Regional Disparities among three Regions of Andhra Pradesh (A study on the Backwardness of Rayalaseema Region)

G. Sivaiah*
Chaganti Rami Reddy**
K.V.Amarnath***

ABSTRACT

There are significant differences among the three regions of Andhra Pradesh in terms of physical, meteorological and socio-economic characteristics. To ensure inter-regionally equitable development, several committees and special Regional Development Boards are constituted to suggest and over see the execution of special schemes for the development of backward regions in the state. However, the regional disparities persist even after five decades of economic planning in Andhra Pradesh., An attempt is made in this paper to analyze the backwardness of Rayalaseema region during 1993-04 – 2001-02. It is also attempted to identify the factors retarding the economic progress of the region and to suggest feasible measures to promote the progress and growth of Rayalaseema region.

INTRODUCTION

The population of Rayalaseema region increased marginally indicating limitations of family planning and birth control programmes implemented

The higher proportion of slum population (belonging to weaker sections) to total population in Rayalaseema region indicates that the efforts of the government to provide large scale housing facilities to the weaker sections and to backward regions failed to drive home the desired purpose.

The higher proportion of barren & uncultivable land to geographical area and the share of cultivable wasteland in Rayalaseema indicates the failure of agricultural

Author's Afflation: *Research Fellow (MRP), Department of Economics, **Assistant Professor, Department of Sociology, ***Research Scholar, Department of Sociology, Sri Krishnadevaraya University, Anantapur- A.P.

Reprint's request: Chaganti Rami Reddy, Assistant Professor, Dept. of Sociology, Sri Krishnadevaraya University, Anantapur - 515 055, Mobile No: +91 94417 34834., E-mail: chagantisku@yahoo.co.in.

development programmes in expanding the area under agriculture.

There is a shift in the cropping pattern from non-food crops to food crops. The area under cereals ad millets declined slightly in Rayalaseema, the area under pulses nearly doubled between 1991 and 2001 and the area under oil seeds in Rayalaseema declined.

Allied activities like livestock and dairy development that are intended to provide income and employment opportunities are limited in Rayalaseema and the governmental support to these programmes need to be expanded.

The irrigational facilities in Rayalaseema have been very limited and the efforts of the government to expand the ayacut area under different sources of irrigation did not yield positive results.

The percentage of net area irrigated under tube wells increased significantly. This is dangerous and adversely affects the ecological balance of the region where ground water level is receding fast making the lives of the people miserable. Factories established in Rayalaseema region are smaller in their size and investment and the per unit working capital and productive capital of the factories in Rayalaseema is far less than the rise in other two regions. In spite of liberalization and determined governmental efforts to promote industrial activity, in Rayalaseema has been discouraging as it failed to provide employment opportunities to the surplus workers in agriculture.

Though the number of beds per 000 population declined and the number of doctors per 000 populations remained unchanged in Rayalaseema region which indicates that there is no significant improvement in the medical facilities provided in Rayalaseema region.

Motor vehicles per 000 population remained unchanged in all the three regions... Private motor vehicles per 000 populations in Rayalaseema region decreased

Road length per 000 sq kms has been very low in Rayalaseema and there is no improvement in the transport facilities provided by the government in Rayalaseema region. The rise in the number of population on each bank is more in Rayalaseema region compared to other two regions.

MEASURES TO MITIGATE BACKWARDNESS OF RAYALASEEMA

In view of the persisting backwardness of Rayalaseema the following measures may be implemented to mitigate the distress of the people.

The growth of population is to be checked by implementing the family planning programmes effectively. Schemes are to be executed to promote the living conditions of slum dwellers by intensifying the house construction activity.

Efforts are to be made to bring barren and uncultivable land and cultivable waste lands under cultivation. Watershed programmes are to be modified to enhance their benefits by developing permanent pastures and stabilizing

agriculture under tanks in drought prone region.

Cropping patter maintaining a balance between food and non-food crops has to be encouraged in Rayalaseema region. Allied activities that provide additional employment and income to rural people are to be encouraged.

Sinking of bore wells and deep-wells in drought prone areas is to be abandoned to prevent the depletion of ground water resources. On the other hand, minor irrigation tanks and percolation tanks are to be reconstructed and maintained to preserve the rainwater for the purpose of recharging the wells around.

