International Journal of Academic Research
ISSN: 2348-7666 Vol.2, Issue-3(5), July-September, 2015
Impact Factor: 1.855

Inclusion of Excusive Lands in AP–The Ways and Means

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Abstract: This paper concentrated on the level of land diversification for various purposes and identify the extension of non-irrigated land of rain fed area, sown area with single crop, wasteland, forest, fallow land and rain fall position which extends the dry land to find out the position of increase in dry land in the state. Further, diversification of cropping pattern due to change in land use is also stressed. To take account of the dry land, very few quantitative and qualitative measures have discusses. Obviously, the major aim of this paper is- to include the excluded lands for different agricultural produce by various measures. To more successive and extension of agriculture in dry lands , A model for inclusive the exclusive lands, need of rehabilitation of land development programme, special area programmes to inclusive the lands in to productive manner again, Waste land development and People's Participation and role of government in this regard is stressed.

Keywords: diversification, population ,explosion

Introduction

The general problem of India and the state of Andhra Pradesh is population explosion and declining of cultivable land. Land has been a stock of renewable resources and a source for human survival as well as improving the quality of human life. Since it has competing demand and multiple uses the rate of land degradation far exceeds its natural rate of regeneration that the degraded land is not naturally replaced within a human life time resulting in loss of opportunities for the next generation. Due to inelastic supply of land to the state and multi-use of land like industrial establishment, housing Road and transport, land for recreational activity facilities, construction of dams etc reducing the cultivable land and supply of food production. On the other side, unfavorable climate conditions lead to extension dry land. In these conditions systematic use of available land is essential to reach required foodgrains and other items. Keeping this in mind, the present paper is attempted to analyze the need of use of inclusion of excusive lands in the state of AP.

Procedure of the study: This paper concentrated on the level of land diversification for various purposes and identify the extension of non-irrigated land of rain fed area, sown area with single crop, wasteland, forest, fallow land and rain fall position which extends the dry land to find out the position of increase in dry land in the state. Further, diversification of cropping pattern due to change in land use is also stressed. To take account of the dry land, very few quantitative and qualitative measures have discusses. Obviously, the major aim of this paper is- to include the excluded lands for different agricultural produce by various measures.

The trends in level of inclusive & exclusive lands in AP

Theoretically, exclusive lands are noting but the rain fed area of agriculture and land that not in present use due to lack of rain (fallow lands), forests, barren land etc. waste land means vast tracts of the lands degraded of cultivation but can

be brought under plough with some efforts. Hence these lands is regarded as a powerful tool and attacking the issues of poverty and backwardness.

Realizing the potential of drylands/un-irrigated/exclusive lands is by no means a simple task. Spread over nearly half of the country, the drylands cover cold arid regions, hot deserts, hilly and undulating uplands, forest areas, plateaus, ravines and coastal and non-coastal saline areas. They are the home to 43 percent of our population. Water availability, soil conditions and the length of the growing season show wide variations here. Nine states (Rajasthan, Madhya Pradesh, Maharashtra, Gujarat, Chhatisgarh, Jharkhand, Andhra Pradesh (Interior AP- Telangana): Semi-arid region with 600 Â– 1000 mm rainfall, red and black soils), Karnataka and Tamil Nadu) account for over 80% of the drylands. Annual rainfall in the drylands varies from less than 150 mm to 1600 mm. Soils vary from shallow skeletal soils of the deserts to medium to deep black soils.

The pattern of exclusive lands in the state is shown in table -1 during different years.

Trends in the *Area of Inclusive lands*

The state of AP possessed 27440049 hectares of land.. About 23 percent area is covered with Forests out of 274.40 lakh hectare total Geographical area of the State and the Net area sown was accounted for to 38.35 percent. Of the total, the net irrigated/ Net Area Shown (NAS) during the period 1997-98 to 2007-08 varied from 36.20 percent in1997-98 to 40.89 percent in 2007-08The total cropped area was about 46.49 percent of the total area. The growth rate of total cropped area has fluctuated from -5.54 percent to 6.74 percent.

