, accomplishing a pre-famous place in the crop situation of the State. Jowar was the second biggest driving crop in 1973-74 possessed 8 districts, yet this crop has
lost its ground in 1996-97 and declined to 3 districts just in 1996-97. The changing dietary propensities for the general population, the low per hectare yields of jowar and the advancement of water system and promotion of H.Y.V. farming with paddy as an escalated crop and broad development of groundnut in the dry-farming zones in total decreased the significance of jowar development in the State.

5. CONCLUSION

So it is concluded that land is a fundamental natural resource. It frames the reason for all the organic, human and monetary exercises. In the creating nations like India, when agriculture is the principle wellspring of economy and vocation for more than 66% of the working populace, appropriate usage of land resource is essential. Land utilization of any area is the result of collaboration of the entire scope of ecological factors however adjusted by financial and recorded variables "The shape and capacity of land utilize is a human undertaking, while the development of landscape is the ceaseless endeavors of man for his needs and sustenance under each conceivable mixes of climatic, vegetative and soil conditions.". In this way, land use in a district is perplexing and dynamic. The change of land cover is dependably implied for particular purposes viz., agriculture, field, timberlands, settlement, industry, correspondence, and so forth.

REFERENCES