Under the policy of the government for the development of agriculture special package programmes are to be implemented for the benefit of backward and drought prone areas in the state.

Rationalization of power tariff for agricultural uses through a flexible and accommodative tariff policy rather than a policy of free supply of power to all regions and all farmers is to be implemented for the benefit of drought prone areas.

It is essential to examine the adverse effects of Artificial Rain harvesting projects on the ecological status of drought prone areas in the long run and effect suitable modifications in the implementation of the project to ensure ecological balance in the drought prone areas.

Industrial development programmes need to be expanded and many industrial units are to be established in Rayalaseema by extending concessions, if necessary. Medium and smallscale industries are to be encouraged to provide employment opportunities in the region.

It is common for different regions in a state or a country to differ among them in terms of social, economic and human development. Myriad of factors - natural, political and administrative factors contribute for regional inequalities or disparities. Infact the root cause for regional inequalities can be traced to the inter-regional inequalities in resource endowment - physical and human resources,

and their use for economic development. Economic planning in India and Andhra Pradesh has been aiming at rapid economic growth. Further, reducing regional inequalities or ensuring regional balance has been one of the major concerns of economic planning.

Andhra Pradesh state comprises of three natural sub-divisions namely Coastal Andhra, Telengana and Rayalaseema. There are significant differences among these three regions in terms of physical, meteorological and socio-economic characteristics. Realizing these regional disparities Government of Andhra Pradesh has designed implemented a host of special schemes and programmers for the development of backward regions of Telangana and Rayalaseema. To ensure inter-regionally equitable development, several committees and special Regional Development Boards are constituted to suggest and over see the execution of special schemes for the development of backward regions in the state.

However, the Governmental efforts to redress the grievances of backward regions in the state failed to narrow down the interregional inequalities at a desired rate and hence the regional disparities persist even after five decades of economic planning in Andhra Pradesh state. Infact, the regional disparities in terms of Industrial progress, employment opportunities, apart from political domination, have formed the basis for the demand for the disintegration of Andhra Pradesh state.

PURPOSE OF THE STUDY

In this context, an attempt is made in this paper to analyse the imbalance or backwardness of Rayalaseema region in terms of agriculture, irrigation, industrial and infrastructural status. The periods of 1994-95 and 2001-02 are selected for the purpose of analysis of regional status. Further, it also attempts to identify the factors retarding the economic progress of the region and to suggest feasible measures to promote the progress and growth of Rayalaseema region.

RAYALASEEMA REGION

Rayalaseema region consists of four districts, Coastal Andhra region consists of nine districts and Telangana region consists of 10 of the 23 districts of Andhra Pradesh state. The demographic profile of Rayalaseema region during 1991-2001 is presented in Table: I. Rayalaseema region accounts for one-fourth, Coastal Andhra region accounts for one-third and Telangana accounts for nearly 42.00 percent of the total geographical area of Andhra Pradesh. According to 2001 census 17.73 percent of the state's population live in Rayalaseema region while the remaining population is distributed equally between the other two regions. Between 1991 and 2001 the population of Coastal Andhra Region declined by a little more than 2.00 percent, the population of Rayalaseema region increased marginally. This indicates that the family planning and birth control programmes have been implemented effectively in Coastal Andhra Region compared to other two regions in the state.

The proportion of slum population (belonging to weaker sections) to total population in Rayalaseema region (6.57) is more than that in Coastal Andhra region (5.80) in 2001. The share of census houses in Rayalaseema region to the total houses in the state corresponds to the share of its population to state's population (17.50 percent) while it exceeds in Coastal Andhra region and falls short in Telangana region during 1991-2001. The relative shares of census houses to total houses in the state in all the regions remained unchanged during the decade. This indicates that the efforts of the government to provide large scale housing facilities to the weaker sections and to backward regions failed to drive home the desired purpose. The density of population per sq km is 200 in Rayalaseema region, 341 in Coastal Andhra region and 268 in Telangana region in 2001. The percentage of female population to total population increased marginally in Rayalaseema, decreased marginally in Telangana region and remained constant in Coastal Andhra region during 1991-2001. On the other hand, the

proportion of rural population to total population in all the three regions remained more or less the same between census years.