Trends in the growth of exclusive lands

The change in the area rather than the irrigated / net shown area is shown as exclusive land growth. It is identified from the table that the growth of forest area has increased 0.18 percent in 2005-06. Cultivable waste lands reduced to 0.43 percent in 2006-07, land put to non-agricultural uses increased to 2.69 percent. Miscellaneous tree crops and graves not included in NAS has fallen to -4.18 percent in 2007-08 and the current fallow lands and other fallow lands growth has declined to minus level in 2007-08 compared to the previous year. It indicates that the efforts to wards development of waste lands in to different purposes have been increasing in the state. The use of dry land for various non-paddy crops is attained in the state

4. Efforts to Inclusive the exclusive lands by Crop Diversification:

The state government has prepared a strategy for improving the production and productivity of major crops while conserving and optimizing the scarce groundwater resource and proposed to encourage farmers growing paddy under well irrigation to go for alternative crops for which, as an incentive, seeds have been provided at 50 percent cost.

Table- 1 trends in percentage growth of inclusive and exclusive lands in AP
(Area in hectares)

Sl. No	Category	1998-1999	1999-2000	2000-2001	2001-2002	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
1.	Forests	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0
2.	Barren and Un-culturable	0.0	-0.10	-0.30	0.0	0.0	0.0	0.0	0.68	-1.83
3.	Land put to Non-Agrl Uses	0.05	0.58	0.28	1.27	1.76	2.69	-0.95	-0.99	1.78
4.	Cultivable Waste	2.93	0.90	-6.79	-3.86	0.03	-0.01	-0.29	0.43	-5.19
5.	Permanent Pastures and other Grazing Lands	-1.01	-0.58	1.03	0.5	0.0	0.0	0.0	-10.91	-5.19
6.	Miscellaneous Tree Crops and Groves not included in NAS	-2.03	0.83	10.70	2.97	-0.06	0.28	-0.05	15.25	-4.18
7.	Current Fallows	-31.24	18.35	-11.26	0.43	0.93	-7.15	-13.66	30.07	-36.13
8.	Other Fallow Lands	-5.68	-4.97	-2.41	0.28	16.68	-0.42	1.70	-2.63	-5.24
9.	Net Area Sown(NAS)	11.49	-3.34	4.82	6.20	-3.23	2.13	3.90	-5.54	5.91
10.	Total Cropped Area	13.06	-4.40	4.70	-6.56	-3.57	1.24	6.74	-4.13	5.91
11.	Area sown more than	15.64	-8.84	0.75	-3.46	-4.22	-2.54	1.44	1.86	5.52
12.	Total Geographical	27440049 hectares								

Note: Net Area Sown including Fish culture for the year 1999-2000 to 2001-02
Source: Directorate of Economics and Statistics, Andhra Pradesh.

Encouragement is also being given for diversification from cotton crop under chalka soil. Promoting mixed farming by encouraging horticulture crops, vegetable cultivation, dairying and poultry etc., is another strategy being adopted by the state government to enable crop diversification.

Andhra Pradesh is the second largest producer of horticulture produce with 1.24 million ha area under horticulture cultivation. The State produces over 9.57 million tonnes of fruits, vegetables and spices and has set a target to produce 22.90 million tonnes by the year 2020. The state ranks first in production of Mango, Citrus, Chillies,

Turmeric, and Oil palm, in the country; second in production of coriander; third in cashew, Sapota and sunflower. It is also one of the major producers of coconut.

Greening Dryland through Agro-forestry

The project started in 2005 and implemented in 2 villages in Mahabubnagar district till December 2007. BIRD-AP was the resource agency for this project supported by Agriculture Man Ecology Foundation. As many as 153 participants consisted of farmers; village youths and development functionaries have been trained in various aspects of natural resource management and livestock development. Increase in forest area as social forestry with fruits and other valuable plantations is another step of inclusive excluded lands. These efforts lead to increase the share of nonfood items in AP. The table-2 gives the information in respect of Area under Food and Non-Food Crops from 1997-98 to 2007-08. Of the 127.56 lakh hectares of total cropped area, 67.76 percent was under Food crops and 32.24 percent was under Non-Food crops during 2001-02. The area under food & Non-food crops was decreased by about 5.8 percent during 2001-02 over 2000-01. It is 67.11 percent and 32.89 percent in 2007-08.

Table- 2 Area under Food and Non-Food Crops (In hectares)

Year	Food	Non-food	Total
1997-98	79,89,921	41,44,990	1,21,34,911
1998-99	89,61,004	46,63,667	1,36,24,671
1999-2000	87,62,809	42,60,229	1,30,23,038
2000-01	92,95,455	42,49,808	1,35,45,263
2001-02	86,43,424	41,12,935	1,27,56,359
2003-04	8428223	3938147	12366370
2004-05	7883110	4635438	12518548
2005-06	8809548	4552536	13362084
2006-07	8984122	3826758	12810880
2007-08	9104773	4462225	13566998

Source: Directorate of Economics and Statistics, Andhra Pradesh.