There is a significant rise in the percentage of literates to total population between 1991 and 2001 in all the three regions. However, nearly one half of the total females are literates in Coastal Andhra region while 42.00 percent of the females are literates in the other two regions. On the other hand there is a significant decline in the share of main workers to total population in all the three regions during 1991-01. In 2001 the proportion of main workers to total population in Rayalaseema and Telangana regions is less than 40.00 percent and it is 42.00 percent in Coastal Andhra region. The proportion of non-workers to total population registered a marginal fall in all the three regions. Infact, the proportion of non-workers in Rayalaseema region (52.22) is less than that of other two regions. This indicates that many non-workers are forced to find work to earn their bread in the drought prone Rayalaseema region. It is also noticed that nearly 8.00 percent of the total population all the three regions are marginal workers in 2001.

STATUS OF AGRICULTURE IN RAYALASEEMA REGION

The details relating to land utilization, area under crops, livestock population etc in Rayalaseema region is shown in Table: II. A little more than one fifth of the geographical area of Rayalaseema region is under forests during the last decade. The proportion of barren & uncultivable land to geographical area has been highest in Rayalaseema region and increased marginally during 1991-2001 indicating the backwardness of the region. Higher share of cultivable wasteland in Rayalaseema indicates the failure of agricultural development programmes in expanding the area under agriculture. On the other hand, low proportion of land under permanent pastures in Rayalaseema region indicates the limitations of watershed programmes implemented in the region.

The percentage of net area sown to the geographical area in Rayalaseema region during 1993-2002 is 49.00. The area under food crops showed an improvement and that of non-food crops showed a slump in Rayalaseema region during the decade. This indicates a shift in the cropping pattern from non-food crops to food crops. A closer look at the area under different crops reveals that the area under cereals ad millets declined slightly in Rayalaseema and the area under pulses nearly doubled between 1991 and 2001. It is interesting to note that the area under oil seeds in Rayalaseema declined by 2.00 percent during this decade.

The import policy of the government permitting the import of palm oil added to the miseries of groundnut farmers leading to a steep fall in the demand for groundnut... The Bio-technology Department has been implementing 15 programmes for the development of agriculture covering several crops in Andhra Pradesh. Unfortunately, groundnut crop failed to find a place in the package of crops for development by Biotechnology Department. The National Oil Seeds and Oil Development Corporation implemented programmes covering a set of crops raised in some district except in Anantapur, the lead district in the production of groundnut in the state.

Livestock and dairying are the allied activities that provide additional income and employment to the rural people in backward areas. The livestock population in Rayalaseema region is far less than that of the same in other two regions. Infact, it is les than one half of the livestock population of Telangana region in 2001. Similarly, the poultry population in Rayalaseema region is less than one third of the Poultry population in the other two regions of the state. All this indicates that the allied activities that are intended to provide income and employment opportunities are limited in Rayalaseema and the governmental support to these programmes need to be expanded.

Table I: Demographic profile of Rayalaseema region

		Coastal	Andhra	ra Telangana		Rayalaseema	
S.	Details						
N		1991	2001	1991	2001	1991	2001
1	Geographical Area 000 Sq Km	92.80	92.80	114.80	114.80	67.40	67.40
2	Percentage to state Area	33.74	33.74	41.74	41.74	24.52	24.52
3	Population (lakhs)	287.33	316.45	260.89	309.73	116.86	134.93
4	Percentage to State population	43.20	41.58	39.22	40.69	17.57	17.73
5	Density of population per sq km	309	341	227	269	174	200
6	No of Census houses (lakhs)	61.60	75.97	49.84	61.29	23.30	29.06
7	Percentage to State total houses	45.71	45.68	36.99	36.85	17.29	17.47
8	Females per 1000 males	984	990	967	971	955	970
9	Female population (lakhs)	142.52 (49.60)	157.30 (49.71)	132.66 (50.85)	152.49 (49.23)	57.09 (48.85)	66.41 (49.22)
10	Rural population (lakhs)	214.27 (74.57)	238.30 (75.30)	182.15 (69.82)	211.05 (68.14)	89.79 (76.83)	103.62 (76.80)
11	Slum population (lakhs)		18.35 (5.80)		36.32 (11.73)		8.86 (6.57)
12	Literate population (lakhs)	112.00 38.98	178.46 (56.39)	88.96 (34.10)	159.35 (51.45)	43.91 (27.57)	70.94 (52.58)
13	Percentage of female literates	36.61	49.35	29.21	41.91	30.08	41.74
14	Main Workers (lakhs)	121.54 (42.30)	118.50 (37.45)	112.51 (42.12)	117.93 (38.08)	50.41 (43.12)	53.58 (39.70)
15	Marginal Workers (lakhs)		25.17 (7.95)		22.84 (7.26)		10.94 (7.96)
16	Non-Workers (lakhs)	158.53 (55.17)	72.68 (54.57)	143.54 (55.10)	169.25 (54.64)	63.37 (54.27)	70.53 (52.22)