At the national level, dryland agriculture emerges as the biggest drag on the growth of the economy. Indeed, the dominant strand of thinking among our policy-makers treats the drylands as a hopelessly lost bet. However, even at their low productivity levels, the quantitative significance of dryland agriculture is by no means small. It accounts for 53 percent of total cropped area, 48 percent of the area under food crops and 68 percent under non-food crops. In terms of production, drylands account for nearly 80 percent of the output of coarse cereals, 50 percent of maize, 65 percent of chickpea and pigeonpea, 81 percent of groundnut and 88 percent of soyabean. Half the output of cotton in the country is from the dry districts (Shah et al., 1998). Given its large size and extremely low productivity levels, a unit rise in productivity in this sector is likely to have the largest impact on aggregate crop productivity. There is

clear evidence that the yield potential of dryland varieties is much higher than what has been achieved on the farm. It is more appropriate to view the drylands as a source for future growth, a hidden potential waiting to be unlocked.

5. Measures to inclusive the exclusive lands

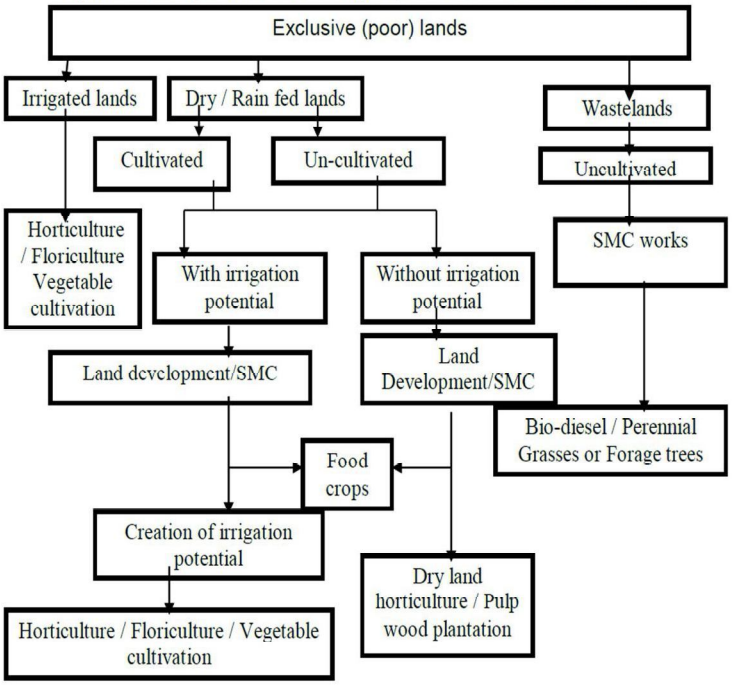
Dry land farming is a risky enterprise at best. Although a major constraint to dry land agriculture is deficient water, hazards such as insects, diseases, hail, high winds, and intensive rains can destroy crops in a matter of minutes or days. Making matters even more hazardous, farmers in dry land regions are often resource-poor and these regions are usually of low priority when national resources are allocated. Even when there is a knowledge base available for planning and managing crop and livestock systems in dry land regions, the most difficult task is to develop strategies that package technology, necessary infrastructure, and social and economic components together. Perhaps the toughest challenge for both farmers and governments will be to separate measures that is important from those that are expedient. Physical constraints like Wind erosion, Water erosion, Soil characteristics and Chemical (Soil chemical problems include low inherent fertility, acidity, toxic levels of aluminum or other elements and low nutrient-holding capacity. Essential plant nutrients can be lost through surface runoff, erosion, leaching, and removal of plant materials. Soil acidity resulting in aluminum toxicity is a common chemical problem in dry land soils) are creating problems. Technological constraints includes – low soil fertility, Crop Germplasm and Institutional and Infrastructure constraints like Credit, Marketing and Distribution, Research and Technology transfer Fertilizers and Pesticides etc are also adding to them. With Suitable measures, these have to avoid.

A model for inclusive the exclusive lands

The range and diversity of the drylands presents a qualitatively complex set of constraints which needs a more delicate mode of handling. It is realize the crucial role the state has to play in a positive reshaping of the dryland landscape. Figure 1 gives root to develop the poor lands.