(Figures in lakh hectares)Note: Figures in the brackets indicate percentage to their respective totals., Source: Directorate of Economics & Statistics, Govt. of A.P., Statistical Abstract of Andhra Pradesh, 2003, Hyderabad.

STATUS OF IRRIGATIONAL FACILITIES IN RAYALASEEMA REGION

The status of irrigation facilities in Rayalaseema region between 1994-95 and 2001-02 is presented in Table: III. The gross area irrigated in Rayalaseema in 2001-02 is less than 7.89 percent of its geographical area while it is 21.00 percent in Telangana and 27.37 percent in Coastal Andhra region. Area irrigated more than once in Rayalaseema

region is 1.52 percent of its geographical area as against 5.04 percent in Telangana and 7.07 percent in Coastal Andhra region in 2001-02. This shows that the irrigational facilities in Rayalaseema have been very limited the efforts of the government to expand the ayacut area under different sources of irrigation did not yield positive results.

An enquiry into the area irrigated under different sources in Rayalaseema reveals interesting facts. Net area irrigated under canals in Rayalaseema declined from 22.90 percent in 1994-95 to 17.45 percent in 2001-

Table II: Status of Agriculture in Rayalaseema region

S.	Details	Coastal Andhra		Telangana		Rayalaseema	
N.	Details	1994-95	2001-02	1994-95	2001-02	1994-95	2001-02
1	Geographical area	92.55	92.55	114.49	114.49	67.22	67.22
2	Forests	19.82 (21.42)	19.82 (21.42)	27.91 (24.37)	27.45 (23.98)	14.72 (21.90)	14.72 (21.90)
3	Barren & uncultivable land	8.34 (9.01)	7.88 (8.52)	5.53 (4.83)	5.97 (5.21)	6.78 (10.09)	6.99 (10.39)
4	Cultivable waste	3.09 (3.34)	2.61 (2.82)	1.95 (1.70)	2.16 (1.89)	2.76 (4.08)	2.23 (3.31)
5	Permanent Pastures	2.78 (3.00)	2.51 (2.71)	3.98 (3.48)	3.46 (3.02)	0.80 (1.18)	0.80 (1.18)
6	Net Area sown	38.45 (40.32)	37.73 (40.77)	38.83 (33.92)	40.82 (35.66)	26.56 (39.51)	26.69 (39.70)
7	Area under food crops	41.20 (44.52)	40.99 (44.28)	(27.43)	33.99 (29.69)	10.06 (14.97)	11.46 (17.04)
8	Area under non- food crops	12.41 (13.40)	9.59 (10.36)	13.80 (12.05)	14.02 (12.25)	18.96 (28.21)	17.52 (26.06)
9	Area under cereals & millets	26.12 (28.22)	23.81 (25.73)	21.39 (18.68)	22.50 (19.66)	5.27 (7.84)	5.05 (7.52)
10	Area under pulses	7.76 (8.38)	8.98 (9.70)	6.37 (5.56)	7.14 (6.23)	1.88 (2.80)	3.08 (4.58)
11	Area under oil seeds	5.55 (6.00)	3.63 (3.93)	8.92 (7.79)	6.13 (5.35)	17.45 (25.96)	15.80 (23.50)
12	Livestock population (lakhs)	110.63	121.78	152.86	164.18	65.61	74.15
13	Poultry population (lakhs)	221.61	301.43	207.32	254.22	69.91	78.30

(Figures in lakh hectares), Note: Figures in the brackets indicate percentage to net area irrigated., Source: Directorate of Economics & Statistics, Govt. of A.P., Statistical Abstract of Andhra Pradesh, 2003, Hyderabad.