Many districts in Andhra Pradesh consist of dry land belt. The technologies developed by the Centre will help several farmers to fruitfully utilize their lands for cultivation of tree born oil seeds for production of bio-diesel. It helps increase the income of rural population and also the landless families will be benefited by the pods containing the oil seeds by supplying them to oil mills. The growth of medicinal plants and herbal drug production will supplement the income of the villagers. In the current context of liberalization and dominance of anti-state sentiments (shared, paradoxically, by the staunchest of neo-liberals as well as the purest among radicals), this point needs strong emphasis.

Figure-1 Development of exclusive (poor) lands into Productive Assets



In particular, the key role of kick starting the growth process in the forsaken drylands has to be played by public investment. The drylands are caught in a low-level equilibrium trap. Public investment is required to enable them to break out of this trap. The endemic process of natural resource degradation needs to be checked. Public investment in drylands has to be substantial, multi-directional and sustained over a long period of time.

Addressing the challenge of dryland agriculture involves implementation of a package of several interlinked components. Some of them are-* Location-specific public investments in water infrastructure;* Soil enrichment and control of land degradation;* Agricultural package of locally appropriate seeds and low-cost, sustainable agricultural practices;* strengthening livelihood options based on livestock, fisheries, agro-processing and forests;* better support systems through credit, marketing, research and extension;* mobilization of communities around natural resource rights;* learning from local contexts about possibilities and limitations of different interventions. This applies to all actors, scientists or government representatives, NGO activists or a member of local community.

Facing the challenge of the drylands is no longer a matter of choice. It is an imperative if we are to meet the goal of national food security in the coming years. Even in the most optimistic scenario of further irrigation development in India, nearly 40% of national demand for food in 2020 will have to be met through increasing the

productivity of rainfed dryland agriculture.

Rehabilitation of land development programmes

Rehabilitation of land development programme, special area programmes is to be needed to inclusive the lands in to productive manner again. Under the programmes, the common Guidelines for Watershed Development provide for a uniform strategy in the implementation of all area development programmes viz. DPAP, DDP, IWDP and EAS. These programmes have succeeded in reach their goals in the past.

Waste land development and People's Participation

Since it is the man who is primarily responsible for degradation of environment, regeneration and conservation can only seeking participation of the people who inhabit the watershed. The entire watershed community should be involved to implement IWDP (integrated wasteland development programme) and maintain the assets created to ensure sustainability of waste lands by fuel wood and fodder plantations etc.

Role of government role

The government should strictly implement the wasteland development programme what has been sponsored funds for 10th to 13th plans (shown in table-3), provide credit facilities.

Programme wise comprehensive evaluation bf an independent professional team needs to be conducted at the end of each plan to assess improved productivity of waste lands, improved availability of fuel wood and fodder, increase in water table, reduction in irrigation, improvement in status of the people who have participated in the development of waste lands by cost –benefit ratio and rate of return on investment. There is a need to develop policies, which would result in the best use and sustainable management of land and water resources so as to prevent land becoming degraded and waste.

Table -3.Waste land development programme during 10th to 13th plans

Plan	Area covered (million hectare)	Estimated cost (Rs/ha	Total cost (Rs million)	Cost sharing ratio	By states (Rs million)*	people (Rs million)
10th plan	15.0	5000.7000	90000	50:25:25	22500	22500
11th plan	20.0	6000-8000	140000	40:30:30	42000	42000
12th plan	25.0	7500-9500	21250	303040	63750	85000
13th plan	28.5	9000-11000	285000	252550	71250	142500
Total	88.5		727500		199500	292000

* Note: The remaining share will be bared by central government

Conclusions

This paper concentrated on the level of land diversification for various purposes and identify the extension of non-irrigated land of rain fed area, sown area with single crop, wasteland, forest, fallow land and rain fall position which extends the dry land to find out the position of increase in dry land in the state. Further, diversification of cropping pattern due to change in land use is also stressed. To take account of the dry land, very few

quantitative and qualitative measures have discusses. Obviously, the major aim of this paper is- to include the excluded lands for different agricultural produce by various measures. To more successive and extension of agriculture in dry lands , A model for inclusive the exclusive lands, need of rehabilitation of land development programme, special area programmes to inclusive the lands in to productive manner again, Waste land development and People's Participation and role of government in this regard is stressed. Some policy suggestions have also presented at appropriate place in the analysis. It is stressed that there is a need of steps to success the goals of what the United Nations has designated year 2008 as the international year of Planet Earth and celebrating it during the Triennium 2007-09. The event coincides with the launching of 11th plan. As mentioned the world bank consultant, Dr. Amrit Patel- "Let us commit to protect and preserve our precious land, water and environment through all possible preventive and curative measures."

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