Table III: Status Irrigation in Rayalaseema region

		Coastal Andhra		Telangana		Rayalaseema	
S.	Details						
N		1994-95	2001-02	1994-95	2001-02	1994-95	2001-02
1	Area irrigated more than once	7.03	6.54	3.89	5.04	1.32	1.52
2	Percentage to geographical area	7.60	7.07	3.40	4.41	1.96	2.27
3	Gross area irrigated	28.78	27.31	16.49	20.28	6.57	7.89
4	Percentage to geographical area	31.10	29.51	14.40	17.72	9.77	11.74
5	Net area irrigated	21.75	20.77	12.60	15.24	5.24	6.37
6	Percentage to geographical area	23.50	22.44	11.01	13.31	7.80	9.47
7	Net area irrigated under canals	12.54 (57.66)	12.00 (57.77)	2.31 (18.33)	2.48 (16.17)	1.20 (22.90)	1.11 (17.45)
8	Net area irrigated under Tanks	4.18 (19.21)	2.96 (14.25)	2.18 (17.30)	1.93 (1258)	0.55 (10.50)	0.78 (12.24)
9	Net area irrigated under Tube wells	2.72 (12.51)	3.46 (16.66)	2.08 (16.51)	4.86 (31.68)	1.19 (22.71)	2.84 (44.58)
10	Net area irrigated under other wells	1.20 (5.51)	1.16 (5.58)	5.41 (42.94)	5.45 (35.53)	2.19 (41.79)	1.50 (23.55)
11	Net area irrigated under other sources	1.10 (5.06)	1.15 (5.54)	0.64 (4.692)	0.52 (3.39)	0.10 (1.19)	0.13 (2.04)

(Figures in lakh hectares), Note: Figures in the brackets indicate percentage to their respective totals., Source: Directorate of Economics & Statistics, Govt. of A.P, Statistical Abstract of Andhra Pradesh, 2003, Hyderabad.

Table IV: Industrial status in Rayalaseema region

		Coastal Andhra Telangana		Telangana		Rayalaseema	
S.	Details						
N		1993-94	2001-02	1993-94	2001-02	1993-94	2001-02
1	No. of registered factories	5657	5912	10093	4992	1899	2259
2	Fixed Capital (Rs. in lakhs)	11130	14050	4160	10720	690	2550
3	Per unit fixed capital (Rs in lakhs)	196.74	237.44	41.22	214.72	36.33	112.88
4	Working Capital (Rs. in lakhs)	910	170	2020	4400	260	460
5	Per unit working capital (Rs in lakhs)	16.08	28.71	20.01	88.14	13.69	20.36
6	Productive Capital (Rs. in lakhs)	10150	16180	6190	13260	950	2710
7	Per unit productive capital (Rs in lakhs)	179.42	273.68	61.33	265.62	50.03	119.97
8	No. of Workers	215512	203131	476332	522660	55780	44731
9	Per unit workers	38	34	47	105	29	20
10	No. of employees	270164	254793	556182	598337	68793	57225
11	Per unit employees	48	43	55	120	36	25

Note: Figures in the brackets indicate Number per 000 population., Source: Directorate of Economics & Statistics, Govt. of A.P, Statistical Abstract of Andhra Pradesh, 2003, Hyderabad.

Table V: Status of Infrastructural facilities in Rayalaseema region

		Coastal Andhra		Telangana		Rayalaseema	
S.	Details						
N		1993-94	2001-02	1993-94	2001-02	1993-94	2001-02
1	No. of hospitals &	827	875	746	794	378	408
	dispensaries	(3)	(3)	(3)	(3)	(3)	(3)
2	Number of beds	12905	13522	15132	16750	5758	6194
		(42)	(43)	(58)	(54)	(49)	(46)
3	Number of doctors	2961	3680	3236	3843	1337	1906
		(10)	(12)	(12)	(12)	(11)	(12)
4	No. of motor vehicles	6015	7079	6823	8316	3154	3927
	APSRTC	(21)	(22)	(26)	(26)	(27)	(27)
5	No of motor vehicles	1178	1235	342	293	888	854
	Private	(4)	(4)	(1)	(1)	(8)	(6)
6	Number of post-	6644	6655	5866	5868	3683	3688
	offices	(23)	(21)	(22)	(19)	(32)	(27)
7	No. of telephone	820	1202	749	1182	469	619
	exchanges	(3)	(4)	(3)	(4)	(4)	(4)
8	Number of bank offices	2101	2296	1900	2178	777	848
9	Population per bank office	14000	14444	15000	15400	16000	16250
10	Black top road length (PR) Kms	3374	4587	1057	5729	569	1689
11	Road length per 000 Sq. Km (in km)	0.36	0.49	5729	0.59	0.004	0.25

Note: Figures in the brackets indicate Number per 000 population.

Source: Directorate of Economics & Statistics, Govt. of A.P., Statistical Abstract of Andhra Pradesh, 2003, Hyderabad.

02. On the other hand the percentage of net area irrigated under tube wells increased significantly from 22.71 to 41.58 during 1994-2002. This is dangerous and adversely affects the ecological balance of the region where ground water level is receding fast making the lives of the people miserable. Governmental policy to provide loans and subsidy to deepening of the old wells and sinking of new wells in this drought prone area resulted in sinking of tube wells for irrigation and contributed to the depletion of ground water level in the region. Perhaps, this is the reason for the increase in the gross area irrigated and net area irrigated in Rayalaseema region during 1994-2003. Infact, well irrigation in drought prone areas is a luxury and sinking of tube wells is to be discouraged firmly.

STATUS OF INDUSTRIAL PROGRESS IN RAYALASEEMA REGION

The number of registered factories, fixed capital, working capital, productive capital, workers and employees working in the industrial units in Rayalaseema during 1993-94 - 2001-2002 are presented in Table: IV. It is found that more than one half of the total registered factories in the State are located in Telangana region and only 11.00 percent of the factories in the state are established in Rayalaseema region in 1993-94. It is interesting to know that the percentage of factories in coastal Andhra region increased significantly by 2001-2002 while the share of Telangana declined remarkably. However, the percentage of factories in Rayalaseema region to state's total showed a small rise by 4.00 percent. This is perhaps due to the constant and strong demand for a separate statehood for Telangana region.

Similarly there is a shift in the growth of fixed capital invested in these factories. The per unit fixed capital invested in the factories works out to Rs. 214.70 lakhs in Telangana region, Rs. 196,74 lakhs in Coastal Andhra region and Rs. 122.88 lakhs in Rayalaseema. This indicates that the factories established in Rayalaseema region are smaller in their size and investment. Though the per unit working

capital of the factories showed an increase between 1993-93 and 2001-2002 the rise in the working capital in Rayalaseema is far less than the rise in other two regions. Per unit productive capital works out to Rs.273.88 lakhs in Coastal Andhra region, Rs 265.62 lakhs in Telangana region and Rs 119.97 lakhs in Rayalaseema region. It reveals that the per unit productive capital in the factories of Rayalaseema region is less than one half of the per unit productive capital in the other two regions.

It is noted that the average number of workers in each of the factories in Rayalaseema and coastal Andhra region showed a decline while it increased in Telangana region. In fact, the average number of workers in each factory in Rayalaseema regions is 20, in Coastal Andhra it is 3 4 and in Telangana region it is 105 in 2001-2002. The trend in terms of average employment in each factory is the same for all the regions. All this indicates that the industrial progress, in spite liberalization and determined governmental efforts to promote industrial activity, in Rayalaseema has been discouraging as it failed to provide employment opportunities to the surplus workers in agriculture.

STATUS OF INFRASTRUCTURAL FACILITIES IN RAYALASEEMA REGION

The details relating to some of the Infrastructural facilities available in Rayalaseema region during 1994-2002 are shown in Table: V. The number of hospitals showed in increasing trend and their number per 000 population has been 3 in all the three regions during 1994-2002. Number of beds per 000 population remained constant in Coastal Andhra region and declined in the other two regions during this period. However, the rate of decline in Rayalaseema is more than that of Telangana region. The number of doctors per 000 populations increased in Coastal Andhra and Rayalaseema regions and remained unchanged in Telangana region. All this indicates that there is no significant

improvement in the medical facilities provided in Rayalaseema region.

The number of APSRTC motor vehicles on road showed an increasing trend in all the regions during 1994-2002. But, motor vehicles per 000 population remained unchanged in all the three regions. The number of private motor vehicles on road increased in Coastal Andhra region while it declined in other two regions. Private motor vehicles per 000 population in Rayalaseema region decreased while it remained constant in other two regions during the period under review. Though, the length of black top roads (Panchayat raj) increased significantly in all the three regions, road length per 000 sq kms has been very low in Rayalaseema and in fact it has been less than one half of the road length in other two regions. This shows that there is no improvement in the transport facilities provided by the government in Rayalaseema region.

The number of post offices serving 000 population declined in all the three regions during the period under review. This is perhaps, due to the expansion of private courier services. There is no change in the number of telephone exchanges serving 000 population is 4 in all the three regions of the state. Though, there has been a rise in the number of bank offices, the average population per bank office also increased in all the three regions. However, the rise in the number of population on each bank is more in Rayalaseema region compared to other two regions. From this it is clear that the Infrastructural facilities provided in Rayalaseema region have been highly inadequate.

FINDINGS AND SUGGESTIONS

Between 1991 and 2001 the population of Rayalaseema region increased marginally. This indicates that the family planning and birth control programmes have been implemented effectively in Coastal Andhra Region compared to other two regions in the state.

The proportion of slum population (belonging to weaker sections) to total population in Rayalaseema region is more than that in Coastal Andhra region and the relative shares of census houses to total houses in the state in all the regions remained unchanged during the decade. This indicates that the efforts of the government to provide large scale housing facilities to the weaker sections and to backward regions failed to drive home the desired purpose.

The proportion of barren & uncultivable land to geographical area has been highest in Rayalaseema region and increased marginally during 1991-01 indicating the backwardness of the region. Higher share of cultivable wasteland in Rayalaseema indicates the failure of agricultural development programmes in expanding the area under agriculture. On the other hand, low proportion of land under permanent pastures in Rayalaseema region indicates the limitations of watershed programmes implemented in the region.

The area under food crops showed an improvement and that of non-food crops showed a slump in Rayalaseema region during the decade. This indicates a shift in the cropping pattern from non-food crops to food crops. The area under cereals ad millets declined slightly in Rayalaseema, the area under pulses nearly doubled between 1991 and 2001 and the area under oil seeds in Rayalaseema declined.

The livestock population in Rayalaseema region is far less than that of the same in other two regions. Similarly, the poultry population in Rayalaseema region is less than one third of the Poultry population in the other two regions of the state. All this indicates that the allied activities that are intended to provide income and employment opportunities are limited in Rayalaseema and the governmental support to these programmes need to be expanded.

The gross area irrigated in Rayalaseema in 2001-02 to its geographical area is than that of the other regions and the area irrigated more than once in Rayalaseema region is 1.52 percent of its geographical area. This shows that the irrigational facilities in Rayalaseema

have been very limited the efforts of the government to expand the ayacut area under different sources of irrigation did not yield positive results.

Net area irrigated under canals in Rayalaseema declined and the percentage of net area irrigated under tube wells increased significantly. This is dangerous and adversely affects the ecological balance of the region where ground water level is receding fast making the lives of the people miserable.

Factories established in Rayalaseema region are smaller in their size and investment. Though the per unit working capital of the factories showed an increase the rise in the working capital in Rayalaseema is far less than the rise in other two regions. Further, the per unit productive capital in the factories of Rayalaseema region is less than one half of the per unit productive capital in the other two regions. Inspite of liberalization and determined governmental efforts to promote industrial activity, in Rayalaseema has been discouraging as it failed to provide employment opportunities to the surplus workers in agriculture.

Though the number of beds per 000 population declined in all regions the rate of decline in Rayalaseema is more than that of Telangana region. The number of doctors per 000 population remained unchanged in Rayalaseema region and this indicates that there is no significant improvement in the medical facilities provided in Rayalaseema region.

Motor vehicles per 000 population remained unchanged in all the three regions. The number of private motor vehicles on road increased in Coastal Andhra region while it declined in other two regions. Private motor vehicles per 000 population in Rayalaseema region decreased

Road length per 000 sq kms has been very low in Rayalaseema and there is no improvement in the transport facilities provided by the government in Rayalaseema region. The rise in the number of population on each bank is more in Rayalaseema region compared to other two regions.

MEASURES TO MITIGATE BACKWARDNESS OF RAYALASEEMA

In view of the persisting backwardness of Rayalaseema the following measures may be implemented to mitigate the distress of the people.

The growth of population is to be checked by implementing the family planning programmes effectively. Schemes are to be executed to promote the living conditions of slum dwellers by intensifying the house construction activity.

Efforts are to be made to bring barren and uncultivable land and cultivable waste lands under cultivation. Watershed programmes are to be modified to enhance their benefits by developing permanent pastures and stabilizing agriculture under tanks in drought prone region.

Cropping patter maintaining a balance between food and non-food crops has to be encouraged in Rayalaseema region. Allied activities that provide additional employment and income to rural people are to be encouraged.

Sinking of bore wells and deep-wells in drought prone areas is to be abandoned to prevent the depletion of ground water resources. On the other hand, minor irrigation tanks and percolation tanks are to be reconstructed and maintained to preserve the rainwater for the purpose of recharging the wells around. Drip irrigation under the watershed programme with reasonable subsidy is to be encouraged for the benefit of orchard garden growers.

In the wake of World Trade Organization stipulations Government of India have to enforce the anti-dumping measures to protect the demand for Indian agricultural products It is most urgent to mitigate the effects of globalisation by cutting down the import of palm oil on a large scale. Blue box measures are to be made use of fully by the government to enhance financial support to the agriculture sector.

For the benefit of farmers in drought prone areas groundnut prices are to be made more

remunerative through price support measures. Crop insurance measures are to be extended to the groundnut farmers to save them from distress.

Excessive use of fertilizers and pesticides are to be discouraged to reduce the cost of cultivation in drought prone areas. Supply of quality seeds to the farmers by the Department of Agriculture is to be ensured to prevent farmers' distress. Budget allocations to agriculture are to be enhanced to benefit the farmers in backward and drought prone areas. Low rate bank credit to farmers is to be enhanced to farmers to save them from the exploitation of middlemen.

Under the policy of the government for the development of agriculture special package programmes are to be implemented for the benefit of backward and drought prone areas in the state.

Rationalization of power tariff for agricultural uses through a flexible and accommodative tariff policy rather than a policy of free supply of power to all regions and all farmers is to be implemented for the benefit of drought prone areas. Revenues realized by implementing a rational power tariff policy may be utilized for the development of agriculture in backward and drought prone areas.

It is essential to examine the adverse effects of Artificial Rain harvesting projects on the ecological status of drought prone areas in the long run and effect suitable modifications in the implementation of the project to ensure ecological balance in the drought prone areas.

Industrial development programmes need to be expanded and many industrial units are to be established in Rayalaseema by extending concessions, if necessary. Medium and small-scale industries are to be encouraged to provide employment opportunities in the region.

REFERENCES

- Government of India, Ministry of Rural Development, Guidelines for watershed development, 1994.
- 2. International Monetary Fund and World Bank, Finance and Development, 1993.
- 3. Yojana, 1989; 33(14 & 15).
- 4. Forum of free enterprise, India's ecological heritage and sustainable development.
- 5. Bhalla, G.S. and Alagh, Y.K. Performance of Indian Agriculture, 1970.
- 6. Papadakis, J, Agricultural potentialities of world climate, 1970.
- 7. Subrahmanyam, V.P & Subrahmanyam, A.R. Application of water balance concept for climate study or drought prone areas, 1064.
- 8. Alfred, F.R. and Chen, Evaluating irritation needs in humid areas, 1993.